Representation from Below
How Women Mobilize Inside Parties

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Declaration

I hereby declare that except where specific reference is made to the work of others, the contents of this dissertation are original and have not been submitted in whole or in part for consideration for any other degree or qualification in this, or any other university. This dissertation is my own work and contains nothing which is the outcome of work done in collaboration with others, except as specified in the text and Acknowledgements.

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Abstract

Political gender inequality is the most persistent form of gender inequality in the world, representing both normative and functional challenges. Women not only remain absent from parliaments, but they are also significantly absent at various levels of politics and party structures. This dissertation asks, *"Can descriptive representation reduce gender inequality in political participation, and if so, how?"* Conventional wisdom holds that women reduce political gender inequality by changing psychological predispositions; however, it ignores macro-sociological and institutional forces aligning female politicians' incentives to actively mobilize women into politics.

This dissertation introduces *"female-led party building,"* a unified theory that improves our understanding of how descriptive representation reduces political gender inequality at the citizen level, inside party positions, and in the top echelons of politics. This novel theory incorporates insights from a diverse body of scholarship in gender and political economy, feminist economics, and political sociology as well as party building, party organization, and institutional analysis.

To summarize this theory, women carve a pathway to power by mobilizing at the grassroots level of party hierarchy and by mounting bottom-up pressure on party elites for greater parity. Female politicians at the lowest levels of the electoral hierarchy enable this grassroots mobilization by lowering family and party organization barriers to recruit women as party activists, channeling women's activism and collective action inside parties, shrinking the gender gap at the party activist level to build inclusive parties. Paradoxically, women's social roles restrict their strategic options and their greater reliance on local politics as a career launchpad incentivizes women to invest more in party building. Women optimize the fewer resources they do have by recruiting female activists; party leaders can observe this easily attributable party building signal. The recruitment of women at the lower levels of party organizations, what I call *"Representation from Below,"* makes female politicians competitive in top-level politics, puts women's issues on the party manifesto, and mobilizes women both to go to the polling booths and to march on the streets. Our understanding of representation, broker politics, distributive politics, and political participation is incomplete without recognizing this novel link between women politicians and grassroots party activists.

This study uses a multi-method and mixed-methods research design relying on survey experiments, the natural experiment of randomized gender quotas, and a close election regression discontinuity design, and rich qualitative data and in-depth fieldwork. It focuses on two of the world's largest democracies, India and Brazil, which feature stark gender gaps in political participation across the spectrum of politics: in parliaments, on party membership

and civic participation. I collected data through ethnographically informed representative citizen and elite survey and gender-wise administrative turnout data at the most micro-site of India's electioneering - the polling booth. In Brazil, I rely on a unique administrative dataset on party membership inclusive of all major parties for more than 5500 municipalities covering the period between 2000 and 2020. This research design enables me to provide one of the most rigorous investigations of the effects of female representation on women's political participation across multiple political levels at scale. Rich qualitative data offers deep insights into the intricacies of how women recruit female activists, irreversibly transforming our understanding of female political leadership and party building.

This research design provides evidence supporting various elements of the theory. I demonstrate that women are more likely to recruit female party members and activists in India and Brazil, shrinking the gender gap inside political parties. In India, the data indicate that the uninterrupted presence of female politicians over a decade strengthens inclusive organization building. In Brazil, the data indicate that female incumbency both increases inclusive party building and reduces member attrition. In line with the theory, I show that women's greater grassroots presence increases the likelihood that local female politicians climb up the political ladder in India and Brazil, shrinking the gender gap in political career progression. India has a stark gender gap in political survival, but my findings indicate that the presence of local female candidates increases the political survival of higher-ranking female politicians, bolstering their chances of retaining a major party nomination in subsequent elections. These results confirm that female politicians use grassroots mobilization to reduce the most persistent form of political gender inequality.

At the citizen-level, I find female-led ground campaigns shrink the gender gap in partisan contact. Increasing contact with women is ushering in a new era of ground campaigns and female voter mobilization in India, resulting in greater female turnout at the polls and lower gender gap in turnout. Data from the original citizen survey triangulated with the investigation of gender-wise turnout from 12K+ polling booths reinforces support for the mobilization-effects mechanism. This dissertation provides a rigorous investigation of the demonstration-effects hypothesis. I use a within-subject survey experiment and show citizens photographs that signal the representative's gender, which is randomly assigned by gender quotas. Women who view photographs of female politicians display lower levels of political efficacy, providing evidence contradicting demonstration-effects. In contrast, randomized information about gender quotas, which reconciles the female political presence with pre-existing norms, neutralizes rather than deepen such backlash.

This dissertation advances "female-led party building" as a potent mechanism that shifts our understanding of female political leadership and shows how women's grassroots mobilization inside parties upends entrenched power structures, enhancing democracy, increasing substantive representation, and delivering development. In doing so, this dissertation brings descriptive representation in to the study of party building and party organization. Far from just changing perceptions, women have taken a step forward by fundamentally transforming parties.

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Chapter 1

Introduction

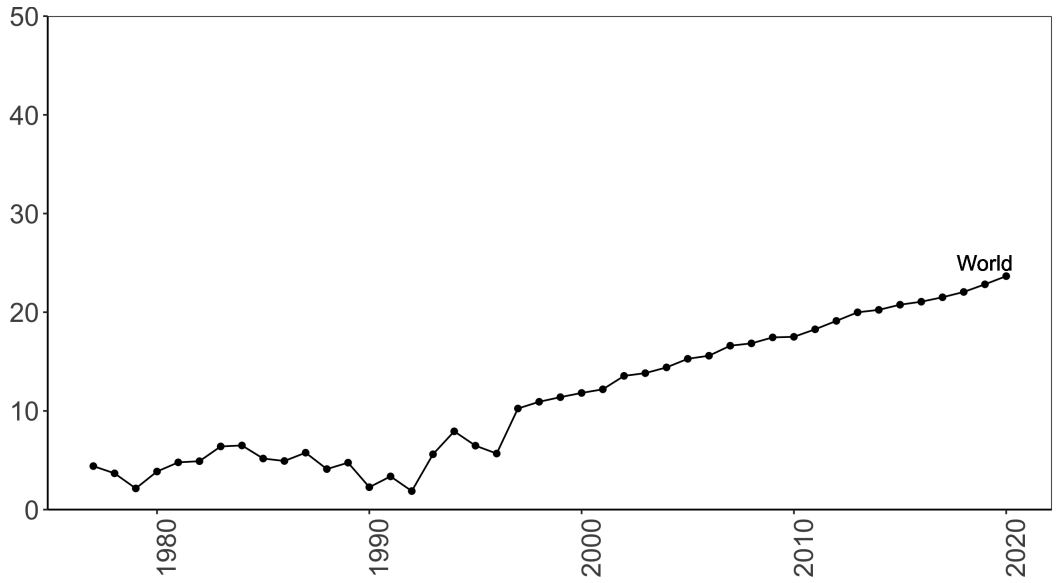
Can descriptive representation reduce gender inequality in political participation, and if so, how? For most of democratic history, mainly men have wielded political power, but this is changing. Around the world, women have made significant progress: both in winning seats in national parliaments and taking charge in local politics. Most of the world's democracies are at their highest levels of female representation historically. Female leadership increases the odds that a female child will go to school, her home will have a toilet, and she will marry at the legal age and have a job.[1] Furthermore, female politicians influence the taxes that girl will pay as an adult and whether she will confidently report sexual crimes.[2] Yet, nations have not yet come close to realizing the full potential of female representation in parliaments, which even in 2021 stands at a quarter globally. While it is important on both normative and functional grounds to increase women's political participation, at the current pace of progress it will take 145 years to close this global gender gap. This statistic makes political gender inequality the most persistent form of gender inequality in the world.[3]

[1] For excellent reviews of the literature on the link between descriptive and substantive representation, see Wängnerud (2009) and Clayton (Forthcoming). Studies from India provide natural experimental evidence underscoring the link between descriptive and substantive representation on these specific outcomes. Beaman et al. (2012) find that female leadership increases educational attainment for girls. Chaturvedi, Das and Mahajan (2021) find that female representatives increase toilet provision in minority female headed households. Castilla (2018) finds that women in local government decrease the likelihood of child marriage and delay the age at first marriage. Mani and O'Connell (2019) find that the length of exposure to women politicians affects overall female labor force participation. Note that female or male are used to refer to woman and man respectively and vice-versa.

[2] Betz, Fortunato and O'Brien (Forthcoming) find that in democracies, women's presence in the legislature is associated with decreased import tax penalties on women's goods. Iyer et al. (2012) find that female representation in local politics increases reporting of rape crimes in India.

[3] See, *The Global Gender Gap Report 2021*; the World Economic Forum estimates that, at the current pace of progress, it will take 145 years to close the political gender inequality gap, which remains the most persistent gender inequality gap relative to income, health, or education.

Fig. 1.1 Women's representation has increased, but not reached parity



The figure plots the % of women in the lower house of national parliaments (y-axis) from 1980 until 2020 (x-axis). The data source is World Bank data on women in parliaments.

Women are not only under-represented in parliaments, they are also significantly absent from various levels of politics and party structures. Political parties worldwide continue to remain enclaves of male dominance. For instance, women are less likely to be party activists. Party activists, also referred to as brokers, are lower-rung partisan agents and intermediaries who are situated between elected politicians and citizens, enabling those in poverty to access state services in low- and middle-income countries (Auerbach and Thachil, 2018).[4] At the citizen-level, compared to men, women are not only less likely to be active members of political parties, but are also less likely to participate in protests. Using data from the World Value Survey in 2012, Figure 1.2 plots the gender gap on these outcomes for some of the most

[4]Party activists are *active* rank-and-file party *agents* that may or may not have formal party membership. They are responsible for conducting lower-rung political party activities like door-to-door campaigning, community organizing, problem solving and so on. They differ from active party members only in one aspect: they may not necessarily have formal party membership. In other words, while all active party members are party activists, all party activists, although they maybe informally affiliated to a party, are not necessarily party members. Crucially, administrative data on party activists or party members is largely unavailable in most developing countries; Brazil is an exception. Recent scholarship on broker politics has collected original data on party activists, advancing our understanding of the role party activists play in enabling bottom-up accountability. Data from these studies reveal vast gender-gaps in party activist roles. For example, using the replication dataset from Auerbach and Thachil (2018) which is available on Harvard dataverse, I find that 88% of slum brokers in India are male. Using the replication dataset from Brierley and Nathan (2020), which is also available on Harvard dataverse, I find that 74% of party brokers in Ghana are male. Combining datasets from three studies, Daby (2020, p. 221) concludes that 62% brokers in Argentina are male. Yet, to date women's under-representation as party activists has received little attention in either of the literature on descriptive representation or that on broker politics.

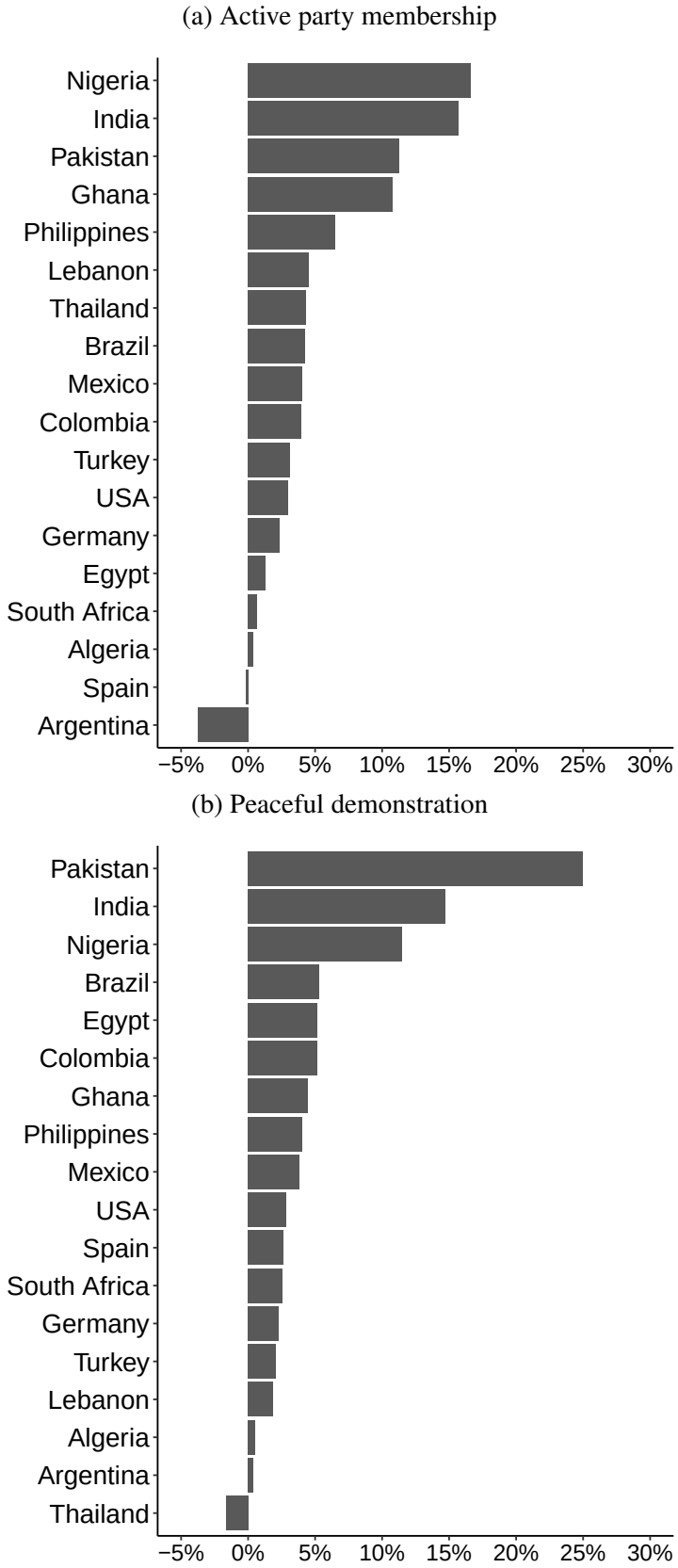
populous countries in the world. These gaps are greater in low- and middle-income countries; India and Brazil, the two key empirical cases in this dissertation. These two democracies often occupy top spots on various measures of political gender inequality in parliaments and beyond.

This dissertation introduces "female-led party building," a unified theory that improves our understanding of *how* descriptive representation reduces gender inequality in political participation at the citizen-level, inside party positions, and in the top echelons of politics. To summarize this theory, women can carve a pathway to power by mobilizing at the grassroots level of party hierarchy and mounting bottom-up pressure on party elites for greater parity. As depicted in Figure 1.3, female politicians at the lowest level of the electoral hierarchy enable this grassroots mobilization by recruiting women as party activists. By recruiting female citizens and activists, female politicians channel women's grassroots activism and collective action in partisan politics, building inclusive parties and shrinking the gender gap at the party activist, broker or member level. Women's recruitment at the lower levels of party organization, what I call "Representation from Below," makes female politicians competitive in top-level politics, puts women's issues on the party manifesto, and mobilizes women both to go to the polling booths and to march on the streets. This dissertation advances "female-led party building," as a potent mechanism that shifts our thinking about female political leadership and shows how the grassroots mobilization of women inside parties both upends entrenched power structures and increases political gender equality in parliaments and beyond. The study of representation, broker politics, political participation, and distributive politics is incomplete without paying attention to female-led party building.

Conventional wisdom holds that female politicians increase women's political participation through demonstration-effects. I use demonstration-effects to refer to a bundle of mechanisms through which female politicians change perceptions and break down psychological barriers that discourage women's political participation. [5] At the citizen level, this breakdown occurs when top-level female politicians act as role models and their presence signals to women that women's interests will be taken seriously, which raises the value of

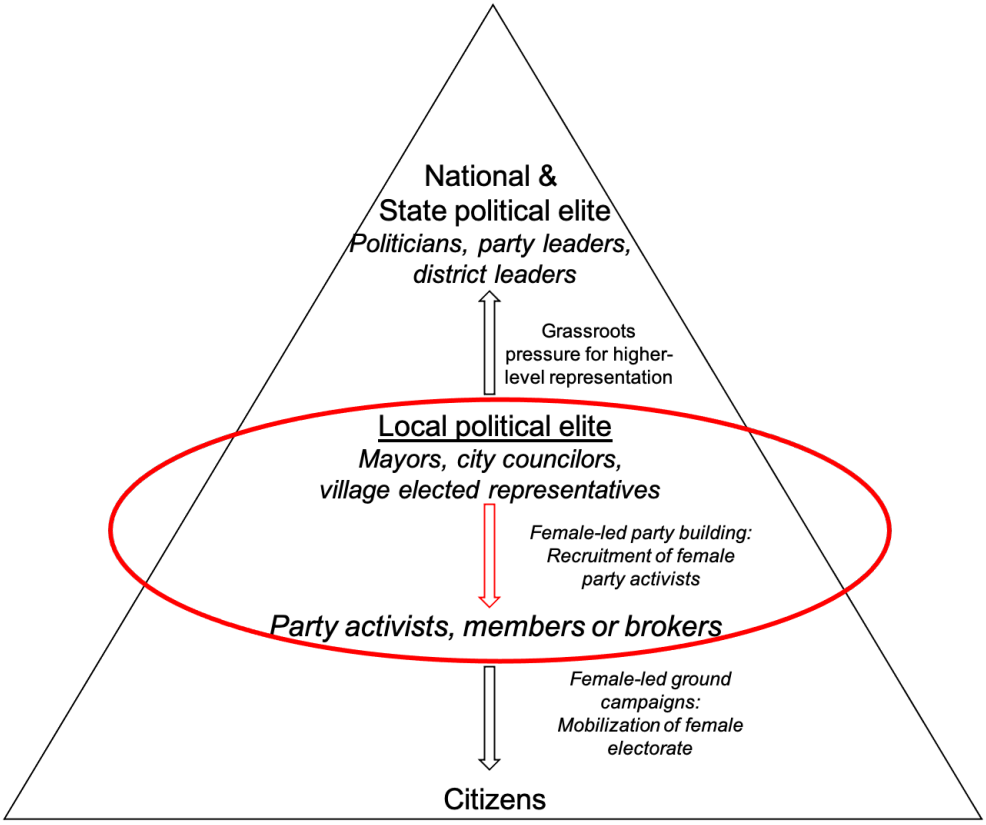
[5] Wolbrecht and Campbell (2007, 2017) are seminal studies that investigate role model-effects. See Barnes and Burchard (2013), Beaman et al. (2009), Schwindt-Bayer and Mishler (2005), Bhavnani (2009), Pande and Ford (2012) for the dominance of demonstration-effects in empirical scholarship linking female representation and women's political participation. See Pitkin (1967), Mansbridge (1999), Phillips (1995) and Young (2002) for the political theory that motivates this empirical scholarship. Few studies test the demonstration-effects mechanism explicitly; those that do find little support for it including the chapter in this dissertation. Other examples are Foos and Gilardi (2020) and Beaman et al. (2009). An indirect mechanism through which female politicians can increase women's political participation is through the fringe benefits of increasing substantive representation such as, increasing economic development or lowering sexual crimes.

Fig. 1.2 Gender gap in party membership and civic participation



The figure plots country level gender gap in active party membership and participation in peaceful demonstrations for high population countries as measured in the World Value Survey Wave 6 (2012). The gender gap is calculated by subtracting the average female participation from male participation in that country for each measure.

Fig. 1.3 The missing link: local female politicians recruit women as party activists



women's political participation and encourages women to participate in politics.[6] At the political elite level, female politicians change perceptions of party elites lowering bias against women's electability and leadership. While psychological mechanisms provide valuable insights into how gender inequality might be reduced by inspiring women's political agency, women face considerable barriers and backlash in exercising this agency. In many low- and middle-income countries, women do not know who their representatives are, must have permission to step out of their homes, and lack access to mobile phones or the internet - in other words, they lack both the information and resources necessary to benefit from demonstration-effects.[7] Crucially, this psychological explanation also ignores how the political economy of gender inequality can align female politician's incentives to mobilize women

[6]The essence of demonstration-effects is that *characteristics* of female politicians break down psychological barriers that hinder political participation. For a recent discussion specifically on role-model effects, see Wolbrecht and Campbell (2017).

[7]In the context of rural India, Beaman et al. (2009) find that the effects of female representation on change in attitudes towards women in politics are only concentrated amongst men who know the name of their female representative.

into politics. Furthermore, it leaves unexplained the classic conundrum: *"Why would male party elites and politicians share power and patronage with women?"*

Simply getting more women to participate in civic protests or identifying those with ambition to run for office is not enough to reduce political gender inequality inside party organizations or in parliaments. Party elites, with their insular networks, continue to gate-keep female aspirants out of key party positions, even when they do not hold bias against women.[8] In most countries, securing a party position is the first step to a political career and eventually to securing a party nomination. Female-led party building *simultaneously* lifts the constraints in both families and in political parties that suppress women's political participation. *"Bringing women into parties"* is not easy, as women in local politics in India told me repeatedly in interviews. Families dislike women participating in politics, particularly in the *dirty mire of party politics.* I found that none of the female politicians or party activists interviewed in India noted being inspired by or being an inspiration for other women to enter politics. Instead, they linguistically emphasized intensive acts of *bringing* women to party meetings, to polling booths, to campaigns, and to rallies despite all barriers, using acts of persuasion and the incentive of *social work* and public service as tools to loosen the domestic grip on women's mobility and *to bring them out of the houses*.

Only grassroots female politicians have the ability to spearhead this change. On the one hand, non-partisan interventions targeted at women, including those led by the state, may well increase women's political participation but can not lift party barriers that restrict women's entry inside party organization. On the other hand, partisan efforts that do not involve women fail because they are ineffective in both accessing women as well and reducing household barriers that constrain them. Grassroots female politicians and party activists, therefore, offer specific potential. These women have the capacity and the incentive to reduce the barriers women uniquely face in accessing politics inside and outside of parties.

This raises the question: *"Why would female politicians recruit women?"* The standard tools of rational choice institutional analysis (Ostrom, 1991; Rothstein, 1998; Shepsle, 2008; Thelen, 1999),[9] feminist and household economics (Agarwal, 1997; Chiappori, 1988; Kandiy-

[8]Studies of gender and party recruitment in American politics show that male elites despite not being overly biased against women are inefficient in recruiting women due to the male-oriented nature of their recruitment networks and have less credibility in acting as mentors (Butler and Preece, 2016*a*; Crowder-Meyer, 2013; Preece, Stoddard and Fisher, 2016; Sanbonmatsu, 2006*a*,*b*). See Gulzar et al. (2021) for an example of the failure of male-led partisan intervention to recruit female party activists in India. Scholars have found similar barriers in the context of ethnic representation. In the setting of Sweden, Dancygier et al. (2015) find that immigrants' political engagement at the citizen-level is unlikely to translate into higher representation of immigrants in political roles.

[9]Summarizing the rational choice institutionalize approach, Shepsle (2008) identifies two standard ways of thinking about institutions. The first view takes institutions as given exogenously, as the rules of the game. This

oti, 1988), and the political economy of gender inequality and the embedded bargaining model help unravel this puzzle (Iversen and Rosenbluth, 2006, 2010).[10] A simple summary of why female politicians recruit female activists is like any other politician they want to advance their own political and electoral success. On the one hand, social expectations about women's appropriate behavior that have roots in women's familial roles limit their politicians' strategic toolkit. On the other hand, their greater reliance on local politics as a pathway to power incentivizes female politicians to invest more in party building and to optimize the fewer resources they do have.[11] Female politicians are able to use their networks to recruit women as party activists; the lower costs of participation at the grassroots level make such recruitment easier. If necessary, local female politicians may use their proximity to communities to knock on doors, and in doing so, take on the challenge of convincing reluctant husbands to let women participate in politics. Men allow such participation due to the activity requiring to work in proximity to other women and the potential benefits the faintest of political access may provide in poor countries. By leveraging these factors, women succeed in *"bringing women out of their houses."*

Paradoxically, gender regressive norms pre-empt men from adopting these strategies without incurring greater costs, which makes recruitment of female party activists and members a woman's game and in the eyes of party elites an easily attributable signal of female politicians' party building intensity. Female politicians are able to claim credit by developing a large female party activist following, and doing so helps these politicians cultivate the support necessary to survive male-dominant parties and highly competitive electoral politics. Party elites cannot ignore these powerful women. As women's clout increases, they make greater demands on the distribution of party nominations. Female-led party building, by mobilizing women's collective action at the grassroots of the party hierarchy, challenges the status-quo distribution of party resources. To summarize, women

dissertation reckons with the second way of thinking, which takes institutional arrangements as coordination mechanisms that generate or sustain equilibria. Rothstein (1998) bolsters the conceptual value of this viewpoint by summarizing research which documents moments when specific political actors have been able to create institutions that greatly enhance their future political power. Thelen (1999) discusses how this "rational choice" variant of institutionalism is compatible with and different to "historical" institutionalism, highlighting the limitations of this approach.

[10]The theory I present builds on Iversen and Rosenbluth (2010, p. 2) who integrate macro-sociological approaches to gender, feminist theory, micro-economics of the household in to an embedded bargaining model in which *"the balance of power between sexes inside the household is shaped by macro-level conditions that define 'outside options' in the event of marital dissolution"*. This dissertation builds on this embedded model to improve our understanding of women's strategic behaviour act once they are in parties and in electoral office.

[11]See Brollo and Troiano (2016) and Fisman, Schulz and Vig (2014) for the gender gap in returns to office in Brazil and India.

use party building to justify and strengthen their demand for parity; parity is not granted to them simply because men's perceptions have changed.

"Female-led party building" serves as a unified theory clarifying many of the puzzles at the center of comparative work on the political economy of the household, leadership, political participation, political parties, and development. For example, it helps explain why the presence of prominent progressive male and female party leaders has done little to put women on party tickets. South Asia offers many examples. Indira Gandhi, Sonia Gandhi, Benazir Bhutto, and Sheikh Hasina indeed did little to change the number of female candidates in their parties. The same goes for India's subnational leaders - Sheila Dikshit, Mayawati, Jayalalitha. The election of Brazil's first female president, Dilma Rouseff, barely moved the number of female mayoral candidates. In Germany, Christian Democratic Union has the lowest proportion of women in the Bundestag, despite Angela Merkel being the leader of the Christian Democratic Union (CDU) for close to 20 years and Germany's Chancellor since 2005.

From the perspective of "Representation from Below," top female leaders are situated too far from the grassroots to engage in party building and to increase female party membership and women's presence in intra-party networks. [12] Consequently, without this grassroots infrastructure, high-ranking female elites remain beholden to male networks and have little incentive or capacity to disrupt them. In contrast, when grassroots female leaders engage in building parties, they disrupt these networks and become able to mount pressure on elites for greater parity in party nominations, as the latter becomes dependent on them for female voter mobilization. Women's pathway to power runs from the bottom-up. "Representation from Below" illustrates how grassroots mechanisms enable marginalized groups to chip away at political inequality across the entire party hierarchy.

Female-led party building contributes to the understanding of *how* descriptive representation increases female voter turnout and political participation. This questions is particularly pressing in India, where, despite the persistence of highly regressive gender norms, the gender gap in electoral turnout has vanished; In some regions, women even turnout out at a greater percentage than men. The colonially rooted notion that male heads of household are simply mobilizing women's turnout or that women do not independently exercise their vote choice independently, an argument historically used by British colonial powers to deny

[12] More broadly, Htun and Weldon (2012) argue that feminist mobilization in civil society - not intra-legislative political phenomena is key for progressive social policy. However, women's mobilization at the lowest levels inside political parties that are closer to civic groups, not in high-level legislative positions, opens up one potential channel through which female politicians can pursue progressive change in the long run. Women can develop more autonomy as they gain more leverage over party leaders, who become more dependent on women's grassroots infrastructure to mobilize an increasingly vocal female electorate.

Indian women voting rights, are out of touch with India's ground reality.[13] Across electoral surveys conducted in many parts of India by Lokniti at the Centre for the Study of Developing Societies, women and men are equally likely to report voting as being individually important, and both groups are well aware of ballot secrecy. Moreover, this traditional argument does not explain either why political parties are increasingly promising special programs and benefits for women instead of targeting these resources at male gatekeepers or why female voter turnout has overtaken men's turnout in many parts of India.

Scholars of women's political participation and female representation in India have ignored the fact that each national-election ground campaigns reach close to 60% of India's electorate - 540 million voters.[14] A vast experimental literature underscores the effectiveness of contact in increasing electoral turnout (Gerber and Green, 2017). Furthermore, such highly intense partisan contact is also not unique to India.[15] Additionally, scholars have also missed that due to the male-dominant organizational structure of ground campaigns and the male-dominance of public spaces, women are less likely to be contacted by a ground campaign. Female-led ground campaigns reduce this inequality, shrinking the gender gap in partisan contact. I refer to this mechanism as "mobilization-effects." Partisan contact activates women's political participation through numerous sub-mechanisms that include providing information, persuading, and inducing social pressure. However, partisan contact because it is costly, provides two critical and credible signals to women: first, parties view females as equal political beings capable of exercising autonomy, and, second that their opinions are of equal importance and political parties care to solicit them.[16] I find that women contacted during election campaigns are more likely to both to vote and to participate in non-electoral politics. Administrative data on gender wise electoral turnout from 12,000+ polling booths in Delhi further supports the mobilization-effects mechanism. Indian women are

[13] See, Liddle and Joshi (1985) for discussion on suffrage in India. See, Banerjee (2014) on the importance of voting to Indian male and female citizens. My fieldwork and experience as a grassroots activist underscores that neither party leaders, activists nor politicians believe that women can simply be mobilized via their husbands, be it in the poorest slums in Delhi to the remotest villages in Bihar. See Bedi (2016) for thick ethnographic work documenting everyday party interactions that highlight the same.

[14] To the best of my knowledge, no prior studies have either investigated ground campaigns and highlighted how ground campaigns contribute to increasing turnout, or the link between gender disparity in campaign contact and its effects on women's turnout in South Asia or elsewhere. For instance, Cheema et al. (2020) and Giné and Mansuri (2018) are two studies that investigate a GOTV non-partisan campaign to increase female turnout in Pakistan, but neither of these studies are concerned with how the gender gap in partisan contact emerges or how this partisan contact affects female turnout.

[15] See Brierley, Kramon and Ofosu (2020), Kramon (2014), Fujiwara and Wantchekon (2013) for a discussion of this in Africa. See Wantchekon et al. (2018) for a discussion of this in Philippines.

[16] While female elites fail to establish a direct connection with female voters, female party activists may restore second-order demonstration effects by tangibly increasing women's gender consciousness along with providing resources that lower the costs of women's political participation.

increasingly turning out to vote, supported by female-led grassroots activism that has directed party resources toward mobilizing women. This rationale also illustrates how women's issues have become an integral part of party manifestos and parties' electoral strategies.

Nonetheless, "Representation from Below" remains unlikely to influence women's political engagement via demonstration-effects. As argued earlier in this chapter, demonstration-effects are less likely to occur in settings where household inequalities in resource allocation restrain women's political autonomy. For instance, I find a vast majority of women do not know who their representatives are or of the existence of a gender quota policy; at least one of such conditions would be necessary to experience demonstration-effects.

Furthermore, I devised a direct test of a fundamental aspect of the demonstration-effects hypothesis using an innovative, within-subject survey experiment. I find that women's political efficacy falls after a woman views photographs of local female representatives compared to viewing photographs of local male representatives; this serves as evidence against the existence of demonstration-effects. Instead of relying on hypothetical vignettes or conjoint experiments, the natural experiment of gender quotas made it feasible to use photos of actual representatives, basing the survey in real political conditions. In line with my theoretical argument, I find this negative reaction, the opposite of a demonstration effect, is driven by women who have lower bargaining power in their households and therefore higher constraints on their political autonomy. These findings underscore that the political economy of the household is crucial to the understanding of the link between female representation and women's political efficacy.

1.1 Research Design

This study uses a mixed-methods research design relying on survey experiments, the natural experiment of randomized gender quotas, and a close election regression discontinuity design, and rich quantitative and qualitative data collected using in-depth fieldwork and ethnographically informed surveys. To conduct the fieldwork, I made multiple visits over five years and to multiple sites in India. During this fieldwork, I shadowed hundreds of political campaigns, politicians, and party activists and conducted in-person interviews. Next, I collected original qualitative and quantitative data using ethnographically informed comparative and representative elite surveys of 1500+ rural and 90+ urban politicians in India, and a representative survey of 1600+ citizens. This multi-method approach provides not only causal evidence but also substantive descriptions of the mechanisms underlying the causal relationships, serving to substantiate the various elements of the theory. Rich

descriptive data is often reasonably sufficient to rule out alternative explanations when it undermines foundational assumptions.

The main but not exclusive empirical focus of this dissertation is India, the world's largest democracy. Due to India's sheer size, gender inequality in India means gender inequality in the world. With 20% of the world's population, India alone pulls down many global indicator of female well-being. Gender-gaps in political participation in India are also amongst the highest in the world. Female representation stands at 14% in India's national parliament and close to 9% in state legislative bodies. The strongest gender gaps in India and in the world are on two types of political participation: women's party membership and civic participation.

India is also one of the most gender regressive countries in the world where over 65 million women (close to the population of the UK and equaling 20% of eligible female voters) are "missing" from the electorate over the last 50 years due to the practice of sex-selective abortions and female foeticide. Analysts documenting this phenomenon highlighted its consequences for democracy: *"But if a significant chunk of the population is 'missing', does it reflect the true consent of the people?"*[17] Moreover, Duflo (2012, p. 1051) highlights, *"For each missing woman, there are many more women who fail to get an education, a job, or a political responsibility that they would have obtained if they had been men."*

There is a saying: "*Whatever you say about India, the opposite is also true.*" These vast-gender gaps in national and state politics co-exist with one of the most progressive gender reforms in the world: the 33% to 50% gender quota policies in local politics.[18] Gender quotas in local electoral bodies in India invite empirical investigation. Across India's 29 states, at least 33% and in a majority of the states, 50% of single-member constituencies in local rural and urban bodies are reserved exclusively for women to contest elections. Only women are permitted to run, and, therefore, only women can win from these seats. Implemented as part of India's 73rd constitutional amendment in 1992-93 and as part of decentralization reforms, this progressive national policy ushered in a new era of local political organization (Bohlken, 2016). Gender quotas in local politics enabled women and marginalized groups to access these newly carved-out roles in local politics. Rough estimates suggest that India has between two to two-and-a-half million elected female politicians. As an Indian Cabinet

[17] See "More Than 100 Million Women Are Missing," Amartya Sen, the New York Review, December 20 ,1990, and *"India's missing women,"* the Hindu, February 10, 2014.

[18] Little research exists to explain India adopted quotas in local politics. The nation lacked a strong women's movement, international norms, cross-partisan support, or party contagion - factors which explain quota adoption elsewhere (Krook, 2009). Instead, my fieldwork and interview data suggests that explanations that highlight political competition and weak party organization fit the Indian case (Weeks, 2018).

Minister once remarked, *"There are more elected women in India alone then the rest of the world put together."*[19]

Political quotas in India have been widely studied as they hold great promise for local democracy, development and dignity for 1.2 billion of the world's poorest population.[20] Development economists and economists based at the World Bank championed the first wave of scholarship on India's gender quotas in the 2000s.[21] One reason for this disciplinary interest was the randomized implementation of these reforms, which makes causal inference possible at a geographical and longitudinal scale impossible to achieve elsewhere in the world. In most parts of India, each election, single-member electoral constituencies are randomly selected to be "reserved." For scholars interested in descriptive representation this design is a gold mine for causal inference. While the minutiae of the randomization policy differs from state to state and from election to election, scholars have replicated and examined the randomization protocols, providing testimony for the design's internal validity in various parts of India. I use this natural experiment to overcome the selection bias of women contesting elections from constituencies conducive to female candidacy.

Female-led party building breaks open the black box of party organization. Disaggregating political parties into their components, party leaders, politicians at multiple electoral levels, and party activists at the grassroots of party organization, lays bare how male dominance of one layer of politics reinforces men's positions in the party hierarchy. Female-led party building disrupts this status-quo equilibrium. I scrutinize this multi-electoral level theory using the natural experiment in India's capital city, New Delhi. The goal to provide causal evidence at all key levels in the political hierarchy guides the choice of using Delhi as a key empirical site. By design, such macro-level variables as, national and state level electoral institutions, quota adoption, duration of quota exposure, and the influence of both centralized party elites and candidate selection committees are held constant. This sharpens the focus on women's strategic behavior inside parties - the key thrust of this dissertation. I measure most outcomes shortly after the last round of local elections limiting the play of micro-level attitudinal mechanisms. The long-running nature of the natural experiment enables to study the effects of un-interrupted and long-term presence of women in local politics on party building.

[19] Source: Television interview with Sagarika Ghose on News18, *FTN: Is gender bias deep rooted in Indian politics?*, October 4 2012.

[20] See Mashail (2020) on how ethnic groups value descriptive representation and use electoral politics to demand dignity. She finds that members of lower social classes to value descriptive ethnic representation relatively highly and to be more willing to forgive the poor performance of ethnic parties.

[21] Ban and Rao (2008), Chattopadhyay and Duflo (2004), and Beaman et al. (2009) are prominent examples in development economics.

Most studies on female representation in India investigate the effect of having a female leader as compared to not having a female leader at the same electoral level. In addition, I also investigate the influence of variation in women's numeric presence on outcomes in higher-level elections. In Delhi's political structure, higher-order constituencies have equal number of municipal constituencies that remain neatly nested within the former for a sufficiently long period. This structure enables one to study the influence of variation in women's numeric presence in local party positions on outcomes in higher-level elections, for example, the gender gap in career progression and political survival. To the best of my knowledge, it is not possible to employ this variation of the natural experiment of gender quotas in any other setting in India due to both frequent border-redistricting and a lack of spatial data on electoral boundaries. This novel re-take on the gender quota design and the focus on causal mechanisms constitutes the empirical contribution of this dissertation to the study of gender quotas, which to date, has focused mainly on identifying causal effects, while *causal mechanisms* remain poorly understood.[22]

I collected original data in Delhi to provide rich evidence for various aspects of my theory. Election results are publicly available for higher-order elections in India but were manually digitized for Delhi's municipal elections. I successfully collected administrative data on candidate affidavits for all candidates across Delhi's electoral levels which enables to rule out selection effects as an alternative explanation.[23] I collected gender-wise turnout data at the polling booth, the key site of electioneering in India's ground campaigns to provide the first causal evidence of the link between female representation and female turnout in India.

No data on party activists or the broader measure of party membership is available in India. The data that I obtained from political parties and filtered through election studies was poor quality, suffered from social desirability bias, and did not reconcile with fieldwork observations. In addition, party activist density in majority parts of India is sparser relative to that found in densely packed urban slums, which renders using a name elicitation based approach, as used in Auerbach and Thachil (2018), unfeasible. However, my fieldwork revealed that both male and female citizens remember their last partisan contact for months

[22] See Iversen and Rosenbluth (2010) for more detailed criticism.

[23] Selection effects are a dominant explanation for the effects of gender quotas on the quality of representation in industrialized democracies (Besley et al., 2017), where women are held to higher qualification standards than men (Bauer, 2020). Unfortunately, low labour force participation rate and women's employment in informal work in India, means that, to begin with, women in politics are less likely to have stronger raw qualifications than men. This is supported by the candidate affidavit data which indicates that women are younger, less educated, less wealthy, and more likely to be homemakers. These findings echo other studies (Chattopadhyay and Duflo, 2004). In addition, using surveys of local politicians, I find female politicians also have fewer informal qualifications for example, less experience in partisan politics prior to running for office, which curtails both their political networks and their ambition.

and even couple of years later. This informed my strategy to collect original data on party activist contact and gender of the party activist through a representative citizen survey which was embedded within the natural experiment of gender quotas.[24] This strategy provides many advantages. Unlike party officials or elected politicians, citizens have no reasons to display social desirability bias on party activist contact, which come as a natural part of a larger battery of questions about politics that are unrelated to gender. Over 94% of citizens are largely unaware of gender quotas which makes systematic social desirability bias even highly unlikely. Citizens' reports illustrate the ground reality of campaign contact, which other sources of data cannot do. An alternative is to shadow and visually inspect ground campaigns, collecting data on the gender of party activists present in them. I employed this strategy, randomly selecting candidate-party pairs for shadowing ground campaigns. Furthermore, I shadowed campaigns in electoral levels that lacked gender quotas and found support for the mobilization-effects mechanism. Although, this small-N approach helps to triangulate and break open how ground campaigns operate, it lacks the scale of the large-N citizen survey. But taken together they address the limitations of each of the strategy.

Furthermore, I also conducted a representative survey of Delhi's local incumbent politicians, collecting systematic data on their political access narratives and examining the gender composition of their networks. I supplement this data with fieldwork spread over five years in other sites in India: Bihar, Rajasthan, Maharashtra, and Karnataka. In summary, this natural experiment which I supplemented with this newly collected data enables to deep dive in to the causal mechanisms underlying the relationship between descriptive representation and democracy and development, while at the same time being well-suited for an investigation of women's agency.

I focus on Brazil as a case to demonstrate external generalizability and the broader appeal of female-led party building. Brazil offers several advantages features making it a compelling case for the purpose. On one hand, it is a large middle-income country with much greater levels of female labour force participation and relatively less regressive gender norms compared to India; It also does not have an exclusionary gender quota policy in local politics. On the other hand, women are significantly under-represented in politics, and large gender gaps exist in party membership and in other forms of civic participation. In addition, rich administrative data on party membership in Brazil has enabled me to overcome the limitations of India's data, allowing quantitative examination of both the quantity and the quality of party-member recruitment. In this co-authored project with Cameron Sells, we use

[24]This survey of citizens was conducted as part of the baseline survey of a field experiment in Delhi, jointly conducted with Robin Harding. I exclusively designed the sampling strategy of this survey and the particular survey questions that are used in this dissertation.

a close-election regression discontinuity design; the results of this study support our findings that the effects of female-led party building hold in a setting without stringent gender norms or as exclusionary a gender quota policy as India.

1.2 External generalizability

The broader contours of the theory presented in this dissertation have few scope conditions. Two key elements of the theory must exist where female-led party building unfolds. First, the gender unequal norms that exist to varying degrees across the world (Iversen and Rosenbluth, 2006), and are also highly persistent (Alesina, Giuliano and Nunn, 2013). Second, party activists mediate political and state access in most low and middle-income countries (Auerbach, 2020; Auerbach and Thachil, 2018; Brierley and Nathan, 2020). On the one hand, the more regressive the gender norms, the stronger the comparative advantage of female activist recruitment. On the other hand, the stronger gender norms require that female politicians have to make a greater effort to recruit women, due to the women's greater constraints on political participation.

Theoretically, drastically unequal gender norms may frustrate female-led party building, while egalitarian gender norms may make this strategy uncompetitive as in that scenario both men and women are equally likely to mobilize women. Yet such extreme or ideal types may not exist. Evidence from India, one of the most gender unequal countries in the world confirms that female activist recruitment is a viable and compelling strategy in a significantly gender regressive place. Evidence from Delhi and Bihar, two empirical sites that are on the polar ends of gender norms, showcases the broader appeal of the theory within India. Within India, Delhi presents a case where women enjoy the highest levels of mobility and access to resources relative to the rest of the country. At the same time, evidence from elite surveys in rural Bihar, one of the most gender unequal places within India, reassures us that rural female politicians also rely on on female activists.

Yet, gender inequalities do not have to be as extreme, as those in India, to promote female-led party building. Causal evidence from the Brazilian case, where household constraints on women's mobility and employment are relatively relaxed in India, underscores this point. Supporting female-led party building in Brazil, I find that female mayors not only substantively reduce gender-inequality in party membership across Brazilian parties, but are also more likely to move to electoral positions in higher-level elections, particularly in constituencies where parties lack membership at baseline. This vast trove of causal evidence from two of the world's large democracies illustrates the wider applicability of this theory.

Table 1.1 Summary of the main research design

Hypothesis	**Design and identification strategy**	**Data**
Local female politicians recruit female party activists and party members (Chapter 2)	Natural experiments of gender quotas in Delhi (2007, 2012 and 2017)	Representative survey of citizens in Delhi (2018)
		Representative survey of local incumbent politicians in Delhi (2020)
		Shadowing of randomly selected candidate ground campaigns in Delhi state elections (2020)
		Representative survey of local incumbent politicians (mukhiyas) in Bihar (2020)
		Representative survey of local politicians (sarpanchs) who are winners and runners of close elections in Bihar (2021)
(Chapter 6)	Close election regression discontinuity design in Brazil's municipal government (2000-2020)	Administrative data on party membership reported by all parties in Brazil (2000-2020)
Female-run ground campaigns are more likely to contact women and lower the gender gap in partisan door-to-door contact (Chapter 2)	Natural experiments of gender quotas in Delhi (2017)	Representative survey of citizens in Delhi (2018) and shadowing of randomly selected candidate ground campaigns in Delhi state elections 2020
Party activist contact boosts women's electoral and civic political participation (Chapter 2 and chapter 5)	Natural experiments of gender quotas in Delhi (2007, 2012 and 2017)	Polling station-level male and female turnout data in 2017 municipal elections in Delhi and the representative survey of citizens in Delhi (2018)
Local female politicians mount grassroots pressure on party leaders for greater parity in higher-level party nominations (Chapter 3)	Multi-tier nested natural experiment of gender quotas in Delhi (2007-2020)	Electoral and candidate affidavit data for the entire universe of candidates at both state and local politics in Delhi
(Chapter 5)	Close election regression discontinuity in Brazil's municipal government	Electoral data in municipal, state and federal elections in Brazil (2000-2020)
Local female politicians are unlikely to trigger demonstration-effects (Chapter 4)	Within-subject survey experiment where citizens are exposed to photographs of male or female incumbents as per the natural experiment of gender quotas	Two-wave panel survey in Delhi (2018) with citizens interviewed within 3 weeks

Furthermore, the specific mechanism of female-led recruitment is also relevant for developed democracies. For example, in the U.S., women's political entry is increasingly being seen

to be followed by women's entry as campaign managers, as senior congressional staff, and so on.[25] Outside of politics and in the arena of business, scholars are finding support for a similar logic of "female-led firm building," in this theory, gender inequalities enable female entrepreneurs to benefit from lower labor costs by recruiting female employees (Chiplunkar and Goldberg, 2021).

1.3 Contributions

Democracy is unthinkable without political parties. Female-led party building strengthens democracy by increasing gender equality and by building resilient parties. Grounded in a political economy framework, I argue that women carve a pathway to power through party building. Furthermore, this dissertation shows women recruit activists who join parties for non-clientelistic reasons, are policy-seeking and are less likely to leave or switch parties, which makes party organization more resilient. The literature on party building is largely silent on the role of women in establishing a party's territorial organization. Ignoring this link misses the fundamental reality that female representation is key to long term party stability and therefore democracy. This dissertation brings women in to the study of party building and is the first to link descriptive representation with the vast literature on party building and party system institutionalization, opening a new research agenda on the study of descriptive representation and party building.[26]

The political economy of gender inequality shapes women's incentive to engage in party building to mobilize female political participation. In shining a light on this process, this dissertation improves the understanding of how women's political entry impinges on the organizational structure of parties, an area overlooked in both the classical as well as recent scholarship on the study of parties as organizations.[27] As more and more women enter parties

[25] An increase in the number of women running for the United States congress was accompanied by an unprecedented wave of female campaign managers. See *With women running in record numbers, female campaign managers are riding the "pink wave" too*, ABC News, November 6 2018. This pink wave leading political analysts to conclude, that,*" 'If they have a campaign that looks like America,'" Walsh said, "they're more likely to have a Cabinet and a government that looks like America."* See, *It is about f—ing time: Women break into top ranks of 2020 campaigns*, Politico, August 23 2019.

[26] Research on party building and institutionalization in Asia (Jensenius and Suryanarayan, 2020; Nikolenyi, 2014), Africa (Riedl, 2014), Latin America (Levitsky, Loxton and Dyck, 2016; Mainwaring, 2018) and Europe (de Lange and Art, 2011; Kitschelt, 1997; Mair, 2011), underscores the importance of a strong grassroots territorial base for party building for parties across the ideological spectrum and the importance of party building for democracy. Yet, this body of work ignores how descriptive representation in local politics matters for building a diverse and resilient territorial organization.

[27] Diverging from the classical scholarship on party organization that views parties as facing severe difficulties in developing new organizational forms and strategies (Duverger, 1954; Michels, 1919), Kitschelt (2019)

and participate in politics, we need a better idea of how this transformative social change is shaping parties as organizations in developing democracies. This dissertation takes a step towards this goal.

In the process of party building, female politicians lower gender inequality across the entire political spectrum. In shining a light on this process, this dissertation chronicles how the political economy of gender unfolds inside parties and moderates the representative-citizen-state relationship. In doing so, it contributes to recent advances in gender and politics scholarship twofold. First, it reinforces the relevance of domestic constraints in influencing specific aspects of women's political behavior as citizens which is the thrust of this recent research.[28] Second, it shows the relevance of the household in influencing women's strategies *once they are in office*, which is an under-studied area of research within this recent scholarship. Fewer studies highlight how household dynamics influence the decision making of female incumbents and candidates.[29]

This dissertation makes several key contributions to the study of gender quotas. Gender quotas have been widely studied in the scholarship on female representation, particularly in India.[30] However, this scholarship ignores political parties, party recruitment, and and the role local politics plays by being the foundation of party organization in India. While early disciplinary interest from economists, who ignore the role of party organization and party activists, is one reason for this issue, this trend has largely continued with a few exceptions in political science.[31] One of the main contributions of this dissertation to the study of descriptive representation in India, and in other low- and middle-income countries, is to bring

considers the behavioral and rational actor oriented studies of parties and structural approaches to party organization. Within this body of work, party activists emerge as crucial actors that drive party success and failure in Western Europe (Art, 2011) and in Latin America (Sells, 2020). Yet, this scholarship ignores the role of descriptive representation in party activist recruitment.

[28]Feminist economists and research in household economics have established the link between intra-household inequalities and economic behavior and development (Agarwal, 1997; Ashraf, 2009; Chiappori, 1988; Doss, 2013; Kandiyoti, 1988; Sen, 1990). Building on Iversen and Rosenbluth (2006), a new wave of gender scholarship uses mixed-methods and experiments to revisit the link between intra-household inequalities and women's political participation at the citizen-level. For prominent examples in South Asia, see Khan (2017) on constrained expression, Carpena and Jensensius (Forthcoming) on early marriage, Prillaman (Forthcoming) on self-help groups, and Haider and Nooruddin (2021) on observer effects in survey research. For a prominent example in the United States, see Bernhard, Shames and Teele (2020) on breadwinning constraints, and Teele, Kalla and Rosenbluth (2018) on double binds.

[29]Iversen and Rosenbluth (2010) and Folke and Rickne (2020) are exceptions but are set in industrialized democracies.

[30]See Pande and Ford (2012) and Clayton (Forthcoming) for a review of this scholarship.

[31]Dunning and Nilekani (2013) is an exception, and considers the role of the partisan affiliation of local representatives in the context of caste quotas.

to the foreground the crucial role local representatives play in grassroots party building.[32] In doing so, this dissertation is not only is the first to show that female politicians lower the gender gap in broker politics, but also contributes to the scholarship on brokers and party activists which has largely ignored the consequences of descriptive representation.[33] Furthermore, scholars are documenting a re-emergence of local politics in the United States and Europe,[34] these findings contribute to this scholarship by reinforcing the importance of descriptive representation in contributing to this rise of local politics.

This dissertation is also the first to explicitly test the demonstration-effects hypothesis using real representative photographs. This investigation provides the first evidence of the negative relationship between symbolic effects and women's political efficacy, challenging the foundations of demonstration-effects. In addition, this dissertation is the first to examine how citizens respond to information about gender quotas in India. Despite two decades of implementation, 94% of citizens in my survey were unaware that there are gender quotas in Delhi's municipality, echoing others who find poor knowledge of gender quotas in rural India (Iyer and Mani, 2019). Crucially, I find that the information about gender quotas does not lower political efficacy amongst men and neutralizes backlash to female representatives amongst women. We know little about citizen support for gender quotas in developing countries,[35] but these findings suggest that, paradoxically, gender quotas may lower backlash in contexts where norms about women's traditional roles remain entrenched. These findings are also relevant for American politics scholars grappling with backlash to female representation,[36] as well as for development scholars who conduct field experiments to increase women's political participation in developing countries.[37]

The thrust of the scholarship on female representation has been female candidacy, particularly in the U.S. (Shames et al., 2020), and this has continued in India (Bhalotra, Clots-Figueras and Iyer, 2018; O'Connell, 2020). While it is certainly important to investigate female candidacy, scholars are finding that large gender gaps exist amongst elected politi-

[32] Studies that investigate female representation and women's political participation have ignored the role subnational politicians play in party building, for example, see Bhavnani (2009), Barnes and Holman (2020), Beaman et al. (2009), Karekurve-Ramachandra and Lee (2020), Clayton (2015) and O'Connell (2020).

[33] See Auerbach (2020); Auerbach and Thachil (2018); Kruks-Wisner (2018); Liaqat (2020) in South Asia. See Brierley and Nathan (2020, 2021) in Ghana. See Auyero (2000) and Stokes et al. (2013) in Latin America. Daby (2020) is an exception which shows the gendered division of labour in broker politics in Argentina.

[34] See recent literature reviews by Anzia (2021); Le Galès (2021).

[35] Clayton (2015) is an exception.

[36] See Bauer (2017); Cassese and Holman (2019); Cassese and Barnes (2019); Mansbridge and Shames (2008); Sanbonmatsu (2008).

[37] See Chowdhury, Gulzar and Pathak (2021); Clayton et al. (2020); Fearon and Humphreys (2017); Gottlieb (2016); Gulzar and Khan (2018); Wantchekon et al. (2018).

cians.[38] These gaps suggest that simply getting more women to run will not be enough to close the gender gap in female representation. In India, I provide the first evidence of the gender gap in political career progression from local to state politics. I also show that while women are less likely to progress upwards, they rely more heavily on local politics as a career launchpad. Women's greater reliance on local politics as a pathway to power amplifies the need to understand this gap in career progression and echoes others who find similar evidence in other developing settings (Clayton and Zetterberg, 2021). Beyond documenting this problem in India, I show that women's greater presence in local politics lowers both the gender gap in career progression and in political survival of state-level female candidates. Similarly, in Brazil, female incumbent mayors are more likely to progress upwards than their male counterparts, and this career progression is stronger in constituencies which are at lower levels of party institutionalization at baseline. These findings contribute to the sparse research on political career progression, which is sparser in developing countries and to the growing research on upstream spillovers of gender quotas.[39]

Another key contribution of this dissertation is to enhance the understanding of *how* female politicians *deliver* development and substantive representation. Female politicians face incredible resistance from all parties involved in policy implementation. They exercise oversight of an overwhelmingly male bureaucracy deeply biased against female political leadership.[40] Citizens remain wary of women's effectiveness as political and economic leaders. Male co-partisans are key perpetrators of violence against women in politics.[41] In terms of raw qualifications, data show that women who enter politics through gender quotas are not exceptional. Yet, increasing evidence suggests that descriptive representation does enable women to access state benefits and welfare programs as well as increases substantive representation (Chattopadhyay and Duflo, 2004). *How do we make sense of this contradiction?*

My theory offers an explanation: female politicians deliver development and substantive representation because they generate organizational power that they can leverage to exercise oversight of bureaucrats (Gulzar and Pasquale, 2016; Raffler, 2017), and to improve their

[38] See Folke and Rickne (2016) in Sweden; Jensenius (2020) in India, Lassébie (2020) in France, Carroll and Sanbonmatsu (2013) and Brown et al. (2020) in the United States.

[39] For studies that investigate upstream spillovers of gender quotas, see O'Brien and Rickne (2016), Karekurve-Ramachandra (2020), and O'Connell (2020).

[40] A burgeoning scholarship documents how street-level bureaucrats discriminate against women and marginalized groups (Ba et al., 2021; Jassal, 2020; Neggers, 2018; Purohit, 2021; White, Nathan and Faller, 2015).

[41] See *Violence against women in politics: A study conducted in India, Nepal and Pakistan*, published by United Nations Entity for Gender Equality and the Empowerment of Women in 2014. In India, 58% of female politicians interviewed identified members of the same political party as perpetrator of violence while only 15% identified citizens.

political standing to speak in legislatures (Barnes, 2016*b*; Clayton and Zetterberg, 2021). Once women get major party nominations they cash in on the the prestige and access that comes with simply holding a party nomination to cultivate a grassroots following. Crucially, party activists are key actors through which poor access the state in developing countries. Missing this crucial link between female representation and party activist limits our understanding of development and representation. Female-led party building ensures that women can rely on the collective power of female grassroots activism to pressurize bureaucrats to deliver services on issues that are important to women. Grassroots female politicians and activists stage protests outside state offices, strategically de-emphasize their political ambition and benefit from having higher legitimacy as *social workers*. Additionally, in settings with broker-mediated state access, female activists facilitate women's claim-making activities. By enabling women's claim-making and pressurizing bureaucrats to deliver those claims, female politicians increase accountability in public service delivery towards women's issues.

Female politicians pay high costs for exercising power;[42] the literature quantifying the substantive gains made through descriptive representation ignores this cost. Safety and protection from violence and harassment are required and minimal condition for any politician performing their duties. Yet, female politicians worldwide and particularly in India and Brazil deal with high levels and dire forms of violence and abuse,[43] and scholars have labeled this phenomenon of violence against women in politics as VAWIP (Bardall, Bjarnegård and Piscopo, 2020). Krook (2017) notes how a 14-year-old girl was kidnapped from her bed late at night and raped as revenge for her mother's victory in local elections in rural India. She powerfully concludes that violence against women is not personal but is serious attempt to undermine democracy. Female-led party building offers women safety in numbers. Women's higher presence inside parties acts as a safety mechanism which lowers the costs female politicians pay to get heard in local committees and parliamentarians.[44]

[42] Krook (2020) is a rich investigation documenting and conceptualizing different forms of violence against women in politics.

[43] See *Violence against women in politics: A study conducted in India, Nepal and Pakistan*, published by the United Nations Entity for Gender Equality and the Empowerment of Women in 2014. In India, 58% of female politicians interviewed identified members of the same political party as a perpetrator of violence, while only 15% identified citizens (Table 2, p. 85). In addition, 41% said that violence against women in politics is an outcome of political party vendetta (Table 5, p. 86). See Biroli (2018) for political violence against female politicians in Brazil.

[44] Evidence shows that group composition and women's presence in greater numbers reduces inequality in deliberative discussion. See Barnett, Jamal and Monroe (2020), Karpowitz and Mendelberg (2014), and Mendelberg, Karpowitz and Goedert (2014). This strategy may not necessarily reduce violence against women, instead, it may even increase backlash (Krook, 2017). However, it is in some ways a weapon-of-the-weak strategy upon which women, especially those who lack dynastic support or celebrity backgrounds, rely upon to shelter themselves from violence.

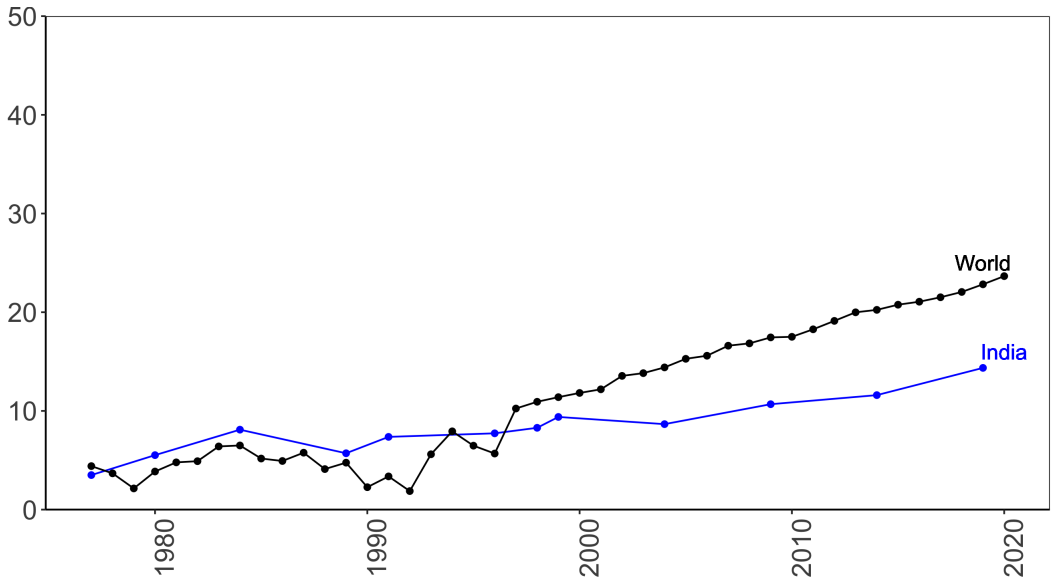
Highlighting the potential safety benefits of female-led party building is the contribution of this dissertation to the study of violence against women in politics (Krook, 2017).

History repeats itself. Female-led party building echoes accounts that explain women's suffrage in the west - conditions under which women achieve political equality. Teele (2018*a*) shows how a strong suffrage movement reinforces politicians' incentives to seek out new voters in competitive political environments. Suffrage movements provide politicians with the information and infrastructure they can use to mobilize the latent female vote and when this occurs in competitive political environments it leads to franchise expansion. Female-led party building re-iterates the contemporary importance of female grassroots infrastructure in democracies, and contributes by showing that the political economy of gender facilitates the creation of this infrastructure when women occupy major party positions in electoral politics. Secondly, because women are present *inside* parties they can use this partisan infrastructure to mount bottom-up pressure on party elites for greater parity.

In light of these positive findings and with gender quotas having been in place since the 1990s, the question is often asked,"Why has the pace of progress remained so slow?" While the World Economic Forum's global gender gap report from the estimates that it will take 145 years to close the gender gap in parliaments in the world, my estimate suggests it will take close to 250 years in India. Figure 1.4 visually plots this slow pace of change. This question is not only relevant for India, but is a recurrent frustration that is often expressed in scholarship and public debate worldwide.

Although the findings about female-led party building indicate women are more aggressively embedding themselves in party organizations and in intra-party networks, party elites and male politicians, to maintain the patronage relationships between them, slow India's pace of change. Most major parties in India have not reformed their candidate selection processes to nominate talented women proactively. Despite the requirement to nominate close to 50% women in each local election across the breadth of the country and the close-to-election-date announcement of randomized reserved seats, parties rarely meet the basic expectation to prepare male and female candidate lists for each constituency. Instead, party elites field wives and daughters of male party members. One would be careless to conclude that male party elite bias against women is the only reason to engage in this capture. To the contrary, party elites, both men and women, have incentives to maintain male-dominant patronage networks. Because male politicians are more effective in rent-seeking and have lower costs in orchestrating political violence than female politicians, they have a comparative advantage in democracies where patronage and violence structures electoral competition. Consequently, it only makes sense for party elites to weigh the trade-off of disrupting these valuable networks

Fig. 1.4 The slow pace of progress on female representation in India



The figure plots the % of women in the lower house of national parliaments (y-axis) from 1980 until 2020 (x-axis) for the world and India. The data source for the world is World Bank data on women in parliaments. The data source for India is the website called *Lokdhaba* which is hosted by the Trivedi Centre for Political Data, Ashoka University.

vis-a-vis the benefits of extending party resources to women. When this tradeoff favors maintenance of the status quo, it manifests itself as a *demand* for "proxy politics" - a form of male capture of women's political positions that dampens female-led party building. In short, female-led party building influences outcomes within this tight margin but also represents an increasingly potent threat to this form of politics.

Female politicians in India have come a long way, but they have not arrived. Yet, a clear pathway to power has emerged: female politicians succeed in politics by bringing more women in to party positions and channeling female grassroots activism inside political parties. To quote Duflo (2012) - *"A world run by women would look decidedly different."* Getting women into office reinforces the potential for this change. To move forward, female leaders must find strategies and collaborations that challenge the status-quo distribution of resources - both inside families and in political parties - while pursuing systemic change that reduces the unreasonable costs women pay to exercise their fundamental political rights.

1.4 Dissertation outline and chapter summary

This dissertation features five stand-alone chapters. The first four chapters are single-authored, and each tests a different observable implication of female-led party building using the natural

experiment of gender quotas in India. The final chapter investigates female-led party building in Brazil using a close election regression discontinuity design and is co-authored with Cameron Sells. As a stand-alone article, each chapter includes citations and references to other chapters. Funding was secured to conduct experiments and collect original survey data, with the initial round of fieldwork completed for two key chapters, however, these projects have been delayed for the unforeseeable future due to COVID-19.[45] The fieldwork for Brazil has also delayed for the unforeseeable future due to COVID-19. The current chapters include fieldwork data that was collected for these projects. The conclusion is the final chapter which summarizes the theory and the empirical findings of this dissertation, offers a glimpse into ongoing projects, and a roadmap for future research. Below, I offer a brief summary of each of the stand-alone chapters.

The second chapter, titled, *"How women mobilize women into politics,"* examines the causal mechanism underlying descriptive representation and women's political participation at the citizen-level. It is widely assumed that female politicians increase women's political participation through demonstration-effects, psychological mechanisms with origins in political theory. Yet, vast majority of women do not know their representatives; many face constraints on mobility and information access. These barriers diminish the scope of demonstration-effects, especially in developing countries. This chapter introduces a new explanation of how female politicians mobilize women in despite these constraints. Female representation has mobilization-effects. Female politicians have the capacity and the incentive to reduce household and party barriers in recruiting women as party activists. Female-led party building puts female activists at the helm of ground campaigns, shrinking the gender gap in door-to-door contact. Receiving partisan contact increases women's political participation. Evidence from the natural experiment of randomized gender quotas in India, in conjunction with original data from citizen and elite surveys support this argument. The findings highlight how the political economy of gender is pivotal to our understanding of how descriptive representation lowers political gender inequality.

The third chapter, titled, *"Local female representation as a pathway to power,"* builds on the concept of female-led party building but focuses on its effects on women's career progression and political survival in higher-level elections. It asks the question, *"What enables female politicians to rise and survive in politics?"* Studies emphasize top-down mechanisms that reduce elite bias but ignore bottom-up mechanisms. I argue that female

[45] One chapter focused on using oral history and archival data to demonstrate how female politicians and leaders have not only contributed to the re-building of women's party wings across Indian parties but also created vibrant spaces for deliberation on women's issues. The second chapter was a collaboration with the ruling party in Delhi to study how male and female party workers deliver substantive representation and influence political responsiveness. The project received funding from the MIT Governance Lab.

politicians transform grassroots party building to mount bottom-up pressure on elites. In settings where local candidates are meta-brokers - brokers for higher-level politicians, but patrons to party activists - male-led party building reinforces female under-representation across the party's hierarchy. Female-led party building disrupts this status quo. I exploit Delhi's multilevel setting, where the natural experiment of randomized gender quotas causes women to replace men as meta-brokers. This design identifies a novel effect - gender quotas' extensive margin - and rules out alternative explanations, while qualitative evidence bolsters support. Local female politicians not only progress upwards, but state female politicians are substantially more likely to survive party positions in constituencies with a greater local female presence. Female-led grassroots party building reduces gender inequality across the entire political spectrum.

The fourth chapter, titled, *"The political economy of demonstration-effects,"* examines demonstration-effects: whether exposure to female politicians increases women's political efficacy. This chapter asks, *"Does exposure to female politicians empower women in patriarchal societies?"* I investigate this question using a within-subject survey experiment within the natural experiment of gender quotas in India. Using the natural experiment, I uncover positive aggregate effects of female representation on women's political efficacy. To test the demonstration-effects mechanism, citizens are exposed to a realistic treatment photographs that signal the randomly assigned representative's gender. Contrary to aggregate results, women who view photos of female politicians display reduced levels of political efficacy, but only those women who have low intra-household bargaining power. Evidence suggests that female politicians evoke backlash by threatening women's traditional identity. Consequently, randomized information about gender quotas, by reconciling female political presence with pre-existing norms, neutralizes this backlash instead of deepening it. Findings demonstrate that bargaining power fractures female representation, and, paradoxically, suggest that gender quotas may reduce backlash in contexts where norms about women's traditional roles remain entrenched.

The fifth chapter, titled, *"Mobilizing at the booth,"* uses administrative data and the natural experiment of gender quotas in the municipal council of India's capital city, New Delhi, to examine whether female politicians increase female turnout. To measure turnout, I use administrative data on male and female voter turnout at the most micro-level of the Indian electoral landscape: the polling booth. In additional, border-redistricting of 2017 creates an opportunity to gain traction on two specific mechanisms: demonstration and mobilization. While the reservation of seats ensures citizens remain exposed to female politicians, border-redistricting disrupts politicians' grassroots party activist networks at those are territorially rooted. Depending on the extent of re-districting, politicians vary in the

extent to which they can rely on erstwhile grassroots party activists. Investigating turnout in 12,485 booths, I find gender reservations increase female turnout substantially but only in constituencies less disrupted by redistricting, bolstering support for the mobilization-effects mechanism. Findings show that female politicians increase female turnout in the long-run at no cost to male turnout, providing additional evidence supporting mobilization-effects.

The sixth chapter, titled, *"Women and party building in Brazil,"* and co-authored with Cameron Sells examines female-led party building in the Brazil. We ask, *"Do female incumbents build (inclusive) party organizations?"* The costs and benefits of holding political office are unequally distributed: women benefit less, but incur personal costs. We highlight a new arena in which women have an upper hand: recruiting female party members. Using rich data on party membership and a regression discontinuity design in Brazil, we show that, despite resource disparities, male and female incumbents are equally likely to increase party membership, but only women shrink the gender gap. We theorize how the political economy of gender inequality incentivizes female-led party building: social roles limit women's options and women rely more on local politics for career progression. Women optimize their limited resources by recruiting female members who both join for non-clientelistic reasons and are less likely to leave. Furthermore, we find that women have greater career progression in constituencies with greater need for party building. We highlight a new way in which female representation enhances democracy via grassroots party building.

Chapter 2

How women mobilize women into politics

2.1 Introduction

Around the world, women remain under-represented across the spectrum of political positions and women's political knowledge and participation lags behind men.[1] Gender gaps in political participation persist even when women gain access to economic or educational opportunities; unequal access to political office remains the most persistent form of gender inequality.[2] These vast gender political inequalities undermine democratic legitimacy (Clayton, O'Brien and Piscopo, 2019) and lower substantive representation (Barnes and Holman, 2020; Betz, Fortunato and O'Brien, 2021; Chattopadhyay and Duflo, 2004; Dietrich, Hayes and O'Brien, 2019; Franceschet and Piscopo, 2008).

Building on Pitkin's (1967) seminal work on representation, theoretical scholarship contends that female visibility at the elite level in politics can lower political gender gaps through *demonstration effects* (Mansbridge, 1999; Phillips, 1995). I use demonstration effects to refer to a bundle of mechanisms through which female politicians change perceptions and break down psychological barriers that discourage women's political participation. Demonstration effects inspire agency from women: female politicians act as role models, signal to women that their interests will be taken seriously, raise the value of women's political participation and consequently break down psychological barriers that lower women's participation. A burgeoning empirical scholarship investigates the effect of female representation. Studies that find a positive aggregate effect, interpret the results as favoring the demonstration effects

[1] See the review by Wängnerud (2009).

[2] See, *The Global Gender Gap Report 2021*; the World Economic Forum estimates that, at the current pace of progress, it will take 145 years to close the political gender inequality, which remains the most persistent gender inequality gap; this remains the most persistent gender inequality relative to income, health, or education.

mechanisms (Barnes and Burchard, 2013; Wolbrecht and Campbell, 2007). On the other hand, studies that find null or negative effects, conclude that the weakness or absence of demonstration effects may be due to ineffective signaling or backlash to women's pathway to power (Clayton, 2015; West, 2017). Yet, the handful of studies that explicitly investigate the demonstration effects mechanism fail to find supporting evidence (Beaman et al., 2009; Foos and Gilardi, 2020; Goyal, 2020*b*).

The main contribution of this paper is to introduce a novel "mobilization" mechanism that adds a micro-foundation to this relationship and documents an additional pathway through which female politicians can increase women's political participation. I argue that female politicians are more likely to recruit female party activists, which lowers the gender-gap at party activist level. In turn, female party-activists are both more likely to be active in the political campaigns of female candidates and are more likely to contact women during ground campaigns, shrinking the gender gap in partisan campaign contact. Women who receive this in-person contact are more likely to have higher political knowledge, more likely to turn out to vote and this contact will have positive spillovers for women's subsequent political participation. Mobilization effects can, therefore, directly contribute to increasing women's political engagement.

In advancing this claim, this paper makes theoretical and empirical contributions to our understanding of *how* female representation lowers the gender gap in political participation in low and middle-income countries. The mobilization pathway addresses the reality that women face multiple barriers to realizing the benefits of descriptive representation on the back of demonstration effects alone. Firstly, many women do not know their female representatives in a meaningful way. This problem is highly acute in low-information contexts. For example, only 11.2% women who participated in this study's survey could name their representative. In contrast, many women, close to 50% women, do interact with and see grassroots party activists, who bring politics to their doorstep. Contact via ground campaigns, at least theoretically, can become the vehicle through which second-order demonstration effects accrue to women. Seeing female party activists, who come from common backgrounds, campaign in politics can demonstrate to women that politics is truly welcoming of women at every level; and that those who lack political or elite backgrounds can contribute to politics too.

Secondly, the political economy of intra-household inequalities can increase women's costs of political participation (Iversen and Rosenbluth, 2010), for instance, by constraining women's mobility and access to information. 39% (5%) of surveyed women (men) share

their mobile phones with other family members,[3] while 56% (17%) women (men) needed permission from the male family head to to participate in a political event. These domestic constraints may make it unlikely that women experience demonstration effects or are able to act on them.

Empirically, this paper uses the site of the municipal council of India's capital city, New Delhi to provide evidence. The municipal context of Delhi enables to use the random assignment of gender quotas for causal inference. Each municipal election, single-member constituencies are exclusively reserved for *only* women to contest (and win) elections (a reserved constituency). Like elsewhere in India, an as-if random protocol that is well known to be exogenous to social, political, economic, or geographic considerations determines the reservation order (Beaman et al., 2009). This design enables to identify the effect of having female political presence and helps to overcome selection bias of female politicians selecting into constituencies that are conducive to female party activist recruitment. The quantitative analysis relies on data from an original representative citizen survey embedded within this design. This survey introduces a new measure which asks citizens about the gender of the party activist, in addition to whether they were contacted by party-activists during political campaigns. The paper triangulates quantitative evidence from the citizen-survey with evidence obtained through representative elite-surveys in Delhi and Bihar, one of the most gender unequal places within India, and fieldwork conducted in multiple sites in India. This qualitative evidence demonstrates the external generalizability of the theory within India.

Across these substantively different data-points, the support for the mobilization mechanism is striking. The strong presence of female party-activists stands out in the high intensity of contact reported by citizens: citizens in reserved constituencies are thrice as likely to be contacted by female party-activists. Furthermore, by measuring individual-level partisan contact, this paper is the first to highlight a stark gender gap in partisan door-to-door campaign contact in India. In non-reserved constituencies, women are 20% less likely than men to be contacted during ground campaigns. A crucial finding is that the gender gap in partisan contact is halved in reserved constituencies.

Using comparative and representative elite-incumbent surveys in the vastly different settings of urban Delhi and rural Bihar, I find that politicians report a similarly sized gender gap in the composition of their campaign organization. Female politicians are approximately

[3]For example, The Mobile Gender Gap Report (2020) shows that the gender gap in mobile and internet use in low- and middle-income countries remains substantial, with more than 300 million men accessing the internet on a mobile than women. Patriarchal norms and household constraints on women are one of the key reasons for these gender inequalities.

25% more likely than men to have gender-balanced or female-heavy campaigns. I use data from political access narratives to illustrate how candidates recruit party-activists and bring citizens into politics –bringing to life the intensity with which women engage in inclusive party building. These narratives lend support to several building blocks of the theory and highlight how party recruitment and ground campaigns work at the grassroots. Shadowing political campaigns at different election level in India confirms that female politicians rely on female party-activists in non-quota elections, too, and reach out more to female citizens.

2.2 The political economy of representation spillovers

The expectation that female political leadership will lower gender gap in political participation is a fundamental one in political science. Most studies of female representation have focused on examining *whether* female political presence has spillovers on women's political participation but less so on theorizing and studying the mechanisms that underlie this relationship. Most empirical studies set in the U.S context have implicitly assumed that demonstration effects are the key mechanism through which female politicians can empower women (Dolan, 2006; West, 2017; Wolbrecht and Campbell, 2007). This theoretical paradigm has also shaped studies that investigate the spillovers of female representation in other settings, which also interpret aggregate findings as either confirming or rejecting the demonstration effects mechanism (Barnes and Burchard, 2013; Bhalotra, Clots-Figueras and Iyer, 2018; Clayton, 2018). However, hardly few studies explicitly examine the demonstration effects mechanism and studies that do so find no support for it (Beaman et al., 2009; Foos and Gilardi, 2020; Goyal, 2020*b*).

Crucially, high informational and structural barriers can frustrate demonstration effects. To experience a high intensity of demonstration effects that can spur women to convert their enhanced political efficacy into costly political action, requires that women have at least some minimal knowledge of their representative. Few studies actually measure to what extent citizens know their representatives, but women display low political knowledge levels on even very basic questions in developing settings.[4] For example, 11.2% women interviewed in the citizen-survey in Delhi could name their representative.[5] In their seminal study investigating the effects of exposure to female leaders in rural India, Beaman et al. (2009) note that low

[4]Even outside low-income contexts, Stauffer (2020) finds that most citizens do not hold even a general idea of women's presence in their state legislature in the U.S, and while citizen's misperceptions may matter for psychological feelings of efficacy, these are not a result of female representation.

[5]The knowledge of gender quotas is also remarkably low, as only 6.6% citizens know about gender quotas.

political knowledge levels, in particular not knowing who is the representative, can limit demonstration effects amongst both men and women:

> "In comparison, our estimates, though noisy, suggest very limited updating among female villagers. One possible explanation is that female villagers are less involved in local politics: women are significantly less likely to know the pradhan's name or to have ever been in direct contact with him or her.... Even among men, the impact of reservation on statistical discrimination is concentrated among those who know the pradhan's name." (p.1528)

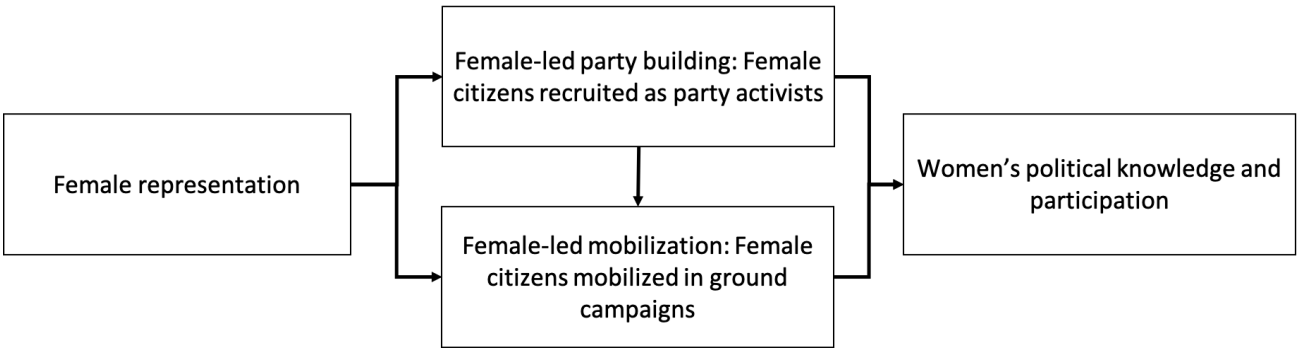
Another key limitation of demonstration effects logic is that it does not account for structural political economy constraints on women's participation (Iversen and Rosenbluth, 2006, 2010). Research suggests that institutional, organizational, and structural barriers limit women's political participation more than their psychological predispositions (Piscopo, 2019). A burgeoning scholarship shows that family domestic constraints are a major barrier to women's political participation in the U.S (Bernhard, Shames and Teele, 2020), Africa (Clayton and Zetterberg, 2021; Gottlieb, Grossman and Robinson, 2018), Latin America (Franceschet and Piscopo, 2014; Wylie, 2018), and are uniquely high in South Asia (Carpena and Jensensius, Forthcoming; Khan, 2017). The repercussions of these domestic constraints on women become evident when contrasting two different types of policy efforts that have recently been aimed at increasing women's participation in these settings.

Field experimental studies highlight the "resource paradox" where non-partisan information awareness campaigns, which are arguably more high-powered and targeted than top-down demonstration effects, but do not come together with lowering contextual constraints faced by women, decrease women's political engagement (Gottlieb, 2016). *Only* seeing women in politics may similarly result in backlash as women respond negatively to this elite signal (Goyal, 2020*b*). In contrast, policy interventions such as women's self-help networks that increase women's access to other women's networks work because they lower the domestic grip on women (Prillaman, Forthcoming).

I argue that female representation can increase women's political participation by directing partisan contact towards women. Partisan contact is a high-powered and costly resource which is aimed at increasing political participation. A vast experimental literature in political science shows that contact is the most effective means to increase political participation. Next, I disaggregate the mobilization mechanism in to its building parts as seen in Figure 2.1. I unpack two fundamental elements of the theory: how female-led party building increases women's participation as party activists and how female-led mobilization directs contact to

mobilize women's political participation. I build on the get-out-the-vote literature to conclude that receiving partisan contact is likely to increase women's political participation (Gerber and Green, 2017).

Fig. 2.1 The logic of mobilization effects



Female-led party building

Across developing countries, politicians and party leaders rely on party activists to mobilize citizens. These intermediaries who sit between politicians and voters and go by many names: party brokers in Ghana (Brierley and Nathan, 2020), slum leaders in India (Auerbach and Thachil, 2018), and party activists in Argentina (Auyero, 2000). Relevant to this paper, party activists rely on upward connections to politicians and party elites to engage in problem-solving, to access patronage or to access political positions (Auerbach, 2020; Brierley and Nathan, 2020). The male dominance of party activist roles is stark but has received less attention in this literature. For example, data from Auerbach and Thachil (2018) shows that 88% of slum brokers are male in India. Similarly, data from Brierley and Nathan (2020) shows that 72% of party brokers are male in Ghana. Muhtadi (2018) shows that 91% of brokers are male in Indonesia. Daby (2020) highlights that 62% brokers are male in Argentina.

I argue that female politicians are more likely to recruit female party activists, shrinking the gender gap in women's participation as party activists. I refer to this mechanism as "female-led party building". Female politicians recruit women because they face lower costs in recruiting women and this strategy gives them a comparative advantage over men. This efficiency arises because female politicians can *simultaneously* lower both family and demand side barriers on women's political entry and bring women inside parties. When women enter political parties as candidates, they enter positions where party building is a key

responsibility. Literature on party organization shows that local candidates are close enough to communities to have deep ties to citizens, and therefore are one of the key stakeholders who build downward linkages for political parties in many low to middle income democracies (Bohlken, 2016; Novaes, 2018; Sells, 2020).

On the family-side, female politicians actively persuade women to participate, and male family member are less likely to be reluctant for women to participate with other women and benefit from tangible political access. In settings where women have high intra-household constraints on mobility, working with a female politician or other female party-activists makes it easier for women at both political levels to navigate mobility constraints. Barnett, Jamal and Monroe (2020) find that mixed-sex work spaces are a strong deterrent to women's participation in the economy, and given the nature of political work, male-led parties increase the mobility constraints that women have to navigate. Furthermore, women continue to face rampant violence and harassment inside male-led parties (Krook, 2017), which can deter male family members from allowing women to partake in partisan politics. The potential to rely on the company of other female activists to navigate these challenging spaces can substantially lower these fears and sanctions on women's mobility. Unlike male politicians, this shared benefit also incentivizes female politicians to invest in recruiting female activists. This does not mean that female (male) candidates will *only* seek out female (male) activists. Instead, female politicians are *more likely* to generate a greater supply of female talent because they are more effective in lowering mobility constraints on women and also have incentives to create this demand-side push.

Yet, it is not sufficient to only resolve mobility constraints to get women inside parties. Studies that examines women's entry at the candidate-level, highlight how political parties act as gatekeepers to political recruitment and keep women out of politics even when women run as candidates (Folke and Rickne, 2016). Existing scholarship documents how the existence of male networks of "electoral gatekeepers", who identify and recruit candidates from their male dominated networks, plays a role in suppressing women's candidacy in a variety of contexts (Bjarnegard, 2013; Fox and Lawless, 2010; Sanbonmatsu, 2006*a*). More crucially, evidence suggests that male gatekeepers fail to recruit women even when they use similar recruitment methods as women (Cheng and Tavits, 2011; Crowder-Meyer, 2013). For example, investigating a new party in Jharkhand, Gulzar et al. (2021) find that the recruitment drive by male party leaders fails to recruit female activists even when they actively aim to recruit women and do not have overt bias against women. When women do enter male-heavy parties, they are often put in powerless positions with limited scope of influence (Folke and Rickne, 2012; O'Brien, 2015), which lowers the credibility of male sponsorship (Butler and Preece, 2016*b*). Daby (2020) highlights that female brokers in Buenos Aires get fewer

in opportunities inside parties and this sustains their under-representation. In summary, male-led party recruitment effectively keeps women out of party organization or relegates them to un-influential roles within parties.

On the party-side, in settings where gender norms limit mix-sex interactions and networks are highly gendered, female politicians are better-positioned than their male colleagues, to actively seek out women from their neighborhoods and broader social and political networks. Women's networks enables parties to access female talent. However, most crucially female politicians can use their better understanding of women's preferences to recruit as well as strategically place women in roles which are substantively meaningful to them and where female activists can claim credit for their labour. The credibility that women's work will be recognized and can translate into material and political access can motivate female activists to both join parties and work hard at election time. By strategically placing women in important positions inside parties, female politicians also benefit from the support of their loyalists during promotion decisions (Goyal, 2020*a*). Research on party-activists shows that politicians rely on party activists to assert their influence inside parties (Brierley and Nathan, 2020). In contrast, male candidates may fail to credibly signal the same commitment to successfully recruit female talent, even if they succeed in overcoming access barriers to reach out to aspiring female activists. Male politician's or party elite commitment to female career promotion is likely to be suspect against a backdrop of looming male-bias.

Female-led mobilization

Female-led party building can transform parties in many ways. Relevant to this paper, I focus on how female politicians transform ground campaigns and increase the likelihood that female citizens are targeted with partisan contact. I argue that in patriarchal settings, male-heavy party organizations are unlikely to contact women. Limitations on mixed-sex interactions and gender segregation together with near absence of women from public spaces means that women are simply harder to access. The difficulty in reaching out to female constituents, who are relegated to private spaces, can lead male party-activists to either shirk or end up accessing fewer women than men.

Consequently, when male candidates or male-heavy parties aim to target women, male party-activists will fail to contact women. Even in settings where contact is pre-planned and equitably targeted, the literature finds that visible characteristics such as, gender and ethnicity of the canvasser can influence the likelihood and the content of contact (Michelson, 2006). Monitoring is also unlikely to resolve this principal-agent problem (Enos and Hersh,

2015). For example, in the setting of Pakistan, Liaqat (2019) finds that monitoring male-party workers is insufficient to ensure that male-heavy campaigns will access women. This evidence suggests male heavy-campaigns will find it difficult to access women and will create a gender gap in campaign contact. Female-led mobilization means campaigns are more likely to be gender balanced, which can increase the likelihood that women are contacted.

The final piece of the argument linking contact to political participation is perhaps one of the most researched topics in experimental political science. An extensive field experimental literature underscores that door-to-door contact - partisan as well as non-partisan contact - is the most effective way of increasing political participation (Gerber and Green, 2017). Evidence investigating non-partisan contact in Pakistan is also overwhelmingly positive and the effect sizes are generally larger than in the U.S. (Cheema et al., 2020; Giné and Mansuri, 2018). There are several reasons to expect why partisan contact can more strongly increase women's political participation because it is better suited to lower family constraints on women.

Party-activist contact opens up a channel through which women can directly receive information about political events, and because party-activists tailor their conversation to suit male or female voters, such tailored interactions can trigger citizen's interest in politics. More crucially, access to party-activists improves political access to state benefits and local goods (Auerbach, 2020; Bohlken, 2018), and present a high-powered channel through which female politicians can persuade male family members to allow women to participate. Studying voter mobilization in Pakistan, Cheema et al. (2020) find that when door-to-door volunteers build consensus with male gatekeepers this effectively costs family constraints and gets women to turnout to vote. Furthermore, unlike non-partisan contact, the whole household can benefit from political connections with party-activists. Finally, because party activists are often closer in the socio-economic profile to citizens than politicians, seeing female party-activists in particular can trigger non-elite second-order demonstration effects.

In the next section, I detail the empirical strategy to test the observable implications of mobilization effects. I use the natural experiment of gender quotas to identify the effects of female-led party building on recruitment of female activist, and the gender-gap in partisan contact in ground campaigns. For investigating the consequences of receiving partisan contact, I use a qualitatively informed strategy to to provide a test of whether partisan contact is positively correlated with women's political knowledge and electoral participation, and whether it has spillovers for non-electoral political participation.

2.3 Research Design

This paper relies on the case of Delhi, India's capital city to provide evidence. Delhi has a population of over 23 million (as per Census 2021), which is greater than Norway, Denmark and Finland combined. This paper focuses on Delhi's municipal government called the Municipal Corporation of Delhi (MCD), which is amongst the largest civic bodies in the world. The MCD is responsible for many key aspects of Delhi governance, including the provision of small dispensaries and primary healthcare, primary educational facilities, sanitation, garbage and waste disposal, collection of property taxes. The MCD is composed of 272 seat single member districts called "municipal constituencies" (or simply wards), that each elect a representative called "councillor" every 5 years through a first past the post system.

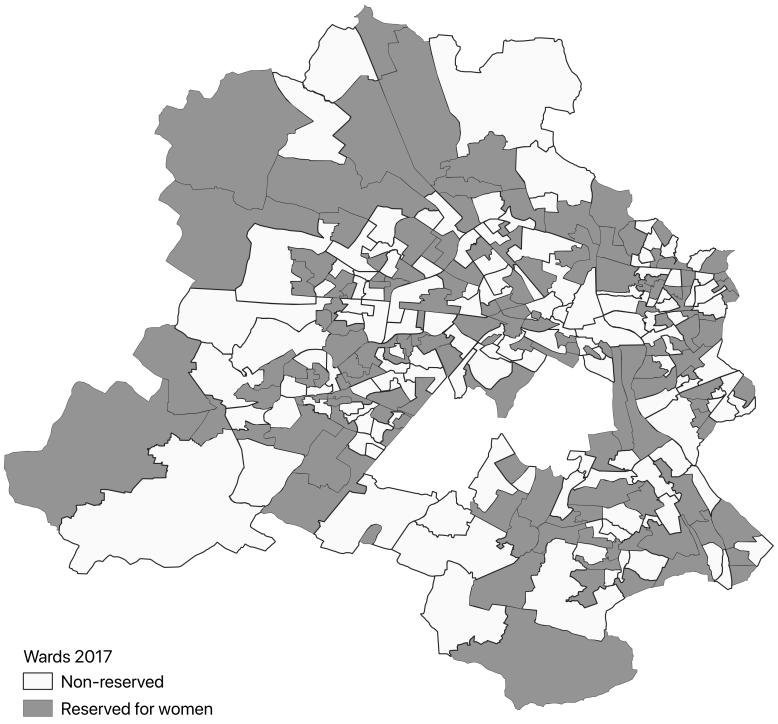
Crucially, the MCD features randomized reserved seats gender quotas. India's centralized gender reservation policy mandates that only female candidates can contest elections in constituencies that are "reserved" for women. The wards that are not-reserved are known as "general" or "non-reserved" constituencies, and are open to both male and female candidates. In the latest 2017 elections, 50% seats were randomly reserved for women and this design offers causal inference for the quantitative analysis. I describe this reservation process in more detail in the following sub-section.

The natural experiment of randomized gender quotas

In municipal elections in 2017 one half of all municipal constituencies were reserved for women through an as-if random process, which very briefly put, involves reserving every 2nd constituency from a serially ordered list of municipal constituencies, and these serial numbers are in-turn pseudo-randomly assigned. Table A.1 in the Appendix section summarizes the reservation policy and gives an overview of the three-step reservation process that was used to implement gender reservations in 2017 (and previous election years).

Figure 2.2 visually plots the 2017 reservation status of all of Delhi's municipal constituencies, where gray represents constituencies reserved for women and white represents non-reserved constituencies. Each of these 272 constituencies (clusters) in the MCD have an average population of approximately 60,000 (cluster size) as per 2011 census. There seems to be no visual pattern to the reservation status. The treatment is "being reserved for female politicians" and substantively means receiving female political presence as candidates or representatives in a context with gender quotas.

Fig. 2.2 Gender reservation in 2017



The Appendix provides further qualitative evidence and Table A.2 reports balance tests which re-assure that the reservations process indeed lead to as-if random reservation of constituencies for women. Note that unlike the experiment in rural India, the past reservation status is un-correlated with the reservation status in the future. This means that each electoral year is a fresh as-if random "cluster" experiment where citizens in an entire constituency (cluster) are treated with female reservation. In other words, politicians do not face any term limit which is an indirect feature of the reservation policy in other Indian settings where reservations are rotated.

Data

The key source of data for quantitative investigation is an original citizen survey that was fielded in Delhi in November 2018, approximately 18 months after the most recent municipal elections in April 2017.[6] This original survey was conducted across 51 neighborhoods and 183 polling stations spread in 17 randomly selected municipal constituencies as per 2017 elections: 9 in female reserved wards and 8 in non-reserved wards. Within each polling

[6]Note that all outcomes are measured in November 2018 and no other elections took place in Delhi in between this period. This survey was conducted as a baseline survey (pre-treatment survey) of a field experiment in Delhi.

station, households were selected using a random walk procedure and respondents that were at least 18 years of age, resident in Delhi for more than 3 years, available to re-interview in three weeks who agreed to interview were interviewed. In total, 860 men and 804 women were interviewed in person. The survey was pre-tested in a field pilot in Sep 2018 and details about the sampling procedure are available in the Appendix A.4.

Table 2.1 Panel A provides balance tests using all of the key demographics variables measured in the survey. Because of small number of clusters, I report randomization inference tests for all the estimates in the paper. The table shows that most of the point estimates are small, and none but one of the 21 variables is significant confirming that there is balance on key observables. Table 2.1 Panel B reports balance using constituency-level measures of total and scheduled caste (SC) population from Census 2011.

Table 2.1 Balance tests

	Control mean (non-reserved)	Treatment mean (reserved)	Difference	RI p-value
Panel A: Survey data				
Age (yrs.)	36.628	36.085	-0.543	0.601
Gender	0.476	0.490	0.014	0.746
Household size (N)	5.550	5.735	0.185	0.186
Delhi born	0.521	0.505	-0.017	0.684
SC/ST	0.340	0.365	0.025	0.669
OBC	0.259	0.295	0.036	0.404
Muslim	0.114	0.125	0.011	0.812
Other minorities	0.032	0.021	-0.011	0.387
Illiterate	0.108	0.133	0.025	0.295
8th class and above	0.892	0.867	-0.025	0.295
High school and above	0.405	0.343	-0.062	0.146
Housewife	0.326	0.375	0.049	0.174
Employed	0.410	0.445	0.035	0.357
Home owner	0.794	0.795	0.001	0.973
Income level	3.151	3.329	0.178	0.432
Household items (Std. index)	0.026	-0.023	-0.049	0.688
Has TV	0.916	0.889	-0.026	0.222
Use bus	0.869	0.893	0.024	0.284
Enumerator gender	0.441	0.456	0.014	0.421
Panel B: Municipal constituency level census data (2011)				
Total population (ln)	11.081	11.031	-0.050	0.547
SC population (ln)	9.368	9.415	0.047	0.869
% SC population	22.966	22.272	-0.695	0.919

Notes: All variables in Panel A are binary unless indicated. The total number of municipal constituencies is 17. There are 9 constituencies and 878 respondents in treatment arm, which is reserved in 2017. There are 8 constituencies and 786 respondents in control arm, which is not reserved in 2017. Each constituency has 98 respondents on an average, ranging from 90 to 110. *** p<0.01, ** p<0.05, * <0.10

In addition to the citizen-survey, I also collected qualitative data through open-ended interviews and three structured elite surveys in Delhi and Bihar. The Delhi elite survey interviewed $N = 92$ incumbent municipal politicians who were elected in 2017 and with a response rate of 33%. The Bihar elite surveys interviewed two different types of rural politicians who oversee the same electoral jurisdiction called gram panchayat and were elected in

2011. Incumbent Mukhiyas, who are responsible for implementing developmental scheme (N=736, response rate=20%); and their counterparts Sarpanch incumbents and runner-ups of close elections (up to 5% margin of victory), who are responsible for law-enforcement and running community-level courts (N=898, response rate=14%) were interviewed. Bihar village politics is also an electoral context where parties are formally absent, which lowers party side barriers to relying on female activists. Both surveys are representative at the state-level and were conducted largely on phone during 2019-2021. The survey instruments are ethnographically informed through fieldwork and additional qualitative data was collected through open-ended interviews and shadowing politicians and party-activists during and between election campaigns, in multiple sites in India during 2015-2020.[7]

Empirical strategy

The causal estimate of interest is the effect of female major party candidacy. The randomized reservation policy makes it possible to estimate the effect of quota-induced female candidacy by simply comparing differences in means of the outcomes of interest in never-reserved and reserved constituencies. Because unreserved constituencies always have very few female candidates who run on major party nominations, these differences in means estimates therefore are the reduced form effects or intention to treat estimates of quota-induced female major party candidacy in a setting with gender quotas. Note this is also the same estimation strategy as in Beaman et al. (2009) and Chattopadhyay and Duflo (2004).

To estimate the reduced form effect of quota-induced female major party candidacy, I run the following OLS regressions for male and female respondents clustered in 2017 municipal constituencies:

$$Y_{fj} = \beta_0 + \beta_1 R_j + \varepsilon_1 \tag{2.1}$$

$$Y_{mj} = \beta_2 + \beta_3 R_j + \varepsilon_1 \tag{2.2}$$

where, Y_{fj} (Y_{mj}) is the outcome of interest for female (male) respondent in constituency j, R_j refers to the reservation status of constituency j. β_1 and β_3 are the causal estimates of interest and refer to the effect of being "reserved" for a woman in 2017 in reference to not being reserved for a woman in 2017 for female and male respondents respectively. Instead of reporting an interaction effect, I report estimates in male and female sub-samples to ease interpretation. Because main results do not employ any controls, the simple difference between β_1 and β_3 provides the coefficient of the "interaction" term. Note that the point

[7] Fieldwork was conducted in Delhi (2015-2020), Bihar (2019-2020), Rajasthan (July 2017), Maharashtra (April 2018), and Karnataka (July 2018).

estimate changes little when adding a battery of individual level controls: age, caste/religion, employment status, marital status, born in Delhi, household items index, and enumerator's gender, and the substantive interpretation of the results remains unchanged (reported in the Appendix).

To interpret this reduced-form effect it is important to note three contextual facts: (1) all major parties nominate women in all reserved seats and in each reserved municipal seat 3 women run on major party nominations. (2) very few women secure major party nominations from non-reserved wards (average of 0.078). In fact, only 5 women secured major party nominations in all of 134 non-reserved seats. As a result, the reduced-form effect is close to what would be obtained by instrumenting for female party nominations by the number of seats reserved for women. (3) independent candidates or candidates from small parties are largely peripheral figures in municipal politics. Only 4% independent candidates won an election in 2017, and 95% of top 2 candidates are from major parties. This data lends support to the exclusion restriction that key relationships are mainly driven by candidates who hold major party nominations. Further, because gender-quotas are announced only a month-ahead of the election, it is unfeasible for parties to plan recruitment drives with quotas in perspective.[8] In other words, gender quotas are unlikely to increase female party-activists other than through female-led party recruitment and therefore these effects can be interpreted as the effect of female major party candidacy.

For all estimates of β_1 (β_3), I provide the heteroskedasticity robust standard errors as well as p-values from a two-sided randomization inference test of zero treatment effects. I also provide randomization inference p-values for the interaction term. The randomization inference procedure has the advantage of providing inference with correct size regardless of sample size. Moreover, while the effective sample size from a cluster randomized study is somewhere between the number of units of observation and the number of clusters, standard asymptotic tests can over-reject with few clusters (Cameron, Gelbach and Miller, 2008). Therefore, in agreement with recent advances in econometrics (Abadie et al., 2020), I report randomization inference p-values in all tables and cluster the standard errors at the level of treatment (municipal constituency). The randomization inference test I employ consists of writing a program to mimic the actual pseudo-random reservation process for each electoral

[8]Interviews with party leaders and senior politicians in all three major parties in Delhi confirm that parties indeed carry on with status-quo practices. Moreover, while parties orchestrate large scale-rallies that span multiple constituencies, parties select candidates on the basis of capacity to conduct door-to-door mobilization and rely on them to do grassroots mobilization. Assuming parties are rational and therefore displace their sparse female activists to support male politicians, it raises the likelihood of null effects. However, both candidates and party activists are territorially embedded in their communities and rarely move to other constituencies. For example, even when reservations effectively impose term-limits on male candidacy, male politicians do not move to non-reserved constituencies to contest elections.

year as in Appendix Table A.1 and reassigning this placebo treatment and control status in the sample. I use the ritest package in Stata written by Hess (2017) to implement this program.[9] Under the null hypothesis of zero treatment effects, the proportion of re-estimated βs that are larger (in absolute value) than the actual β provides a p-value for such null hypothesis. Note that this clustered design is sufficiently powered (80%) to detect substantively meaningful treatment effects, which means as small as 6% to 10.3% with binary outcomes and assuming an ICC observed in the data which ranges from 0.001 to 0.03 as per EGAP power calculator.

Dependent variables: Measuring female-led recruitment and mobilization

This paper introduces a new citizen-level measure that asks respondents not only about whether they were contacted by a party-activist during the electoral campaign, but also asks them about the gender of the party-activist.[10] The former measures overall mobilization efforts, while the latter measures the extent to which mobilization is conducted by female activists. Towards this aim, the survey asked respondents whether: "*In the last municipal elections in 2017, did any party-activist visit* you *personally? If yes, do* you *remember whether the party worker(s) were male or female or a group of male and female party-activist?*"[11]Figure 2.3 shows that on an average 60% of the respondents report being contacted by party-activists during elections, and approximately 11% respondents report contact by female party-activists.[12]

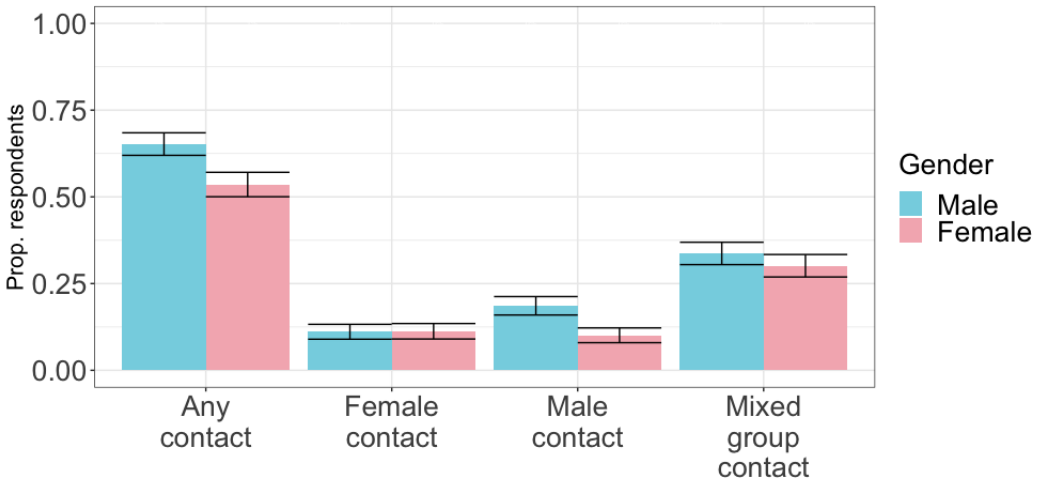
[9]This program operates as follows: within the strata (block) employed in the policy for the particular election year, I reshuffle the municipal constituencies and assign all the observations clustered within each of the 2nd municipal constituency to treatment. As per the reservation policy in 2017, all constituencies are stratified into scheduled caste (SC) and non-SC reserved wards within each of the MCD corporation in the North, South and East and treatment is assigned to every 2nd constituency on a serially ordered list within each of the strata. I then proceed to re-estimate β using this placebo assignment procedure multiple (1,000) times.

[10]Unlike in Latin America, there is no formal data on party-activists that is available in India. Fieldwork attempts to get to such data revealed that parties neither store this data systematically nor do they have access to details of all party-activists due to the churn of candidates and brokers that happens both during and between elections, for example - see (Jensenius and Suryanarayan, 2020). Parties also seem wary of sharing live data due to fear of poaching of party-activists. Relying on sporadic datasets maintained by parties raised measurement concerns that were serious enough to undertake the more costlier form of data collection through citizen and elite surveys.

[11]Questions about partisan contact in electoral studies in India ask about household-level contact which masks the gender gap in campaign contact, as women report contact that was received by their husbands.

[12]Asking citizens to report campaign contact and the gender of the party-activist may be prone to gender specific measurement bias. For instance, the literature on political knowledge shows that there are differences in the "propensity to guess" Mondak and Anderson (2004). It is plausible, therefore, that women may underreport party contact. However, in the context of this paper, assuming that women's propensity to underreport is not affected by the treatment, estimates that compare women with other women across treatment groups do not suffer from this bias (although they may be noisier due to measurement errors). This assumption seems

Fig. 2.3 Gender gaps in mobilization



Notes: The graphs plot the mean of the variable indicated on the x-axis with 2 standard error bars grouped by gender. All outcomes are measured with respect to the 2017 municipal campaign.

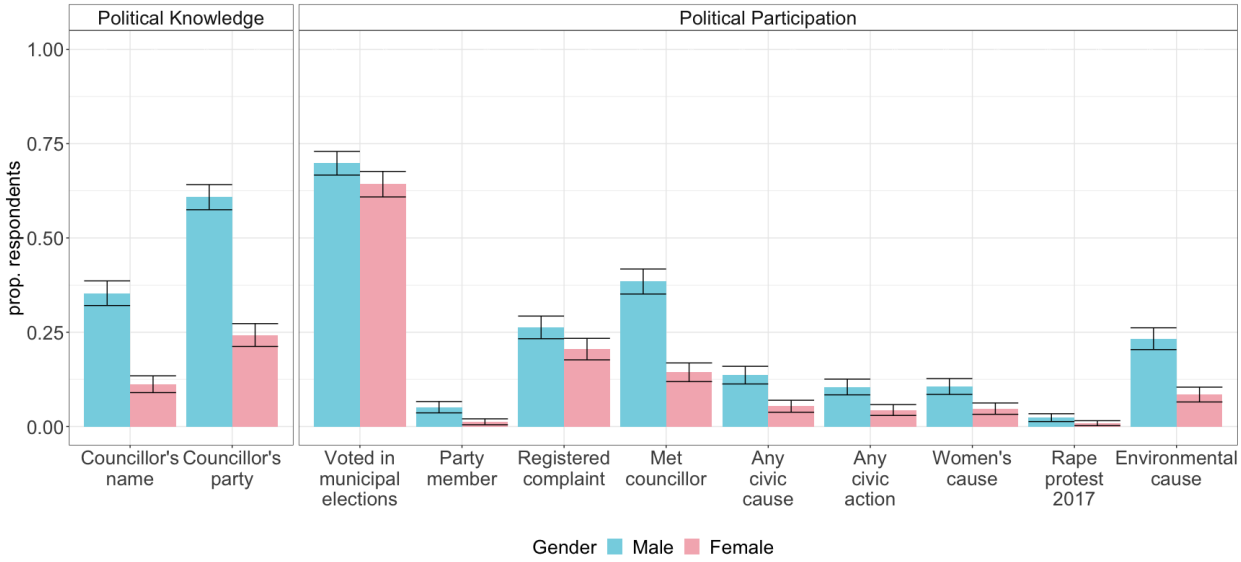
Dependent variables: Measuring political knowledge and participation

Figure 2.4 left panel reports citizen's responses on two basic measures of political knowledge. These are the name of their constituency's municipal councilor and her political party. Both men and women have low political knowledge levels and the gender gap in political knowledge is stark. Figure 2.4 right panel shows that there are stark gender gaps in various forms on political participation. The figure plots four key forms of political participation: (a) voting and becoming a political party member; (b) claim-making acts, that is, registering a complaint with the MCD or having any meeting or interaction with the councillor; (c) public participation in any public political or social event, such as, neighborhood meeting, demonstration, march, protest etc. And, the more costly form of participation, that is, whether the respondent took any civic action, such as striking, writing a letter, taking a pledge, or abstained from taking an action, such as refusing to pay bills or to buy plastic, or other extreme forms of protests, such as hunger strike; and (d) participation in women's issue, anti-rape protests that occurred in 2017, and environmental protests.[13]

reasonable as it is unlikely that the treatment, which is having a female politician, alters female citizens' memory and recall. In other words, it is unlikely that the treatment is leading women to report female contact without actually having being contacted.

[13]I only report post-treatment measures in the paper. The Appendix B.2 and Appendix B.2 confirm persistent gender gaps across other measures of political knowledge and participation.

Fig. 2.4 Gender gaps in political knowledge and participation



Notes: The graphs plot the mean of the variable indicated on the x-axis with 2 standard error bars grouped by gender. All questions are coded as 1 if respondent correctly answers the question or has participated in the event, and 0 otherwise.

2.4 Main results

In this section, I provide evidence for each of the three hypothesis that each represent interconnecting causal chains in the mobilization effects mechanism. The first hypothesis is that female politicians are more likely to recruit female party-activists. The second hypothesis is that female-led mobilization reduces the gender gap in partisan campaign contact. The third hypothesis is that contact and female contact in particular is positively linked with women's political knowledge and political participation.

Table 2.2 column 1 shows that both male and female respondents report a substantively higher likelihood of being contacted by female workers during the 2017 municipal elections. While only 6.3% of female respondents report being contact by only female party-activists in non-reserved constituencies, 15.5%, that is, more than twice as many female respondents, report being contacted by only female party-activists in constituencies that were reserved for female politicians in 2017. Similarly, while 6.4% male respondents report being contacted by only female party-activists in non-reserved constituencies, 9.1% more report being contacted by only female party-activist in reserved constituencies. These results lend strong support to the female-led party recruitment hypothesis.

Table 2.2 Female politicians recruit female party-activists

	Female respondents			**Male respondents**		
	Female visit (1)	Male visit (2)	Mix-group visit (3)	Female visit (4)	Male visit (5)	Mix-group visit (6)
Reserved in 2017	0.092	-0.086	0.030	0.091	-0.163	0.033
(ref. Not-reserved in 2017)	(0.022)	(0.022)	(0.033)	(0.021)	(0.027)	(0.033)
RI p-values	0.000***	0.068**	0.576	0.026**	0.000***	0.211
Control mean	0.063	0.272	0.320	0.064	0.147	0.285
N	773	773	773	828	828	828

Notes: The number of municipal sub-units is in panel A is 7 and in panel B is 17. *** p<0.01, ** p<0.05, * <0.10

Evidently, both male and female citizens report a higher likelihood of being contacted by female party-activists in reserved constituencies. Instead of using male activists, female politicians are either relying on female or mixed-groups of party-activist. This result is interesting as it suggests that female politicians are not strategically using female or male party-activists to access the female or male vote. If indeed female politicians were (successfully) strategizing along gender lines, one would expect male respondents to continue to have a higher likelihood to be contacted by male party workers, which is not the case. This result is somewhat revealing of women's motivations for gendered recruitment. As highlighted in interviews, women's main motivations to recruit female party activists concern navigating family and intra-party challenges to carve a career in politics.

Table 2.3 confirms that female-led mobilization reduces the gender gap in partisan campaign contact. Firstly, the data shows there is a substantive 15.8% point gender gap in campaign contact. This is inline with the descriptive observation that ground campaigns in developing settings are less likely to contact women. Crucially, as expected female-led mobilization significantly lowers this gender gap by 7.7% points in reserved constituencies as compared to non-reserved constituencies. This supports the hypothesis that female-led ground campaigns are more equitable in reaching out to constituents relative to male-run campaigns.[14]

The final link the causal chain suggests that receiving contact, and female partisan contact in particular, is likely to increase women's political engagement. Before stepping into this analysis, it is important to note that Appendix Table B.4 and Table B.5 report mixed aggregate effects of female political presence on women's political knowledge and participation. While

[14]Refer Appendix B for qualitative data about how political campaigns are run and how citizens are invited to participate in them. Female politicians and wokers change this process to include and invite female constituents.

Table 2.3 Female-run campaigns reduce the gender gap in partisan contact

	(1)
Reserved in 2017	-0.039
	(0.033)
Female	-0.157
	(0.035)
Reserved in 2017 # Female	0.077
	(0.049)
RI p-values	0.000***
Male mean (control)	0.673
Female mean (control)	0.515
N respondents	1601

Notes: *** p<0.01, ** p<0.05, * <0.10

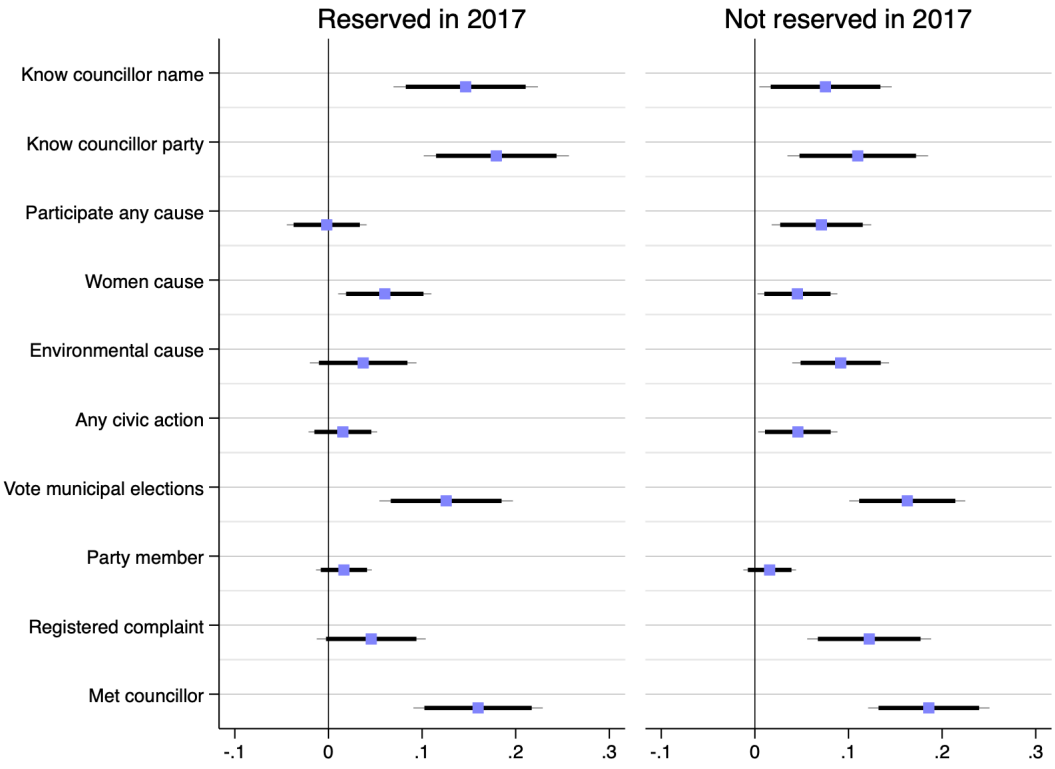
women report higher levels of political knowledge on several distinct measures of knowledge, I find no evidence of a susbtantive increase in political participation.

Yet, as the logic of mobilization effects suggests this does not mean female representation is inconsequential for women's political participation.[15] The theory outlined in this paper suggests that aggregate investigations of the spillovers of female representation mask substantial heterogeneity. Instead spillovers may only accrue amongst those who are contacted during political campaigns and where contact effectively reduces political economy constraints on women's participation. Unlike the quasi-random assignment of gender quotas, campaign contact is not randomly assigned and it therefore beyond the scope of the paper to provide causal evidence of the effect of receiving any type of party-activist contact.

To test whether contact correlates with citizen's political engagement, I rely on information from interviews which suggest that candidates target campaign contact towards those neighborhoods that are most likely support them. To deal with the endogeneity bias that results from this partisan targeting, I divide the sample in reserved and non-reserved constituencies and add a fixed effect at the level which partisan targeting occurs, that is, at the neighborhood level. The respondents are spread across 51 neighborhoods. This neighborhood fixed-effect accounts for various time-invariant confounders that correlate with partisan targeting or candidate characteristics. Second, I include controls for gender, marital status, age, household items index, employment status, caste and religion, whether respondent is Delhi born to account for factors that may be correlated with the likelihood of receiving

[15]Note that it is beyond the aim of this paper to adjudicate between demonstration effects and mobilization effects. Contact is not randomly assigned and because demonstration and mobilization effects may affect each other and the outcomes of interest, sequential ignorability assumptions cannot be justified in this case which makes conducting mediation analysis unfeasible. An example which showcases the potential of demonstration and mobilization effects reinforcing each other is that being contacted by party-activists leads women to come outside their doors, which in-turn can increase the likelihood that they are exposed to female politicians in campaigns where both are present.

Fig. 2.5 Campaign contact is correlated with citizen's political engagement



Notes: Bars represent 95% (black) and 90% (light gray) confidence intervals. Regression uses robust standard errors.

contact and political engagement. I then investigate participation and knowledge outcomes that are "post-treatment", that is, occur after 2017 electoral campaigning is over.

Figure 2.5 plots the coefficients from this regression and shows that campaign contact is significantly correlated with citizen's political knowledge and participation in both reserved and non-reserved constituencies. [16] These results provides suggestive evidence that contact is positively associated with political engagement.

2.5 Qualitative evidence

The quantitative investigation relies on a citizen reported measure of party-activist's gender. There are many benefits of using a citizen reported measure. Citizens' reports confirm that

[16]Contact correlates with the political engagement for both men and women, and campaign visits by either male or female workers are both correlated with political engagement. Results available on request.

female-led party recruitment actually affects citizen-level outcomes and citizen reports also less likely to suffer from social desirability bias.[17] However, there is concern that citizen reported gender disparity in who contacts also picks up the outreach effectiveness of the campaign. In other words, female politicians may simply be deploying their female activists more effectively, while both male and female politicians continue to have equally gender balanced campaigns. While high-levels of reported contact make this concern less plausible, I present two pieces of evidence which further alleviate this concern. These are: (1) interview data from structured elite surveys of politicians in vastly different settings of rural and urban India,[18] and (2) evidence from fieldwork and observations of political campaigns in quota and non-quota elections.

Using data from Delhi elite survey, I find that female politicians indeed report having more female party workers in their networks. 37% female incumbents noted a female party worker in their top five supporters, relative to 16% men. Additionally, all elite surveys asked politicians the same question: *whether their ground campaigns in the last election were comprised of mostly male or mostly female activists? [or were gender-balanced?]*[19] Figure 2.6 confirms shows that female politicians are much more likely to note that their campaigns are gender-balanced relative to male politicians in Delhi as well as for both types of rural politicians in Bihar.

In the second survey conducted in Bihar in 2021, which interviewed winners and runners of close-elections (up to 5% margin of victory) for the Sarpanch political position, I included an additional question that asked candidates to share an estimate of the % female canvassers. Using this measure, I find a 14.6% gender-gap in reported female-party activist estimates: male politicians report having 35.9% female activists, while female politicians report having 50.5% female activists in their campaigns. The estimates are very similar amongst winners and runners of close elections where margin of victory is at most 5%, suggesting that winning elections does not influence this self-reported measure, which lowers social desirability concerns.

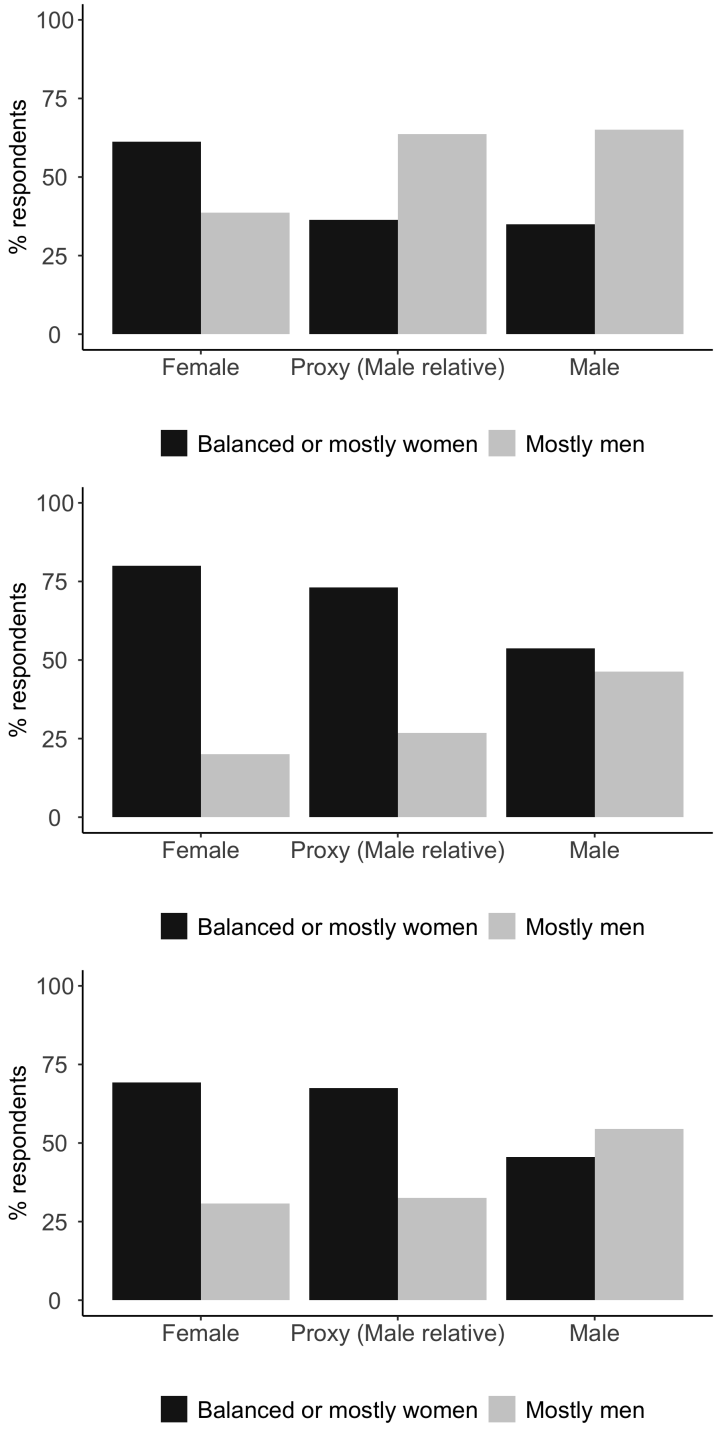
How does the process of female-led party building unfold? Interviews highlight how women knock on doors to lower family barriers and to enable women to partake in party

[17]The citizen survey was a generic survey about all levels of Delhi politics and governance. The survey was not about gender politics or primed gender in any explicit way. Low levels of knowledge about representative and gender quotas also allay concerns that citizens were thinking about female leadership.

[18]Refer Appendix B for additional qualitative data about the recruitment process and photographs of candidate's campaigns that underscore their gendered nature.

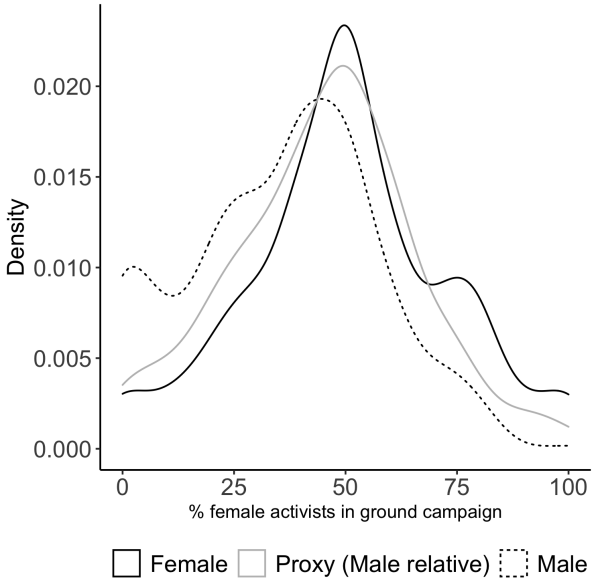
[19]Enumerators had the option to select "gender-balanced" on their screens, but it was not explicitly announced to reduce cheap talk. To measure the extent of female activist recruitment, I combine responses of "mostly female" and "gender-balanced" to contrast with "mostly men" as the status-quo recruitment response.

Fig. 2.6 Female politicians in Delhi and Bihar report greater reliance on female party-activists



Notes: The top panel plots evidence from the Delhi survey for three categories of incumbent municipal councilors (2017 elections): female politicians (N=31), proxy who are male relatives who answered the interview on behalf of female politicians (N= 11), and male politicians (N=40). The middle panel plots evidence from the Bihar survey for three categories of incumbent Mukhiyas: female politicians (N=93), proxy (N=340), and male politicians (N=303). The bottom panel plots evidence from the Bihar survey for three categories of Sarpanch candidates who are winners and losers of close elections (2016): female politicians (N=91), proxy (N=320), and male politicians (N=490).

Fig. 2.7 Candidate reported gender gap in % female activists in Bihar



Notes: The graph plots evidence from the Bihar survey for the same three categories of Sarpanch candidates in Bihar as in Figure 2.6.

politics. The strongest expression of women's demand-side push to recruit women comes through this one single statement that I heard repeatedly during fieldwork with female politicians in Delhi and Bihar:

> *"Women do not even come outside [of the house]. I took the women out [of the house]."*

This reoccurring line not only emphasizes family constraints on women's participation, but also that female politicians work around these constraints to draw women out. Male politicians rarely, if not never, made any statements that suggested concerted effort in seeking out female activists. It is noteworthy that no female politician credited seeing other women participate in politics as the reason for her political entry as a party activist or candidate. The gendered nature of party recruitment further comes alive in women's political access narratives that indirectly highlight how female politicians have enabled women to access formal and visible political positions inside parties. I share few typical examples:

> "I joined politics when Mrs. Rama contested elections and asked for my help. But when I was working for Mrs. Rama's campaign, I did not do so thinking

that I will join politics. Rama ji and the then Member of legislative assembly, Mr. Shama saw my capacity to work and the style of work, and they said that they will make me the President of women's party wing of this District because there was no organization at that time. At that time, women did not like joining politics; and their family members disliked it as well, but when I came here and was made the President of women's party wing, I got the educated women out of their houses. I made a good president [of women's party wing.]"[20]

"There was no politics in my life. The ex-municipal councilor from this area, Mrs. Beena had come to our neighborhood and I met her at a local event. This is where I began my political journey. She said to me that she wanted to install street lights in my neighborhood and asked for my help. I felt good about this. The installation of streetlights was a good thing. I offered my support and started working closely with her [on issues in the constituency]. Eventually, she made me the President of Women's party wing in my constituency...Mrs. Beena made me fill the form to become a Women's party wing member in 2013. I was active informally before, but this was the first time I became formally associated."[21]

"I do not have any political association in the family at all; I just had a passion for social work. If any work was not being done by the government officials, I would take that on. Earlier I used to live in [Nagarwasi], and there was a sewage line related work which was done four times in the course of a year. I got that work done along with the RWA. [Meena] used to be the municipal councilor back then, and she appointed me as the Mahila Morcha Adhyaksh in the area *District President of women's party wing*. I used to work only for social causes, if a work was not being done by the government officials, the people would come to me."[22]

Both male and female politicians frequently note how their party building efforts are rewarded by parties. Female politicians explicitly note their gendered approach to recruitment: *"When I joined politics, I got many women from my area into politics. This is why the party recognized me as well."*[23]

[20] Interview conducted on 5th June 2020.
[21] Interview conducted on 29th June 2020.
[22] Interview conducted on 20th July 2020.
[23] Interview with female MLA during fieldwork in Delhi in July 2015.

The second piece of evidence comes from visual inspections of primary field observations and examining secondary sources and images of political campaigns. Female-led campaigns are clearly more gender diverse. During fieldwork, I noted the gendered nature of political campaigns in diverse regions in India: ranging from urban Delhi to rural Bihar, and in both quota and non-quota elections. I share one typical example obtained from shadowing the electoral campaign of a female candidate in the most recent round of Delhi's non-quota state elections: [24]

> "One of the most interesting thing to note during the door-to-door was that the number of people accompanying the candidate were exactly 1:1 in ratio, in terms of men and women. A head count revealed that the number of volunteers remained between 35-40, with a few joining and leaving the rally as per their convenience, because they were all residents of areas nearby or the same region where the door-to-door was being conducted."

In contrast, the campaign (called "pad yatra" in Hindi) of a male candidate from the same party, comprised mainly of young male volunteers:

> "One of the most noticeable aspects of the pad yatra was the fact that only three women were a part of the same, out of around 120 men, who belonged to various age groups. The most dominant age group were men between the ages of 20 and 25, who were at least 50 in number."

2.6 Legacies of female-led party building

I exploit the long-run nature of the natural experiment to examine how female-led party building unfolds over time. However, due to border-redistricting in 2017 and a lack of data on polling-station records and the history of reservations at the time of fielding the citizen survey, I was unable to block the survey data collection on historical reservation status. However, mapping polling station data over three electoral cycles in 2007, 2012 and 2017, respondents can be placed in either one of $2 \times 2 \times 2 = 8$ treatment arms. Figure 2.8 plots the mean of female party-activist contact for three theoretically interesting treatment effects in reference to never-reserved constituencies.

[24] These campaign observations were reported by a research assistant who followed the female candidate on the 31st Jan 2020 and the male candidate on the 3rd Feb 2020. A detailed account of shadowing other campaigns along with corresponding photographs is available in the Appendix.

Fig. 2.8 Female-led party building over time

Figure 2.8 shows that the effects of female-led party recruitment: persists (reserved in 2007 and/ or 2012), can be realized in the short-term (reserved for the first time in 2017, but previously unreserved), and strengthen in the long-run (reserved in all three elections). The comparison group is respondents who are in never-reserved constituencies in 2007, 2012 and 2017. All the results are economically and statistically significant at 95% level.[25]

2.7 Conclusion and implications

A vast scholarship, mainly developed in industrialized settings, raises the expectation that female representation can increase women's political engagement through demonstration effects. This paper shows that female politicians influence women's political engagement through a novel mechanism: female-led party building equalizes two key functions through which political parties perpetuate gender inequality in politics: recruitment and mobilization. Causal analysis of citizen-survey data collected within the natural experiment in the empirical site of Delhi, bolster internal validity of the findings. Qualitative evidence from representative elite surveys and fieldwork in Delhi provide rich evidence for the process of recruitment and

[25] Appendix A.5 discusses the natural experiment in 2007 and 2012. Appendix section B.3 provides the results in table format.

mobilization. The broad dynamics of female-led party building hold in substantially different settings within India. Data from elite surveys in Bihar, a vastly different rural setting in India, and shadowing political campaigns in state and national elections in India showcase the arguments external generalizability on two aspects: quota and non-quota elections and urban and rural settings.

This paper makes several contributions to the study of female representation. The paper makes two key contributions to a burgeoning scholarship which underscores the importance of household for women's political participation at the candidate-level (Bernhard, Shames and Teele, 2020), as well as at the citizen-level (Khan, 2017; Prillaman, Forthcoming). First, the paper shows *how* female politicians and party activists lower family side barriers to recruit women as activists and to enable women to participate in politics. Second, building on studies of gender bias in party recruitment (Fox and Lawless, 2010), the paper highlights that only overcoming family barriers is insufficient to increase women's representation inside parties. By showing that female-led party building is parity enhancing because it lowers family constraints on women, the paper contributes to studies of gender bias in party recruitment by echoing that male-led recruitment is ill-suited to recruit women (Crowder-Meyer, 2013), and by explaining why male-led recruitment can fail even when it is explicitly aimed towards that goal (Gulzar et al., 2021). The findings contribute to our understanding of how gender quota reforms affect policy (Clayton, Forthcoming), by highlighting how "quota women" act as entrepreneurs and capitalize on women's under-utilized talent to reduce inefficiency and inequality in democracies.

This paper is the first to show that female politicians recruit female party activists, brokers who play a crucial role in the politics of poor countries through problem-solving (Auerbach and Thachil, 2018; Brierley and Nathan, 2020).[26] By highlighting how female politicians lower gender-gaps at the activist level, this paper draws attention of the broker literature, which has otherwise remain focused on problem-solving, to descriptive representation. Female party activists are crucial for directing party mobilization efforts towards female voters in ground campaigns, which highlights the consequences of descriptive imbalance at this level on political participation. Female party activists are another pathway through which female politicians can increase substantive representation and equalize access to the state.

[26]In a break from the previous literature that viewed these brokers as cogs in voter monitoring machines (Stokes et al., 2013), this burgeoning literature highlights the importance of party-activists, who by enabling poor citizens to access the state increase bottom-up accountability. See Hicken and Nathan (2020) for a review. Chauchard (2018) finds little support for quid-pro quo and party-activist orchestrated vote-buying in India.

By highlighting the potential of female-led partisan mobilization to reduce political economy constraints on women's participation, the findings contribute to field experimental studies that find that non-partisan informational campaigns are ineffective when they fail to reduce gendered constraints (Gottlieb, 2016) and effective when they do so (Cheema et al., 2020). By showing how female-led partisan mobilization is important for equalizing campaign outreach in India, the findings contributes to the sparse literature on ground campaigns in low-income, patriarchal settings. India features the world's most intensive yet understudied ground campaigns. As per recent National Election Studies approximately 500 million citizens reported contact by party-activists, but we have little knowledge about gendered inequalities inherent in partisan mobilization.[27] The findings suggest that the increase in female-led mobilization, a result of women's political entry due to the nationwide implementation of gender quotas in local politics, is likely to be one explanation behind India's success in closing the gender gap in electoral turnout. Towards this goal, this paper sparks an exciting research agenda on opening the black box of ground campaigns, measuring who conducts campaign contact, while contributing to the study of how partisan campaigns can be conducted to increase the quality of democracy (Wantchekon et al., 2018). Future research can use field experiments to examine the effects of partisan contact which is surely beyond the scope of one paper alone.

There are many dimensions alongside which external generalizability of the theory can be considered. In industrialized settings where broker politics is absent, the political economic framework presented here can be extended to examine how female representation can lower breadwinning constraints amongst female candidates and increase recruitment of women in non-elected roles. For example in the U.S., newly elected minority congresswomen launched leadership PACs to raise money for fellow candidates which can lower breadwinning concerns that strongly constraint female candidacy (Bernhard, Shames and Teele, 2020). Female representatives can also lower these breadwinning concerns by contributing to other female candidates through the channel of candidate contributions (Shames et al., 2020).[28] Similarly, an increase in women running for the U.S congress was accompanied by an unprecedented wave of female campaign managers,[29] leading political analysts to conclude, that,*" 'If they have a campaign that looks like America,'" Walsh said, "they're more likely*

[27] As per NES-Post-poll 2014, published online by Lokniti, CSDS, 61.1% of electorate reported contact by a party-activist (page 49). As per NES-Post-poll 2009, 57.9% reported contact by party-activists (page 17). No election study in India (or elsewhere) measures the gender of the party-activist.

[28] See, *Ocasio-Cortez creates PAC to push back on the Democratic Party's "blacklisting'" rule*, The Washington Post, January 12 2020.

[29] See, *With women running in record numbers, female campaign managers are riding the 'pink wave' too*, ABC News, 6 Nov 2018.

to have a Cabinet and a government that looks like America."[30] These observation suggest that female politicians can lower family constraints and party barriers even in settings where political economy constraints are relatively lower and on top of gains that can accrue from demonstration effects. In other federal settings where local politicians play a role in party building, such as in Brazil (Sells, 2020), or Veneuzela or Indonesia (Bohlken, 2016), women's entry in local party politics can activate female-led party building.

Women's political entry as party activists has implications that extend beyond political campaigns and reach into the entire spectrum of politics. Female-led party building increases party leadership dependence on female politicians and female politicians can use this leverage to demand greater parity in party nominations (Goyal, 2020*a*), in non-electoral leadership positions and require party elites to redress harassment and violence targeted at women inside parties. Krook (2017) highlights that violence against women in politics is rampant, especially in developing countries. A study on violence against women in politics published in by United Nations Entity for Gender Equality and the Empowerment of Women (2014) shows that, in India, 58% of female politicians interviewed identified members of the same political party as perpetrator of violence while only 15% identified citizens. 41% female politicians said that violence against women in politics is an outcome of political party vendetta. Future research can investigate whether female-led party building enables women to demand fairer treatment inside parties.

Finally, a natural question is what are enablers of female-led party building? Insights from fieldwork suggest heterogeneity in the intensity of female-led party building by a variety of factors. First set of factors concerns female politicians' backgrounds. Female politicians who can rely on families for mobilizing are likely to have a lower intensity of female recruitment relative to female politicians who have themselves risen from the grassroots. Counter-intuitively, data from politician surveys shows that due to the interference from male relatives, the intensity of female recruitment is lower in urban areas than rural areas. Women can also attract diverse female party activists with whom they share multiple identities, ranging from caste to regional, language, marital home-state, class etc.

Second set of factors are party-level variation. Parties can create different political opportunity structures for recruitment. For example, female politicians in religious parties can rely on patriarchal discourse, which can further lower family constraints on female party activists. Sells (2020) shows that party organization matters for party building. Parties that are strongly organized might benefit from expansion of women's recruitment, while weak parties may not be able to defray conflict that arises from the entry of new members.

[30] See, *It is about f—ing time: Women break into top ranks of 2020 campaigns*, Politico, 23 Aug 2019.

Third set of factors concerns geographic and cultural context. Relative to rural settings, urban settings provide transport infrastructure that can lower mobility constraints on women and aid in activist recruitment. The increase in rural roads infrastructure in many developing countries suggests that mobility constraints on women have lowered in recent times (Goyal, 2019*a*). Moreover, rural settings are relatively more gender-regressive and this context can intensify gendered patterns of recruitment, as seems to be the case in Bihar. Examining what enables female politicians to build parties and investigating intra-party consequences of female-led party building is a promising research agenda which can transform our understanding of female representation, women's political participation and party building.

Chapter 3

Local Female Representation as a Pathway to Power

3.1 Introduction

Political equality is a fundamental tenet of democracy. Yet women remain under-represented in parliaments around the world and political inequality remains the most persistent gender inequality in the world today.[1] Not only are women less likely to run for office, but vast gender-gaps among elected politicians show that improving female candidate supply will be insufficient to lower the gender-gap in representation. Research shows that female politicians are less likely to survive political office (Folke and Rickne, 2012; Jensenius, 2020), less likely to reach the top echelons of politics (O'Brien and Rickne, 2016), and points to party elite bias as a key explanation for these gender gaps. Parties remain enclaves of male-dominance and hostility and discrimination within party organization continues to adversely affect women's political careers (O'Brien, 2015). Political glass ceiling lowers women's chances of securing top positions or surviving in them (Folke and Rickne, 2016; Kerevel, 2019). What enables female politicians to overcome elite bias and rise and survive in politics?

This paper advances our understanding of female representation by showing how female politicians can transform grassroots party organization to mount bottom-up pressure for greater parity on party elites. Studies that examine interventions that lower elite bias focus on top-down mechanisms. Studies of candidate selection show that interventions that expand

[1] See, *The Global Gender Gap Report 2021*; the World Economic Forum estimates that, at the current pace of progress, it will take 145 years to close the political gender inequality, which remains the most persistent gender inequality gap relative to income, health, or education.

party elite access to electoral information can increase the quality of representation (Gulzar, Hai and Paudel, Forthcoming). Studies investigating gender quotas reaffirm that party leaders use women's electoral performance as a benchmark to re-nominate women to run at the same electoral level (Bhavnani, 2009); quota adoption can force elites to look beyond status-quo candidates (Barnes and Holman, 2020). Fewer studies investigate women's strategic behavior aimed at influencing party elites. Piscopo (2016) is an exception and finds that women built strategic win-win collaborations with bureaucrats to tie the hand of party elites with formal reforms in candidate selection. While these findings underscore the importance of elite bias in perpetuating gender inequality and highlight reforms that lower elite bias, research has paid little attention to bottom-up mechanisms that female politicians can leverage to influence elite decision-making.

This paper argues that when female politicians occupy grassroots party building positions, they can increase bottom-up pressure to demand greater parity in the distribution of high-level party positions. This argument applies to multi-level systems in low and middle income democracies where local candidates are meta-brokers - brokers for higher-level politicians, but are patrons to party activists whom they recruit. Under the status-quo, men dominate these grassroots party building roles which reinforces male party activist recruitment; this grassroots party building enables men to forge reciprocal patronage linkages with senior politicians. These vertical linkages favor male politicians at both electoral levels in progressing to and surviving in high-level electoral positions. These self-reinforcing networks link female under-representation across political levels. Women's entry in local political institutions breaks this bad equilibrium. "Female-led party building" increases gender-balance in party activist recruitment and enables female politicians at both electoral levels to forge reciprocal patronage linkages from which they are otherwise excluded. Senior female politicians benefit from the support of loyal local female politicians and female party activists, while the latter benefit from greater success in securing party patronage. In advancing this argument, this paper builds on and contributes by highlighting the importance of descriptive representation to the study of party building (Jensenius and Suryanarayan, 2020; Sells, 2020), broker politics (Auerbach and Thachil, 2018; Brierley and Nathan, 2020), and party activist recruitment (Gulzar et al., 2021).

Empirically, this paper uses a novel research design to identify the effect of the variation in the number of female major party candidates in lower-level politics on outcomes in higher-level politics, a relationship which has not been previously estimated. I investigate two key outcomes: political career progression and party re-nomination in high-level elections. To do so this paper relies on the empirical site of Delhi, India's capital city. Delhi features a multi-level electoral system where municipal politicians are meta-brokers for state politicians

and centralized state-level party leaders decide party nominations. Crucially, the natural experiment of gender quotas leads all major parties to exclusively nominate women in at least a third or half of all single-member municipal constituencies. In other words, women replace men to occupy these grassroots party building positions in all major parties. Additionally, municipal constituencies are geographically nested within the same state constituencies for a sufficient period of time. Municipal elections occur in 2007, 2012 and 2017 with each election featuring a newly randomized assignment of reservations, and occur shortly ahead of state elections in 2008, 2013, 2015, 2020. State elections do not have gender quotas. Together, these design features enable to hold top-down influence of centralized elite constant and to focus exclusively on grassroots mechanisms.

Highlighting female-led grassroots party building and estimating this novel treatment effect of quotas is this paper's contribution to the study of gender quotas. Empirically, existing studies in the quota literature estimate the *intensive margin* or the longitudinal effect of quotas or quota adoption by using staggered implementation or a difference-in-difference design which rely on parallel-trend assumptions (Barnes and Holman, 2020; Besley et al., 2017; O'Brien and Rickne, 2016; O'Connell, 2020). These designs hold women's numeric presence constant and capture the macro-effect of the quota shock. Instead, this paper identifies the *extensive margin*, the effect of the variation in the number of female municipal politicians that hold major party nominations within state constituencies, while quotas *remain* in place. This design not only requires fewer identifying assumptions, it also enables to hold several macro-level explanatory variables constant such as, due to quota adoption or mechanisms that operate over longer time durations. These features make the design better suited for unpacking causality and adjudicating among competing micro-level explanations. This design also makes it possible to investigate the relationship between candidate's electoral performance in hierarchical subnational elections, and to the best of my knowledge, is the first paper to do so in India.

This paper investigates two key largely independent pathways through which women contest state elections: career progression from local politics and party re-nomination in state elections. While local politics is a more common pathway for women to progress to state politics, local female politicians are less likely than male counterparts to secure state-level party nominations. This paper is first to document this gender-gap in career progression in India. Investigating the reduced-form effect of number of reserved seats, I find that the percentage of local female candidates that secure party nominations in subsequent state elections doubles in state constituencies with higher presence of local female nominees. A back-of-envelope-estimation suggest that this design single-handedly accounts for 80% of the municipal to state-level pipeline in the study period. Crucially, state-level female

incumbents and re-contestants are enormously - 3 to 5 times - more likely to survive their party nominations in constituencies with higher presence of local female nominees. As expected, female candidates who have no previous background in politics do not benefit from this support. Qualitative evidence brings the process of female-led recruitment to life and the importance of party building to women's success which bolsters support for female-led grassroots party building as the key explanation.

The rest of the paper is organized as follows. I outline the theory. I highlight the importance and difficulty in securing high-level party nominations in India and use a conjoint experiment to underscore their importance for citizen's vote choice. I discuss the research design and describe the rich administrative and original and representative elite and citizen survey data. I present qualitative evidence and then use this design and original data to rule out alternative explanations. I conclude with a discussion of the contributions and argument's external generalizability for settings within and outside India.

3.2 Theory

Widespread decentralization reforms have devolved power to subnational governments in low and middle income democracies and comprise one of the most key political institutional reforms in the last few decades in these settings. Consequently, local political institutions have emerged as important grassroots institutions that reconfigure power in higher-level politics (Bohlken, 2016). Yet, the role of local institutions play as the foundation of party building has received little attention in studies that investigate female representation in local politics (Barnes and Holman, 2020; Beaman et al., 2009; Bhavnani, 2009; Kerevel, 2019).[2] Paying attention to local institutions as key sites of party building reveals how political gender inequality can perpetuate, and therefore, also unravel from bottoms-up, as women enter local politics.

In advancing this argument, this paper builds on and contributes to two distinct bodies of scholarship in comparative politics. A rich literature on party organization and broker politics shows that local institutions are central to party building (Bohlken, 2016; Sells, 2020). Local politicians rely on patronage from senior politicians and party elites (Bohlken, 2018; Chhibber and Jensenius, 2018; Novaes, 2018). While the latter rely on the grassroots activist

[2]Reviewing studies of gender quotas, Clayton (Forthcoming) concludes that despite the existence of gender quota reforms in subnational governments existence in 73 countries, gender quotas in subnational politics remain less studied relative to quotas in national governments. While India is an exception (ibid.), studies of gender quotas in India also do not pay attention to how female representation in local institutions impacts grassroots party organization.

support of local candidates to rise up in the party hierarchy and to mobilize voters (Auerbach and Thachil, 2018; Brierley and Nathan, 2020). Party activists are the crucial resource in this hierarchical exchange. Yet, this scholarship has paid little attention to the stark gender-gap at the party activist level. Consequently, the causes and upstream consequences of male dominance of party activist roles for perpetuating gender inequality have escaped theoretical scrutiny.

On the other hand, research on female representation shows that gendered practices in party recruitment can contribute to female under-representation and offers an explanation for the party activist gender-gap. Research shows that male-dominance of gatekeeping networks lowers the quantity of party contact directed at women (Crowder-Meyer, 2013; Fox and Lawless, 2010). Experimental studies find that gender segments the response to elite recruitment (Preece, Stoddard and Fisher, 2016), while a lack of credibility of male elite sponsorship lowers the effectiveness of recruitment among female politicians (Butler and Preece, 2016*a*). Although research on gendered party recruitment is sparse in low and middle income settings, recent studies show that male-heavy parties fail to recruit women even when they employ female-centric messaging (Gulzar et al., 2021). Surprisingly, while the recruiter's gender stands out as a compelling explanation in driving party activist gender-gaps, there is little research which investigates how female representation can transform party activist recruitment (Goyal (2019*b*) is an exception).

By paying attention to local institutions as the foundational site of the grassroots party building and to the gendered nature of recruitment, this paper synthesizes these literatures into one key insight: Female-led grassroots party building is a potential mechanism that can reinforce women's position in the party hierarchy and increase gender parity across the party hierarchy. To elucidate this argument, this section first reviews the literature on party organization and recruitment. The goal is to conceptualize local politicians as meta-brokers and to sharpen *how* male dominance of local institutions reinforces gender inequality. I then discuss how women's entry in local politics lowers gender-inequality in party activist recruitment and therefore increases gender parity in career progression and political survival.

Local politicians as meta-brokers

In settings, where patronage plays a large role in structuring political competition, local politicians are "meta-brokers": brokers to higher-level politicians but patrons to party activists whom they recruit on behalf of party elites. Consequently, party activist support is the key currency that greases the hierarchical patronage exchange between political levels. Research

on party organization shows that having loyalists in subnational governments enables higher-level politicians and party elites to gain deep connections to local communities to mobilize voters. Party elites and politicians at the top form "pyramidal" vertically organized linkages and make *"heavy investments in the administrative infrastructure of multilevel political machines that reach from the summits of national politics down to the municipal level"* (Kitschelt, 2000, p. 249).

Investigating the logic of local democracy across the developing world, Bohlken (2016) is an exceptional study that uses cross-national data to show that local democracy emerges precisely because of the need of higher-level government elites to control local intermediaries on whom they rely for political support. Investigating the Indian setting, she notes that: *"local elected representatives play an important role as intermediaries, targeting patronage and mobilizing votes on behalf of party members in higher-level elections"* (p. 59), and that *"decentralization provides ready-made people at the grassroots level from the village upwards"* (p. 62). Offering a rich summary of the party organization literature in Brazil, Novaes (2018) also notes that local politicians have been crucial in providing political support to upwards subnational and national politicians at every stage of the Brazilian republic.

An aspect of local politics that is now receiving attention is that local politicians not only act as brokers for senior politicians, but also play a central role in the recruitment of party activists. In the setting of Brazil, Sells (2020, p. 1576) describes how, *"local governments were a critical source of the organizational resources that could help parties grow at the grassroots level."*; providing the clearest example of this empirical reality. In India, Auerbach and Thachil (2018) describe how local politicians screen and recruit quality brokers inside parties by scrutinizing the quality of their connections in slum communities. In Ghana, Brierley and Nathan (2020) describe how national party elites, who lack the localized knowledge to identify potential brokers in each community, rely on local party elites and ordinary party members to select brokers. They conclude that party *"brokers' connections to local elites are central to their selection in a much larger variety of settings than informal slums, including rural towns and villages and rich and poor urban neighborhoods."*

Conceptualizing local politicians as meta-brokers sharpens attention to the hierarchical nature and the overarching motivation politicians have for engaging in grassroots party building activities. Local politicians exert effort to recruit party activists because support from party activists is not only valuable to win elections or to mobilize voters, but is instead crucial to influence intra-party decision making. Brierley and Nathan (2020) find that the size of a local party elite's following among brokers influences her power within the party by affecting her ability to bargain for promotions and nominations. In turn, party activists

engage in organizing visual and public events through which politicians signal grassroots activist support and rise up the ranks within party hierarchy (Ichino and Nathan, 2012). A manifestation of how deeply senior politicians and local politicians value their grassroots ties is visible in studies of distributive politics. Senior politicians are seen to forgo targeting pork to voters, but instead target these resources to local party functionaries to elicit their co-operation (Bohlken, 2018; Chhibber and Jensenius, 2018). Party bosses are wary of disgruntled but powerful politicians who can use their grassroots activist support to sabotage the party's electoral success (Nellis, 2017), or worse switch party alliances to competitors sowing the seeds of party weakness (Jensenius and Suryanarayan, 2020; Novaes, 2018), and therefore likely to fulfill their demands for political positions.

I argue that this hierarchical and inter-dependent nature of politics in low and middle income democracies interlinks female under-representation across political level, as men's dominance as local politicians and party activists reinforces the likelihood that male politicians succeed in higher-level politics. Under the status-quo, men dominate as local politicians and are less likely to recruit female party activists. Studies of party recruitment in low income settings indeed show that male gatekeepers are inefficient in recruiting female talent (Gulzar et al., 2021). Empirically, the male-dominance of broker roles is highly visible in political events and is common knowledge in developing countries. While quantitative data on broker politics remains sparse, some recent attempts reveal the problematic magnitude of gender-gaps. For example, data from Auerbach and Thachil (2018) shows that 88% of slum brokers are male in India. Data from Brierley and Nathan (2020) shows that 72% of party brokers are male in Ghana. Daby (2020) is one of the few studies in this literature that explicitly highlights the gender-gap in clientelism and shows that 62% brokers are male in Argentina.

From the perspective of women's political careers, women's absence in party activist roles sustains a bad equilibrium which constraints female representation by lowering women's intra-party influence relative to men. Lack of female presence in the lower-rungs of the party hierarchy means that senior-level female candidates have weaker grassroots activist support. Gender norms and gendered networks restrict women from tapping into hierarchically organized male networks of candidates and brokers, who in-turn benefit from narrowing the competition to rents and are threatened by growing calls to expand female representation. Women's presence in the local party hierarchy can provide women the opportunity to build grassroots capacity and overcome these challenges.

Local female representation as a pathway to power

The key argument in this paper is that when women run in local elections on the back of major party nominations and become meta-brokers, female-led party building alters patterns of party activist recruitment and women's ability to use grassroots party activist following to enhance their political careers. Women build grassroots capacity by hiring more female party activists and reinforce this grassroots capacity by forging patronage linkages with senior female politicians. In this process, local female politicians increase gender parity across political levels. Consequently, women are able to make stronger demands to party nominations at both electoral levels: local female politicians are more likely to rise up in the party hierarchy, while re-contesting female candidates who already have a background in higher-level politics are more likely to retain their position. The rest of this section elucidates this argument.

Local party nominations are one of the strongest enablers of grassroots party building, particularly for female politicians who often have lower financial and political capital relative to male counterparts. Female candidates can use the increased prestige that comes from simply holding a party nomination to recruit higher-quality, and quantity of brokers to build grassroots capacity, especially relative to independent or minor party candidates. While incumbency can be expected to bring in additional benefits to activist recruitment, evidence suggests that major party labels are a relatively larger margin for the purpose of building a grassroots following (Sells, 2020), as major party candidates recruit high-quality party members who remain loyal to the party regardless of its ruling status.

A central feature of women's grassroots party building is that women are more likely to recruit female party activists than male politicians. Relative to male politicians, women are better positioned to recruit female party activists from their broader social and political networks. Recruiting female activists is strategic. Female politicians can use female activists as a "gendered" signal of their grassroots following to party elites. Gendering political spaces and recruiting female activists enables women to lower the head-on competition over activist pools and to party patronage with male politicians. Crucially, female party activist following is a gendered signal which is easily attributable to female politicians and enables women to effectively claim credit for building a grassroots following. Additionally, female-run ground campaigns are likely to be more effective in contacting female voters, as the latter are in private spaces that are less accessible to male activists (Goyal, 2019*b*). This greater ability to mobilize female voters increases party elites' dependence on female politicians. In summary, local female politicians can carve out a niche by mobilizing female activists and voters which enables them to build a comparative advantage over their male peers.

Female-led grassroots party building has consequences for the gender-gap in political careers. Presence of local female candidates reduces demand (party) side barriers and family constraints on women's participation and enables women to enter broker politics. This lowering of the gender-gap at the lower-rungs of informal politics slows down the snowballing of disparities that weaken a female aspirants' political career. Constituencies where more women run on party nominations in local politics have a larger pool of female talent with stronger grassroots activist support, which increase the odds that a female candidate from the local-level rises in the party hierarchy to contest higher-level elections. Additionally, female co-partisans at higher-electoral levels find it easier to access female grassroots networks and can strike mutually beneficial patronage relationships with local party nominees. These hierarchical relationships reinforce women's grassroots capacity from both top-down and bottoms-up. Because senior politicians have higher greater to patronage and influence over bureaucrats, local female candidates also have a greater incentive to co-operate and ensure that a senior female candidate is nominated and survives at the top.

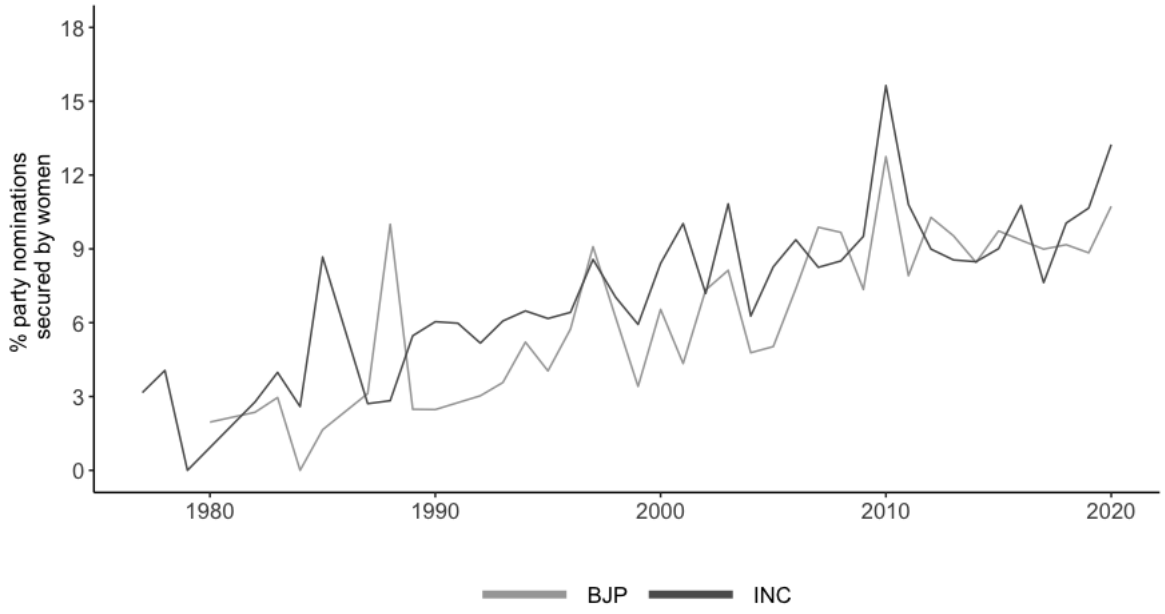
When women succeed in building these hierarchical patronage linkages, it becomes costlier for party leaders to sideline powerful female aspirants. Powerful women, like their male counterparts, can stage public rallies and protests against unfavorable party decisions. They also have the wherewithal to sabotage the party's electoral success in the constituencies where they have established a territorial hold. Powerful women are also more likely to retain some access to party patronage that can enable them to continue to keep their relationships with their constituents warm even when they are out of office, which enables them to stay-put at the higher-level of the party hierarchy. In summary, female politicians succeed by building grassroots activist support. In the process of doing so, and with the motive to sidestep male-dominance and hostility, they recruit female brokers and form connections with other female politicians, setting in a virtuous cycle that enhances gender parity across the entire political spectrum. Consequently, in constituencies with greater local female presence, local female politicians have a higher chance of career progression and state politicians have a greater chance of surviving political office.

3.3 Context: The gender-gap in party nomination in India

Party nominations are key to electoral success in India. Evidently, from 1977 to 2019, only 1.2% winners have been independents in India's national election, and only 5.4% independents have ever won a state election. Given this backdrop, the stark gender-gap in party major nominations is the key reason why female representation in India's state

assemblies hovers at the dismal figure of 9-10%. Figure 3.1 shows that both major parties - the Bharatiya Janata Party (BJP) and the Indian National Congress (INC) - have equally failed at ensuring gender parity in party nominations. The total share of BJP or INC party nominations that women have received across state elections since 1977 stands at 6.6% The comparative figure for Delhi, since its state assembly was formed in 1993, is 9.8% which is 1.5 times the national figure.

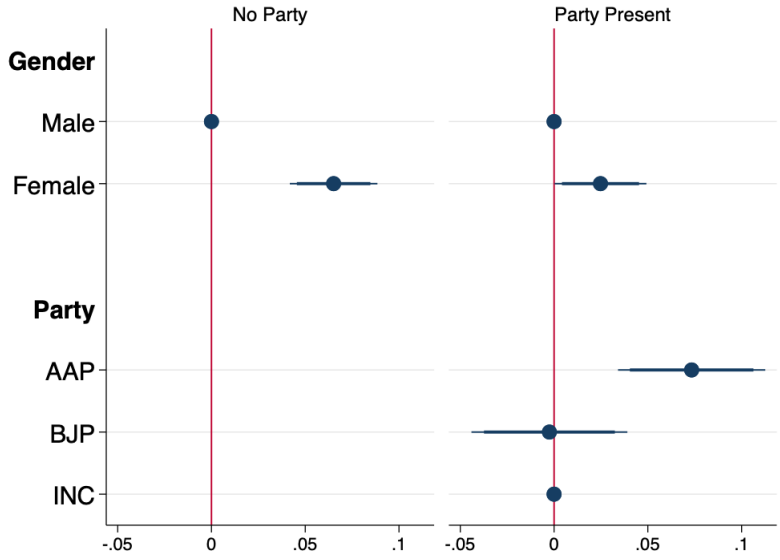
Fig. 3.1 Major parties have failed to nominate women in India's state elections



Notes: This figure visually plots the share of party nominations that female candidates measured as the % of party nominations women get over total seats a party contests in state elections, summarized by year and party.

Voter bias against female candidates seems to be an unlikely explanation for why parties fail to nominate women in India. The figure B.4 plots ACME from a candidate-choice conjoint experiment that randomly varies candidate profiles as well as whether respondents see a party label (left) or not (right) while making selection decisions for Delhi's state assembly. The plot shows that party labels are the strongest predictor of vote choice vis-a-vis other attributes, again underscoring the importance of party labels. Further, party labels markedly lower down the gender-premium that women enjoy. Although voters still prefer female candidates, these findings are testament to the importance of party nominations and also suggest that over-voter bias is unlikely to explain female under-representation in India. These experimental findings also echo findings from observational data which shows that

Fig. 3.2 Voters prefer female candidates but party nominations lower gender premium



Notes: This figure plots the point estimates for the gender and party labels (left panel) from an OLS model which regresses the respondent's binary choice of candidate on all the attributes in the candidate profile. Standard errors are clustered by respondent. Bars represent 95% (black) and 90% (light gray) confidence intervals. The source of the data is a two-wave representative citizen survey with 1664 unique respondents in Delhi, and which yielded N = 14394 observations.

women's winning rates are in proportion to their running rates in state and national elections (Jensenius, 2020).

Here, it is worth describing how difficult it is to secure a party nomination in India and how important grassroots party activist support is to achieving success in this process. Farooqui and Sridharan (2014) summarize the party nomination process in major Indian parties as highly centralized where national or state-level committees reserve final decision making authority. Several party members in single-member districts compete for party nominations, and centralized selection committees look for signals of grassroots activist support to make selection decisions, such as wealth and criminality (Vaishnav, 2017). It is not uncommon for party elites to "visit" potential candidate's constituencies and see whether they can mobilize activists and voters in local neighborhood events. The nomination process is so conflictual that none of the major parties dare to declare selection decisions until the official registration day- 2-4 weeks ahead of the elections. It is common knowledge that this is due to the fear of dividing the party membership beyond repair and is done to limit the campaigning duration and therefore the sabotage done by disgruntled candidates and party

activists. On the registration day, it is routine to see this internal conflict spill into full public view and make its way onto streets and into newspaper headlines.[3]

The nature of this conflict further reinforces the centrality of grassroots party-activist capacity to the nomination process. Disgruntled candidates and their loyal party activists often join other parties in public events or, as Nellis (2017) finds discretely use their capacity to work against the party to sabotage their opponent. Such brazen acts, often referred to as *anti-party* activities can lead to suspension or punishment, especially in parties that have a more strongly organized rank-and-file and the means to parse out the truth from the noise.[4] However, discrete behavior largely goes unchecked due to high levels of rumor spreading and mis-information which make it a noisy information environment.

3.4 Research Design

Does an increase in female presence in the local party hierarchy enable women to use grassroots pressure to influence this tenuous process? This paper provides evidence by examining women's entry in municipal politics in Delhi, India's capital city. Delhi's population is projected to be 23 million in 2021, which is greater than that of Chile, or that of Norway, Denmark and Finland combined. Like all Indian states, Delhi has a three-tier governance system - national, state and municipal governments - with single-member districts and plurality rules for elections that occur every five years. Delhi's state legislative assembly comprises of 70 single-member districts called state or assembly constituencies (ACs) that each elect a "Member of the Legislative Assembly" (MLA) to the Delhi parliament.

In line with India's decentralization reforms in 1993, Delhi's local body, called the Municipal Corporation of Delhi (MCD) was re-organized and given substantial powers. Today, the MCD is amongst the largest civic bodies in the world and has several responsibilities typical of municipalities, including the provision of primary healthcare, primary educational facilities, sanitation, garbage and waste disposal. The MCD is composed of 272 seat single member districts called "wards", that each elect a representative called "councillor".

[3] See *Delhi Assembly Elections: BJP Workers Protest Over Ticket Distribution Outside Party Office*, Outlook magazine, 19 Jan 2020.

[4] See, *BJP suspends three UP leaders for anti-party activities*, Press Trust of India, 31 Oct 2015; and *BSP suspends former min Upadhyay for helping rivals*, Times of India, 22 May 2019.

Data

The main source of data for outcome variables is Delhi's state-elections data which was dowloaded from Lokdhaba, the public website hosted by Trivedi Political Data Centre at the Ashoka University in India. The municipal elections data was scraped directly from the website of the State Election Commission of Delhi and manually digitized. To construct political histories, I merged the entire universe of candidate datasets by name, after a round of basic text cleaning using a Java script. Because municipal politicians rarely contest elections from high-level constituencies other than in which their wards are located, the names of municipal candidates were matched with candidates from corresponding high-level constituencies. The spatial maps were taken from the online page of DataMeet Trust, Bangalore, India.

I supplement this electoral data with qualitative data from structured interviews with 92 incumbent municipal politicians in Delhi that were conducted in-person and (largely) over phone during Dec 2019 to Sep 2020. All current incumbents in the MCD were contacted to participate in the survey, which yielded a very high response rate of 33%.[5] Appendix section B.1 provides details about data collection and shows that this survey is broadly representative of the population of municipal incumbents.

Natural experiment of randomized gender quotas in Delhi

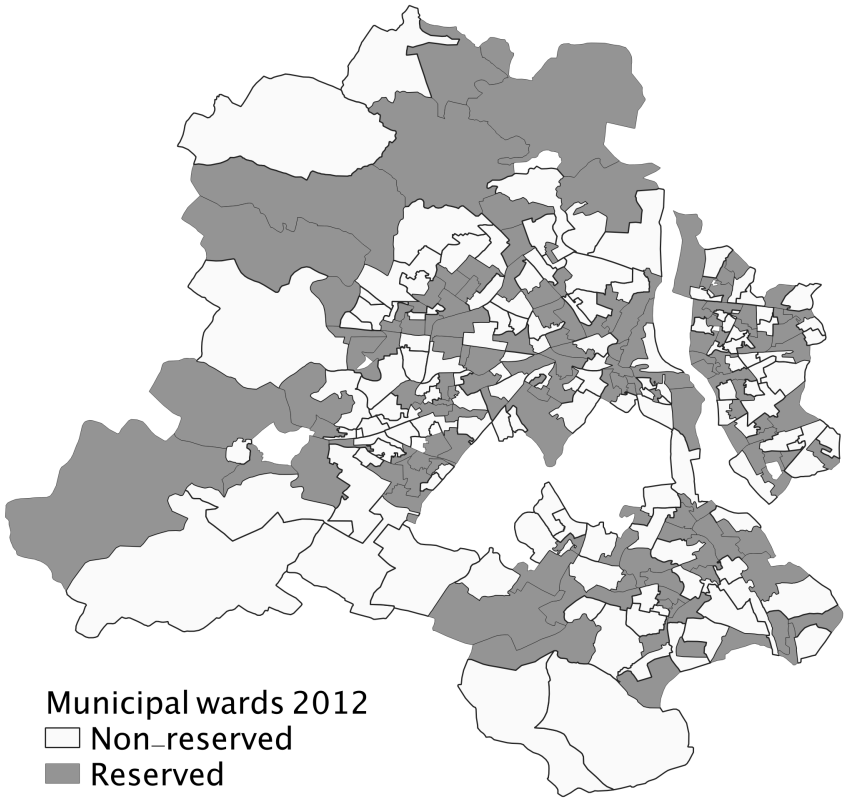
Delhi reserved 33% of its municipal seats until 2007, and as seen in Figure 3.3, now reserves 50% of its 272 seats for women.[6] Reserved seats means only female candidates can contest (win) elections in constituencies "reserved" for women. As is well known in the Indian case (Beaman et al., 2009; Bhavnani, 2009), municipal constituencies are reserved for women are chosen through an *as-if random* process that is known to be free and fair from economic or political bias. Briefly put, this standardized and centralized process reserves every other ward from a serially ordered list. These serial numbers are in-turn assigned by starting at the northernmost point within (serially ordered) state level constituencies and going in a zigzag

[5]Despite candidate surveys in U.S are much more institutionalized, this survey's response rate comes close. For example, Center for American Women and Politics (CAWP) Recruitment Studies 2008 has a response rate of 36% among legislators. Politician surveys are rare in India. Bussell (2019) is an exceptional study which conducts structured surveys with India's state-level politicians, and as a benchmark, has a response rate of 11%.

[6]Prior to 2008, Delhi's municipal council had gender quotas in 1997 and 2002. However, it was only with the major re-organization in 2007, that municipal constituencies were re-organized to fit within newly re-districted state constituencies and were doubled in number. Therefore, this paper takes 2007 as its starting point.

clockwise (or anti-clockwise) pattern. Appendix Table A.1 details this reservation policy, provides balance tests and qualitative evidence to bolster support for internal validity.

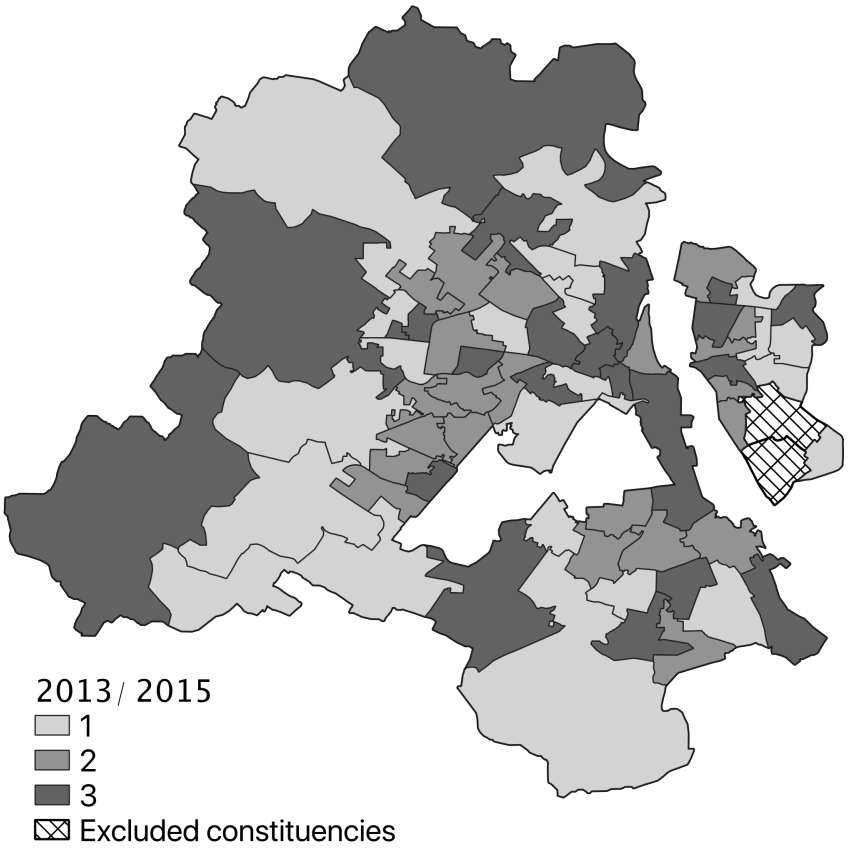
Fig. 3.3 The natural experiment of randomized gender quotas in Delhi



Notes: This figure plots Delhi's 272 municipal constituencies, and the darker shades represent constituencies that were reserved for women during 2012 municipal elections.

This natural experiment if gender quotas is unique as it comes as close as is possible for an at scale experiment to occur in the real world. Crucially, this natural experiment combined with Delhi's political organization leads to a variation in the number of wards that are reserved within higher-level state constituencies. Comparisons of state constituencies that vary along number of reserved wards does not suffer from selection or other endogenous effects that would be endemic to such comparisons. Figure 3.4 shows an example of this nesting, where Delhi's state-level constituencies are shown as shaded by the number of municipal wards that were reserved for women (as per the 2012 municipal elections) when the 2013 (or 2015) state elections took place. Two state constituencies in Delhi (in white), that largely house national bureaucracies and army offices, historically do not contain any municipal wards and are therefore excluded from the analysis in this paper. Two shaded constituencies differ from the rest and have three municipal constituencies and are also excluded. This qualifies 66 out of 70 constituencies as eligible for the purpose of analysis.

Fig. 3.4 Random variation in reserved municipal wards within state constituencies

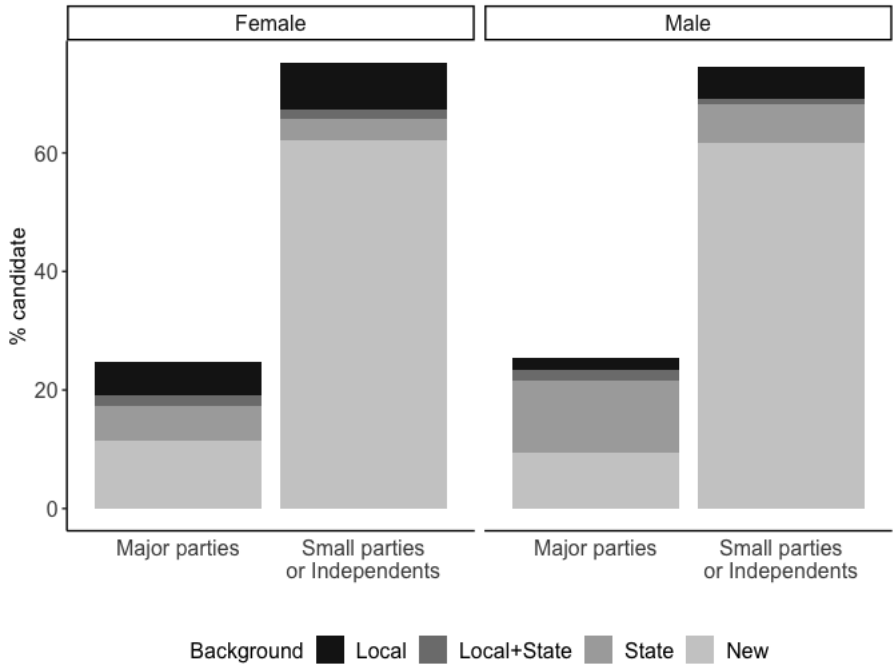


Notes: This figure plots Delhi's 70 state constituencies each shaded by the number of wards that were reserved for women during the 2013 or 2015 elections.

Descriptives

State-level election data shows that out of the 2897 candidates that contested state elections in Delhi since 2008 until 2020: only 9.5% - 278 candidates were women. 9.3% of all major party nominations went to women - and only a mere 69 women ran on major party tickets, relative to 668 men. Figure 3.5 plots background type within each gender to show that contesting in municipal elections is a stronger career path for women than for men. Amongst female (male) major party candidates, 23% (8%) had prior local experience, 23% (49%) had prior state experience (re-contesting candidates or incumbents). 7% (7%) of female major party nominees had both local and state experience and the rest 47% (36%) were new candidates with no previous electoral experience.

Fig. 3.5 Pathways to power for male and female candidates



Notes: This figure plots the share of state-level candidates with four mutually exclusive background categories who either contest on a major party ticket or contest on small parties or as independents as % of total female (left panel, N= 278) or male (right-panel, N= 2619) candidates. The data refers to all candidates that contested elections in Delhi during 2008 to 2020.

Empirical strategy

To examine the effect of the number of party nominations that women get at the local-level, I estimate the reduced-form effect of number of female seats, that is, the number of municipal wards that are reserved for women within a state constituency, on career progression and re-nomination in state elections using the below equation:

$$Y_{ct} = \beta_0 + \beta_1 w_{ct} + \alpha_c + \theta_t + \varepsilon \tag{3.1}$$

Where, Y_{ct} is the outcome which is measured at the state-level electoral constituency c in the election cycle t. In particular, female state party nominations are measured as: (1) a dummy which is 1 if a female candidate runs on a major party nomination and 0 otherwise or (2) % (of total candidates) municipal politicians or incumbents or re-contesting state female candidates that secure a major party nomination. The major parties are: BJP, INC and the Aam Aadmi Party (AAP). The AAP contested its first state elections in 2013 and its first and only municipal election in 2017.

α_c is the constituency fixed effect, which improves precision by accounting for time-invariant predictors of the outcomes of interest that are not affected by the treatment. θ_t is the election-year fixed effects which is necessary because the number of reserved seats for women within a high-level constituency varies each election due to changes in the reservation policy that affect the entire state.

w_{ct} is the number of wards that are reserved for women within a state constituency c in the election cycle t and β_1 is the parameter of interest. Following convention, I use an interval measurement scale because the distance between any two adjacent attributes is equal (1 to 2 to 3 reserved seats is equally spaced), and makes it easier to interpret the results. Because of randomized reservations, this design offers an unbiased causal estimate of the number of major party nominations secured by women, which is otherwise hard to estimate as women might select into municipal politics in places with more senior female politicians. I report the reduced-form effect which is easier to interpret and does not require functional form assumptions, and report robust standard errors and p-values computed using randomization-inference.

To interpret this reduced-form effect it is important to note three contextual facts: (1) all major parties nominate women in all reserved seats and with each reserved municipal seat, on an average 2.36 women ran on major party nominations in local elections. (2) very few women secure secure major party nominations from non-reserved wards (average of 0.078). In total a mere 35 women ran on major party nominations from 2007 to 2017 in all of the 452 non-reserved wards. As a result, the reduced-form effect is close to what would be obtained by instrumenting for female party nominations by the number of seats reserved for women. (3) local female politicians from small parties or independent female candidates are largely peripheral figures in municipal politics - 87% of seats are won by the three major parties and 88% of top 2 candidates are from major parties which means it is reasonable to assume the exclusion restriction that key relationships are mainly driven by the number of local female politicians who hold major party nominations.

An additional advantage of Delhi's context is that for most of the study period, wards are dispersed relatively equally across the state constituencies. Until 2017, 66 out of 68 constituencies all have the same - four number of wards - each. However, In 2017, border redistricting in the municipal council causes a major upheaval and leads some state constituencies to end up with 3 to 7 ward each (4 on an average) for the purpose of 2020 state elections. Consequently, despite randomization, because some constituencies now have a (lower) higher baseline number of wards, they have a (lower) higher likelihood of being treated with reservations.

To deal with this unequal likelihood of treatment, I stratify the state constituency population on the basis of number of wards and restrict the main sample to state constituencies that have four wards each election year throughout the period of study.[7] To be clear, this is not selection on a confounder but stratification to a subset in which the causal parameter of interest is unbiased. This leaves me with 229 constituency-year observations- all of which have 4 municipal wards each. This subset also comprises a vast majority of the population (84%). Stratifying has the crucial advantage that it reduces un-theorized heterogeneity introduced by variation in the baseline number of local constituencies,[8] While this stratificiation strategy is superior to the convention of adding controls, I conduct two robustness checks (1) restrict the study to until 2015 elections (Appendix B.6) (2) use all state-constituency observations and add control for the number of wards (Appendix B.7) - and find that there is no substantive change in the results.

Appendix Section A.6 reports several balance tests to show that: (1) the main sample is balanced on a wide range of individual level socio-economic and demographic variables obtained from a citizen-level survey (2) lagged electoral variables do not predict future treatment status. For all estimates of β_1, I provide the heteroskedasticity robust standard errors as well as p-values from a two-sided randomization inference (RI) test of zero treatment effects. Design-based uncertainty is the correct method to estimate p-values here rather than the conventional method of boot-strapping p-values, because in experimental designs, the uncertainty arises from the *"lack of knowledge about the values that the regression outcome would have taken under alternative interventions"* (Abadie et al., 2020, p. 265). Further, RI allows us to make exact distribution free inferences regardless of sample size. The RI test I employ uses code to mimic the randomized reservation process and I use the ritest package in Stata written by Hess (2017) as the package to implement this program.

[7] Appendix Table A.6 shows the distribution of the number of wards and the number of wards reserved for women in each MCD-State electoral year combination. Unfortunately, state constituencies with 6 and 7 wards ($N = 3$ and $N = 1$ respectively) show no variation on treatment status, that is, one cannot estimate causal effects without extrapolation. In such cases, statistically it is best to estimate a representative causal effect for the subset of the target population for which positivity does hold. For state constituencies with 3 and 5 wards each (N=21 and N=12 respectively), the sample size is too small and underpowered to estimate statistically distinguishable causal effects. This informs the decision to focus on state constituencies that have four wards.

[8] State constituencies that have more local constituencies are more competitive and each local politician exerts relatively less influence at higher level outcomes. For example, 3 reserved seats in a state constituency with 7 local seats comprise a minority, but comprise a majority in a state constituency with 4 local seats. Such mechanisms are not the theoretical focus of this paper and due to small sample size beyond the scope of this paper to test but are a ripe area for future research.

3.5 Results

Table 3.1 Column 1 shows that an increase in reserved wards increases the likelihood that a female candidate secures a major party nomination by 10.2 % points, which over a baseline of 14.3%, means a substantive 71% point increase. The percentage of female candidates that secure party nominations more than doubles by 1.297% points. The significance of these results cannot be overstated. Evidence from around the world underscores how male dominance of political parties is the strongest barrier to female political success, and women's entry in politician assemblies is the most persistent indicator of gender inequality, particularly in the Indian context.

Table 3.1 More female candidates get major party nominations in constituencies with higher local female presence

	Major party nomination		**Small party nomination**		**Run as independent**	
	Any female (1)	% female candidate (2)	Any female (3)	% female candidate (4)	Any female (5)	% female candidate (6)
# female wards	0.102	1.297	0.053	0.357	-0.074	-0.664
	(0.049)	(0.679)	(0.075)	(0.985)	(0.071)	(0.812)
	[0.035]	[0.013]	[0.477]	[0.734]	[0.171]	[0.278]
Reference mean	0.143	1.1330	0.396	3.989	0.319	3.242

Notes: The table displays OLS estimates of the dependent variables in top-row on # female wards, which is the number of municipal constituencies reserved for women within the state constituency. The unit of observation are state constituencies observed in four elections and have four municipal wards each (N=229). All regressions have an election and state constituency fixed effect. Any female is a dummy if a female state candidate runs on major party nomination, small party nomination or as independent respectively, and 0 otherwise. % Female candidates refers to share of female state candidates as % of total candidates. Reference mean is estimated as the mean of the outcome in constituencies that have only 1 reserved ward. Robust standard errors are reported. P-values from a two-sided randomization inference are reported in square brackets.

The table also shows that an increase in female presence in local politics does not translate in increasing the number of women who run from small parties or run as independents at the state-level. The theory implies that given the intense demand for grassroots party activist support, simply seeing more women run in local politics may not be sufficiently strong to inspire higher-level candidacy among independent female candidates, as they lack the ability to build grassroots support for which party labels are important. Similarly because small party candidates are un-influential in both municipal and state politics, having more un-influential local players who build little grassroots support is unlikely to influence higher-level nominations.

Political career progression: The municipal to state-level talent pipeline

Table 3.2 shows that local female politicians are less likely to contest state election than their male counterparts. On an average 5.2% of municipal candidates contest state elections: 2.1% of female candidates contest state elections, while 7.4% male candidates contest state elections. Local female candidates are close to 2.8 times less likely to contest state elections relative to male candidates, and this gender-gap persist even after controlling for electoral performance and securing a major party ticket in local elections. The gender penalty is robust to inclusion of constituency fixed effects and individual-level background controls such as, education, criminality, wealth and age. These findings suggest that it is likely that a political glass ceiling exists in the context of career progression from local to state elections in India and echo Folke and Rickne (2016), who conceptualize and provide evidence for a political glass ceiling in Swedish local elections.

Table 3.2 Gender-gap in career progression

	Dependent variable is contest state-level elections			
	(1)	(2)	(3)	(4)
Woman	-0.059***	-0.058***	-0.059***	-0.060***
	(0.005)	(0.005)	(0.007)	(0.007)
Election year fixed effect	Yes	Yes	Yes	Yes
Party and vote-share controls	Yes	Yes	Yes	Yes
Background controls	No	No	Yes	Yes
State constituency fixed effect	No	Yes	No	Yes
N	7530	7530	4108	4108

Notes: The dependent variable is a dummy which is 1 if the municipal candidate contests subsequent state elections and 0 otherwise. The mean is 0.518, for men: 0.0744 and women: 0.0214. The unit of observation are individual municipal candidates in three municipal elections in (1) & (2) and in 2012 and 2017 in (3) & (4). Party/ vote-share controls are standardized vote share and a dummy to indicate whether municipal candidate contested on a major party ticket. Background controls are log of total assets, log of age, dummy to indicate whether candidate has at least high school education, criminal background. Data on background controls is taken from candidate affidavits registered with the state election commission and is only available in 2012 and 2017. Robust standard errors are reported.

Table 3.3 shows that higher female presence in local party hierarchy enables women to rise up in the party hierarchy and overcome this political glass ceiling. A higher presence of women in municipal politics strengthens the upstream supply of female candidates who have a background in local politics by 1.5 times (by 1.035% over a baseline of 0.688%). With an average of 2.35 female local representatives per state level constituency in a total of 138 constituencies, the point estimate of 1.035%, implies that an additional 37.62 local female candidates ran in the state level as a result of the increase in the number of reserved seats. This is approximately 15% of total female candidacy and 80% of the entire municipal female candidacy observed at the state level in the full sample in the entire period.

Table 3.3 Municipal female politicians run and secure party nominations in state elections

	Municipal female candidate runs (1)	% municipal female candidate runs (2)	Has major party nomination (3)	% has major party nomination (4)
# female wards	0.105	1.035	0.059	0.730
	(0.048)	(0.519)	(0.031)	(0.427)
	[0.007]	[0.002]	[0.009]	[0.004]
Reference Mean	0.088	0.688	0.011	0.061

Notes: The unit of observation are state constituencies observed over time in four elections that have four municipal wards each (N=229). Outcomes in even columns are measured as 1 in case a municipal female candidate runs in state elections and 1 in case she runs on a major party nomination respectively and 0 otherwise. Outcomes in odd columns are measured as % municipal female candidate runs in state elections and % doing so on major party nomination respectively. All regressions have an election and state constituency fixed effect. Robust standard errors are reported. P-values from a two-sided randomization inference are reported in square brackets.

Not only are local female candidates more likely to run in state constituencies with more local female presence, they are over five times more likely to secure party nominations. 0.061% local female candidates run in a control state constituency with only 1 reserved seat. In contrast .73% more local female candidates run in constituencies with every increase in reserved seat, which is close to 12 times in magnitudes. In other words, if parties nominate local female candidates to contest state elections, they are highly likely to be nominated in state constituencies with higher number of reserved seats.

Next, I use the data on the entire universe of male and female local candidates and their performance in local elections, I find that performance in municipal elections is strongly correlated with the likelihood to secure a major party nomination. Table 3.4 shows that women's likelihood to secure a major party ticket (column 1) is strongly correlated with their vote-share in local elections.

Table 3.4 Electoral performance in quota elections as a signal of grassroots activist support

	Municipal candidate contests state election as:			
	Major party nominee		Independent	
	Female (1)	Male (2)	Female (3)	Male (4)
Std. vote-share	0.010***	0.016***	0.008*	0.000
in municipal elections	(0.004)	(0.005)	(0.004)	(0.003)
Mean dependent variable	0.004	0.007	0.003	0.013
N candidates	3216	4314	3216	4314

Notes: The unit of observation is a municipal candidate and contains all female and male candidates that contested municipal elections from 2007 to 2017. Dependent variable is 1 if the municipal candidate contested subsequent state elections on a major party ticket and 0 otherwise. The predictor variable is the standardized vote-share garnered by the candidate in the municipal election. Regression includes a control for whether candidate is a winner and contains election fixed effects. Robust standard errors are reported. *** p<0.01, ** p<0.05, * <0.10

This relationship is surprising. Unlike for the purpose of candidate selection in local elections, women's electoral performance in local elections that feature same gender races are not a useful benchmark of voter preferences for state elections, where women mainly compete against other men. However, electoral performance in local elections does provide an objective and public signal about the ability of women candidates to mobilize voters to everyone involved - opponents, party leaders and senior politicians. Indeed, party leaders and senior politicians report using municipal electoral performance to judge the organizational capacity of their municipal nominees [9] Furthermore, this correlation also holds for women who run as independents in state elections. Because there is no party gatekeeping in this case, these results show that contesting local elections boosts women's individual capacity to contest elections, regardless of major party support, which is a remarkably ambitious and risky choice, considering that no independent candidate has won a state election in Delhi since 2007, and across India the % of independent winners stands at 1.2% since 1977.

Political survival: Re-nomination rates of female state candidates

Table 3.5 shows that a higher number of municipal seats held by women also translates in a greater likelihood that female incumbents (4.5 times) and runner-ups (3 times) re-run on major party nominations by several orders of magnitude. Given the lower likelihood that women are re-nominated by political parties in India's state elections, these effect sizes are remarkable. Female politicians who have experience in local politics as well as are re-contesting at the state-level have the strongest likelihood of retaining their party nominations. Moreover, given the baseline mean is 0, it means that this effect is entirely driven by the greater likelihood that women with this strong background run in places with higher local female nominees. This evidence again underscores the importance of grassroots capacity mechanism for women's ability to secure party nominations.

Furthermore, the likelihood that new state-level female candidates, who lack any political experience, secure party nominations remains unchanged as evident in column 1. As discussed in the introduction, if indeed, a transformation of gatekeeper attitudes is the reason linking a greater presence of local party nominees to a greater parity in higher-level party-nominations, we would expect similar effects for all female candidates, which is not the case.

[9] Interviews with major party leaders and senior politicians conducted in Delhi.

Table 3.5 Female state candidates re-run on major party nominations

	New state candidate (1)	Re-contesting state candidate (2)	State incumbent (3)	Both local state experience (4)
# female wards	0.024	0.064	0.050	0.023
	(0.052)	(0.040)	(0.027)	(0.019)
	[0.586]	[0.036]	[0.035]	[0.064]
Reference mean	0.110	0.022	0.011	0.000

Notes: The unit of observation are state constituencies observed over time in four elections that have four municipal wards each (N=229). The outcome is a dummy which is 1 if a (new/ re-contesting/ incumbent/ both local and state experience) state female candidate secures a major party nomination in a given state constituency. Robust standard errors are reported and all regressions have an election and state constituency fixed effect. P-values from a two-sided randomization inference are reported in square brackets.

Votes for women

Finally, table 3.6 Column 2 shows that with each additional increase in local female seats, female vote-share doubles (increases by 5.35% points, compared to a baseline vote share of 5.13%). This echoes conjoint evidence which shows that major party nominations are valuable to voters, and when women get party tickets they gain votes.

Table 3.6 Women's vote-share in higher elections increases

	Overall turnout (1)	Female vote-share % (2)	Female wins (3)	Female incumbent wins (4)	Female Top 3 (5)	Female Top 5 (6)
# female wards	0.192	5.353	0.041	0.032	0.100	0.069
	(0.358)	(2.216)	(0.035)	(0.023)	(0.053)	(0.067)
	[0.573]	[0.010]	[0.157]	[0.121]	[0.032]	[0.224]
Reference mean	61.816	5.133	0.033	0.011	0.132	0.253

Notes: The unit of observation are state constituencies observed over time in four elections that have four municipal wards each (N=229). Turnout data is unavailable for the 2020 state elections and therefore N=198 for column (1). Female vote share is measured as the % of votes cast for female candidates. Female wins is a dummy which is 1 if a woman is the winner. Female top 3(5) is a dummy which is 1 if a woman is in the top 3(5) position. Robust standard errors are reported and all regressions have an election and state constituency fixed effect. P-values from a two-sided randomization inference are reported in square brackets.

Column 1 shows that a higher number of seats held by female local politicians increases female vote share without increasing overall voter turnout. It is plausible that countervailing responses among women may cancel out in aggregate effects or male voters react negatively to female party contact. Due to lack fo female turnout data, it is not possible to offer a precise explanation for this null result. However, the increase in vote-share is substantial. Yet, results in Column 3 and 4 show that despite this increase in vote-share, increased local representation does not increase the likelihood that a female candidate wins, but it does make

female candidates more competitive. Column 5 shows that the likelihood a female candidate finishes in top 3 spots increase by 10% points. Relative to a baseline mean of 13.2%, this is a substantive 75.5% point increase.

Table 3.7 Securing party nominations correlates with the increase in female vote-share

	(1)	(2)	(3)	(4)	(5)
# female wards	5.353**	2.046	3.620	3.579*	5.402**
	(2.651)	(1.504)	(2.341)	(2.112)	(2.580)
% candidates female major party		2.550***			
		(0.556)			
% candidates female any local prior experience			1.675***		
			(0.584)		
% candidates female major party with prior local experience				2.429***	
				(0.815)	
% new female candidates					0.277
					(0.177)
N	229	229	229	229	229

Notes: The dependent variable is female vote-share at the state constituency level. Robust standard errors are reported. *** p<0.01, ** p<0.05, * <0.10

Table 3.7 shows that this increase in female vote share is strongly (although not completely) correlated with the % of female candidates who run on major party tickets. Introducing the party nomination variables diminishes the effect size of number of reserved seats on vote-share.This correlational evidence echoes claims that supply side barriers are a key reason for women's under-representation in politics (Jensenius, 2020), and echo the conjoint experimental evidence presented earlier in the paper.

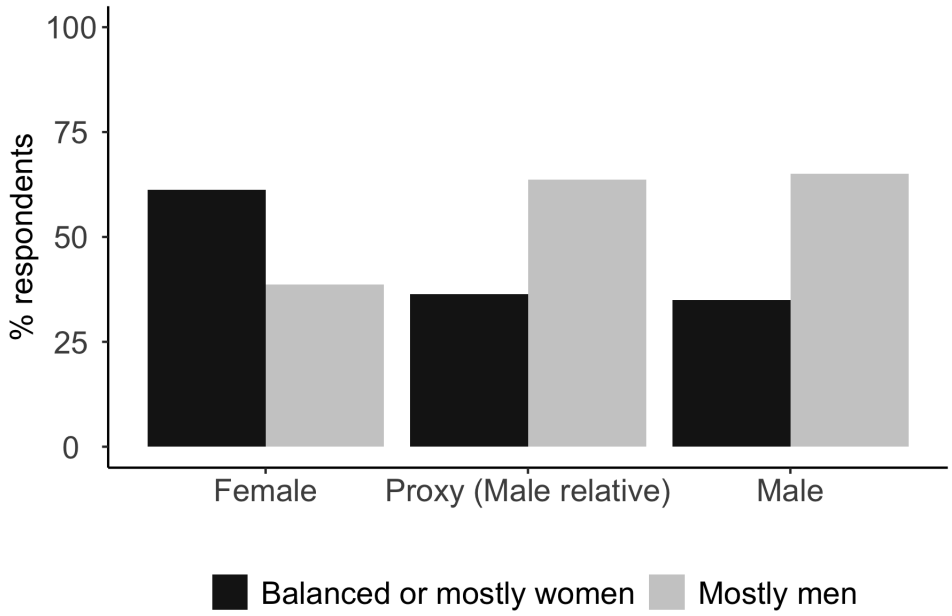
3.6 Qualitative evidence

This paper argues that the greater intensity of female-led party building in state constituencies where more female politicians hold party nominations at the local level is the key reason for women's success in securing party nominations at the state-level. This section uses qualitative evidence to provide evidence and highlight the process of female-led party building. The interview data supports several building block of the argument and underscores that women's grassroots party building is parity enhancing.

Using data from structured interviews with municipal incumbents in Delhi, I find that women have used party nominations to invest in building gender-inclusive grassroots capacity. When asked to name their close mentors and relationships in politics, female incumbents (26%) were twice as likely as men (13%) to explicitly name a senior female politician as an

ally. 37% of women incumbents noted a female party worker in their top five supporters, relative to 16% of men incumbents. Figure 3.6 disaggregates female politician type to show that women are 1.7 times more likely to note that their campaign organizations were either gender balanced or had a higher presence of female canvassers (61% female incumbents) relative to male incumbents or spouses who are active on behalf of women (35% male incumbents or relatives).[10] Even on this measure, which are downward biased due to social desirability, the gender-gap is striking.[11]

Fig. 3.6 Women's ground campaigns have more female party activists



Notes: This figure plots data from a self-reported measure of the composition of ground campaign organization collected via structured interviews with municipal incumbents (N = 92) for three groups: (1) female incumbents who answered the interviewed (40%); (2) proxy women, that is women whose male relatives, mainly spouses, answered the interview on their behalf and reported undertaking most of the work (13%); (3) male incumbents (47%).

While these statistics summarize and give a representative picture of women's strategies, I share two examples of women's political access narratives from the survey which showcases the process of female-led grassroots party recruitment:

[10] All municipal incumbents were asked: *whether their ground campaigns in the last election were comprised of mostly male or mostly female activists? [or were gender-balanced?].* Enumerators had the option to select *gender-balanced* on their screens, but it was not explicitly announced to reduce cheap talk. To measure the extent of female activist recruitment, I combine responses of *mostly female* and *gender-balanced* to contrast with *mostly men* as the status-quo recruitment response.

[11] Data from fieldwork and shadowing candidates in various levels of election campaigns suggests much starker gender-gaps in ground campaigns. Interview with the director of a major non-partisan organization that supports women in running political campaigns across India confirms these observations (interviewed conducted on 15th November 2020).

> "There was no politics in my life. The ex-municipal councilor from this area, Mrs. Beena had come to our neighborhood and I met her at a local event. This is where I began my political journey. She said to me that she wanted to install street lights in my neighborhood and asked for my help. I felt good about this. The installation of streetlights was a good thing. I offered my support and started working closely with her [on issues in the constituency]. Eventually, she made me the President of Women's party wing in my constituency...Mrs. Beena made me fill the form to become a Women's party wing member in 2013. I was active informally before, but this was the first time I became formally associated."

> "I joined politics when Mrs. Rama contested elections and asked for my help. But when I was working for Mrs. Rama's campaign, I did not do so thinking that I will join politics. Rama ji and the then Member of legislative assembly, Mr. Shama saw my capacity to work and the style of work, and they said that they will make me the President of women's party wing of this District because there was no organization at that time. At that time, women did not like joining politics; and their family members disliked it as well, but when I came here and was made the President of women's party wing, I got the educated women out of their houses. I made a good president [of women's party wing.]"

Throughout the interviews, both male and female politicians highlighted their participation in campaign activities and problem-solving capacity as the reason for support from across the party hierarchy to secure party nominations. For an example, consider this detailed account in which a female politician credits her long time investment in problem-solving in her neighborhood and her connection with another female councilor for becoming the President of her district in the BJP's women wing:

> "I do not have any political association in the family at all; I just had a passion for social work. If any work was not being done by the government officials, I would take that on. Earlier I used to live in [Nagarwasi], and there was a sewage line related work which was done four times in the course of a year. I got that work done along with the RWA. [Meena] used to be the municipal councilor back then, and she appointed me as the Mahila Morcha Adhyaksh in the area *District President of women's party wing*. I used to work only for social causes, if a work was not being done by the government officials, the people would come to me."

Other gave more emphasis to developing reputation for local problem-solving as the key reason for success in getting a party nomination -

> "When we started working in 2004-05, getting a ration card made or opening a bank account was very difficult so we helped people with such things. People would come to me to request assistance in getting ration cards, Identity proofs and bank accounts made. We kept helping people with such problems and eventually gained recognition for it, people would tell each other to go to Madhu maam for these things."

Women also highlighted numerous examples of working in the political campaigns of local party functionaries and state-level politicians as a reason for their political success. For example: *"I did door to door campaigning thrice. We had the contact details of 12000 people from the area and we would call them for the campaign and would tell the people about all the work that the party has done."* They also utilized grassroots support to lobby for party tickets: *"When Mr. Mahesh was the state party president, citizens and supporters from my area had written letters to him asking him to give me a party ticket to contest [state] elections in 1998."*

While male politicians openly displayed prejudice against women, both men and women noted how their political careers were affected by a patronage or patrimonial decision made by party leaders, or were cut short due to a revenge-seeking faction wary of their growing power. For example, a female incumbent noted: *"My ticket was confirmed thrice but got cancelled each time. In 2002, my name was finalized but Mr. Rao (district party president) was observing that I was very active, and I have a lot of energy and support. He did not want me to succeed and he lobbied to get my ticket cancelled three times."* In another typical example, a female politician noted how a senior minister was adverse to her candidacy: *"The person who was the MLA here, Mr. Rai, after he won and became the Minister, our relationship had become sour and he did not want me to get the ticket. He said that he will not let me contest the election."* Municipal politicians also noted staging support for those who they were close to in helping them secure party tickets in state elections, even when the candidate belonged to a different party: *"We three [female] councillors [candidates from party] from this area banded together to get the MLA [female MLA candidate from another party] to join our party."*

Finally, there are numerous examples from newspapers in India (and elsewhere) that show how women have used investments in party building to demand fairer treatment from parties. For example, in India's central state of Madhya Pradesh, BJP female leaders made a

collective demand for tickets for female party members by underscoring their party building activities: *"The BJP has 56 organisational districts in the state and women ticket aspirants want representation in every district. We want 56 tickets for women in the 230-member assembly seats keeping in mind their role in strengthening the party at the grassroots level."*[12] In Rajasthan, female party workers in the INC similarly highlighted women's party building work at the grassroots to make a demand some seats for women candidate: *"Our party workers toiled in the Assembly elections and now they are ready to face the Lok Sabha elections. We are not raising demand of quota for the women but the party should give at-least 5-10 seats to the women candidates."*[13] In another example, a female runner-up's party workers staged massive protest against party leadership decision to deny her a renomination in Delhi: *"Delhi BJP Vice President Shikha Rai's supporters also arrived at the scene to stage another protest over the denial of a poll ticket to Rai. Shikha Rai had contested the 2013 polls from Kasturba Nagar constituency but had lost."*[14] Together these many pieces of evidence provide strong support this paper's theoretical argument.

3.7 Alternative explanations

In this section, I consider two class of alternative explanations. First concerns different types of attitudinal mechanisms. Second concerns mechanical selection effects of quotas. Despite strong evidence showcasing the gendered nature of women's grassroots capacity and female party nominees in supporting senior female politicians, it is plausible that instead attitudinal mechanisms explain the observed outcome. That is, women gain more party nominations simply because party leadership attitudes towards women have changed. Yet, the design employed in this paper offers considerable leverage in limiting the scope for a variety of attitudinal mechanisms and reasonably allays these concerns.

First, all party leaders and selection committees of the three major parties are centralized at the state-level and are exposed to the quota policy for the same time period. This means that change in top-down selection committees or party leader attitudes, who are the key decisions makers, cannot drive the relationship of interest. Second, as reported in balance checks in the Appendix, past reservations in local elections are un-correlated with future reservations which means that within-state exposure to quota policy is balanced across treatment levels. Third,

[12] See, *BJP women wing demands fair deal in tickets for assembly polls*, The Times of India, Aug 13 2018.

[13] See, Rajasthan Mahila Congress demands Lok Sabha ticket share, DNA, Feb 6, 2019.

[14] For other examples from India, see *Uttarakhand women leaders demand fair share of party tickets*, The Hindustan Times, July 8 2016. For an example from Pakistan, see *PTI women workers protest over allotment of tickets for reserved seats*, ANI news, June 23, 2018.

all outcomes are measured over a short time horizon - 1 to 3 years - which further limits the scope of micro-level attitudinal mechanisms. Even amongst citizens, the most malleable aspects of prejudice such as, stereotypes take close to a decade of continued exposure to women to change modestly (Beaman et al., 2009).

On top of this, the results show that neither do more female candidates run in places with more female party nominees nor do new female candidates get party tickets. A transformative shift in micro-level attitudes driving these large effect sizes should have also encouraged new female candidates to get into politics and to be successful in getting party nominations. However, this is not the case. Furthermore, data from elite interviews suggest intra-party attitudes have changed little. As a male local politician sums up the zeitgeist:

> "Our society is male-dominated society (translated from 'Purush pradhan samaj'); men have to accompany and stay next to women everywhere they go, while a man can go anywhere alone. It becomes a two people job if a woman joins politics."

Reports of increasing intra-party hostility also belie a change in micro-level male attitudes, as female politicians in South Asia strongly report members of the same political party as a major perpetrator of violence.[15] Krook (2017) documents the pervasive and escalating nature of violence against women in politics, which is particularly intense in South Asia. She shares an example of how a 14-year-old girl was kidnapped from her bed late at night and raped as revenge for her mother's victory in local elections.

Finally, it is worth noting here that attitudinal mechanisms in general find little support in studies that examine access to top positions. Krook and O'Brien (2012) conduct a cross-national analysis to the appointment of female cabinet ministers worldwide and find that changes in the status of ordinary women or the evolution of attitudes towards gender equality do little to improve gender parity in political positions. The macro-level decline in female labour force participation and worsening sex-ratios in India also suggests that attitudes towards women have become worse let alone improve. Together, these various pieces of evidence strongly undermine the basis of support for attitudinal mechanisms in driving observed results.

[15] See *Violence against women in politics: A study conducted in India, Nepal and Pakistan*, published by United Nations Entity for Gender Equality and the Empowerment of Women in 2014. In India, 58% of female politicians interviewed identified members of the same political party as perpetrator of violence while only 15% identified citizens (Table 2, p. 85). 41% said that violence against women in politics is an outcome of political party vendetta (Table 5, p. 86).

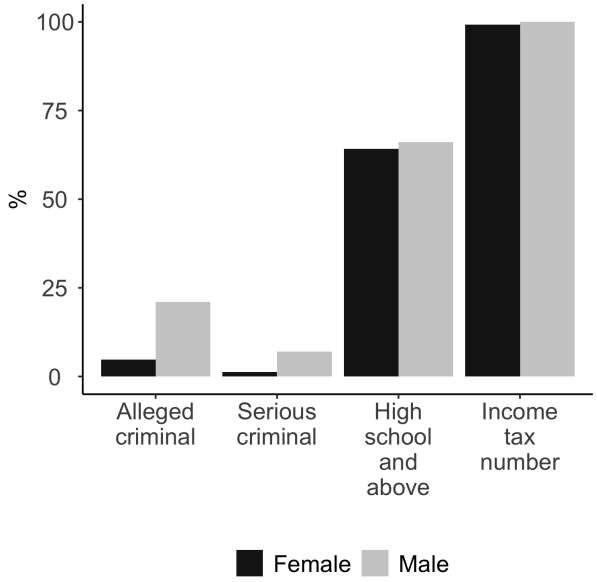
Another alternative explanation for the results is a mechanical effect of quotas through within-system "selection effects". Note this differs from selection effects analyzed in Besley et al. (2017) who estimate the intensive margin of quotas and therefore study selection effects that result due to quotas constituting a shock to the entire system. Instead, in this paper, due to the focus on the extensive margin, selection effects may accrue if quotas lead exceptionally talented women to run who, relative to their male counterparts, come endowed with higher-levels of grassroots activist support. That is, unlike women building grassroots support *ex-post*, after receiving a party nomination, quotas introduce into politics women who have grassroots support *ex-ante*. By this logic, when more of these higher quality women run, they use their ex-ante grassroots capacity to rise up and forge patronage linkages with state-level female candidates. This concern is unlikely to drive my results. First, this argument is sharply inconsistent with the process of party building and qualitative evidence which underscores that party nominations are the key resource with which female candidates recruit party activists.

Second, a further look at the candidate affidavit data, which all municipal candidates file at the time of official registration, further belies the expectations about women's ex-ante capacity. Across a variety of measures that are known to matter to build a grassroots following in India such as, criminality or wealth (Vaishnav, 2017), female candidates, who are mainly housewives, lag behind men as seen in Figure 3.7 and Figure 3.8. Among male and female candidates, there are no major differences in education and on having an income tax return reference number.[16]

On what is arguably the strongest predictor of grassroots supports, which is the number of years a candidate is active in broker politics prior to contesting elections, even female incumbents, who are stronger than losing candidates, have substantially shorter party activist careers as in Figure 3.9. The median prior broker politics experience for female incumbents is 6 years, while for men it is 25 years. Due to their longer investment in grassroots politics, men develop wider and deeper broker networks ex-ante which help them rise up in the party hierarchy. Indeed interviews with male state-level candidates suggest that these broker networks help men to pre-empt contesting local elections altogether. Furthermore, if local quotas were entirely captured by women who were relying on their husbands grassroots capacity, we should not see the strong results documented in the paper. Moreover, interview

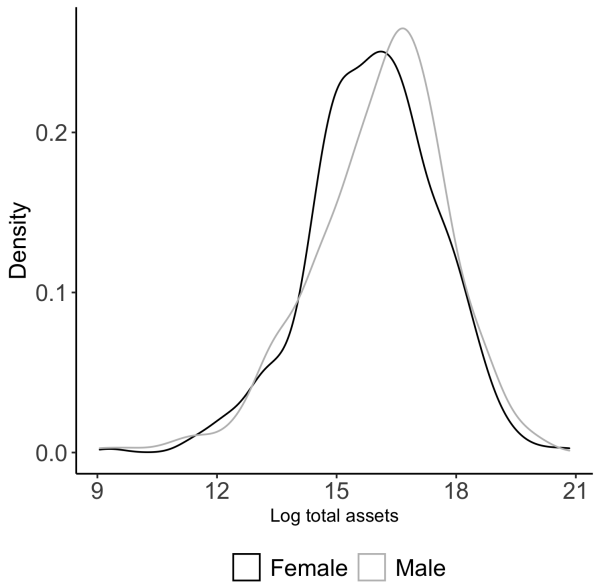
[16]While I lack data on candidate's dynastic background (data collection on hold due to COVID-19), wealth and having an income tax return reference number should pick up these effects. In other words, if many dynastic candidates were running, the difference between men and women should be smaller. Furthemore, if more dynastic women are running at local level and can rely on their family's grassroots supports, the theory suggests that they are less likely to recruit female activists and less likely to support female politicians at higher level, which run counters to the findings.

Fig. 3.7 Female major party candidates have fewer criminal allegations than men



Notes: This figure plots data from candidate affidavits of all male (N= 577) and female major party candidates (N= 637) from 2012 and 2017 municipal elections for which data is available and for 90% of total major party candidates in this period (N=1353). All variables are dummies. From left to right, variables hold value 1 if candidate has any criminal allegations, candidate has more than 1 criminal case (i.e. serious), candidate has above high school education, and candidate has filed an income tax return reference number.

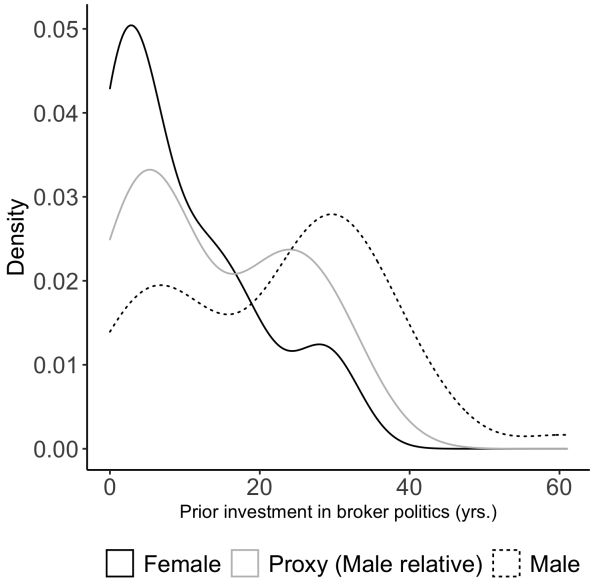
Fig. 3.8 Female major party candidates are less wealthy than men



Notes: This figure plots the log of total assets taken from candidate affidavits of all male and female major party candidates.

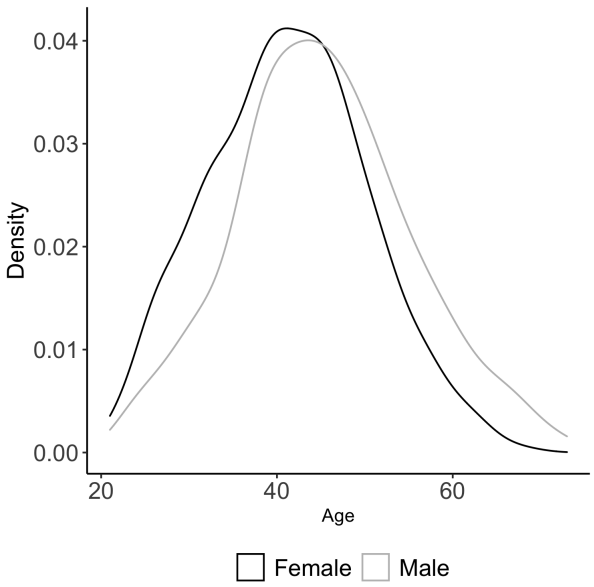
data shows that the proportion of "proxy-women", whose husbands answered the interviews on their behalf and were taking care of most of the responsibilities, is approx. 13% of women. While this is not marginal, such women represent a small minority.

Fig. 3.9 Female major party incumbents have shorter activist careers than men



Notes: This figure plots a measure of years of investment in politics as a party activist for the same three groups of incumbents as in 3.6. All incumbents were asked to describe their political journey and to report a start year in which they first conducted a significant political campaign or problem-solving task on behalf of a party or candidate. The difference between the start year and the first election they secured a party nomination is plotted for male and female incumbents.

Fig. 3.10 Female major party candidates are younger than men



Notes: Notes: This figure plots the age of all male and female major party candidates and is taken from candidate affidavits .

Figure 3.10 shows that women also have lower political experience than men as measured by age. On an average, men are 45 years old while women are 41 years old. These various pieces of descriptive data confirm that within-system selection effects are unlikely

to be a compelling alternative mechanism. Furthermore, I regressed municipal candidate attributes on likelihood to secure a state-level major party nomination and find that none of these measures no longer predict the likelihood that a woman will gain a nomination after controlling for vote-share. This analysis reaffirms that it is grassroots support, which is signaled *after* contesting local election that matters to parties. In contrast, ex-ante attributes matter for progression only in so far they enable candidates to build grassroots support *after* they get a party nomination. As we see from the above figures, far from selection effects, women are ex-ante at a disadvantage relative to men.

These figures show that despite female candidates come in ill-equipped to compete with men, female-led party building lowers the negative influence of these ex-ante disparities. In other words, while women are setup in politics to fail, they succeed when given a fair opportunity to counter long-standing gender inequalities. Yet, preliminary analysis shows that the time spent as party activists correlates with political ambition and how qualified female incumbents feel to contest state elections.[17] This correlation suggests that even winning office may not completely undo the career repercussions of these past inequalities.

3.8 Conclusion

Political gender inequality is the most persistent form of gender inequality in the world and remains democracy's unresolved dilemma. This paper shows that female representation in local politics is one pathway to lowering this power inequality not only in career progression and political survival in higher-level politics, but across the entire political spectrum. Crucially, the paper finds that grassroots mechanisms exert influence at the top which is an empowering finding for the study of female representation worldwide. More so because local female politicians succeed by building leverage to demand parity in the top echelons of party politics in the Indian setting, which is home to some of the most extreme expressions of gender inequality. The results suggest that investigating the consequences of female-led party building on female representation in other non-elected roles inside parties and on substantive representation will widely improve our understanding of political parties and democracy.

Despite holding several macro-level variables constant and investigating a rather thin extensive margin of gender quotas, I find that gender quotas substantially improve descriptive representation in higher-level politics. They do so by equalizing women's access to local

[17] Municipal incumbents were asked to rate on a scale of 0-10 how qualified they feel and likely they are to contest Delhi state elections in 2025. These question was added at a later point in the data collection process, therefore N = 40. Due to this small N, this analysis is only exploratory in nature.

political opportunities inside major parties, from which women are otherwise surely excluded. Gender parity in local politics in turn enables female politician, like their male counterparts, to use their party nomination as a resource to build a grassroots following. Far from being a mechanical attitudinal or selection effect of quotas, the results are testament to women's entrepreneurial grit and also allay fears about male capture of gender quotas. Women's enterprise in cultivating grassroots support enables them to lower the repercussions of past gender inequalities that hurt their careers and to mount bottom-up pressure and overcome elite bias. While women's grit increases political gender equality, this result also echoes research which shows that women often work harder than men to secure the same opportunities in politics (Bauer, 2020). The focus on the extensive margin improves precision in our understanding of *how* gender quotas increase female representation (Barnes and Holman, 2020). Studying the extensive margin of gender quotas in other sub-national settings will vastly improve our understanding of how institutional design features of gender quotas and electoral institution interact to moderate these effects (Clayton, Forthcoming).

Finally, decentralization reforms have fundamentally altered party organization in low and middle income democracies and created a new wave of politicians who use local politics as a launchpad to state or national level politics. Yet we know little about gender-gaps in career progression in local politics in these settings. Towards this gap, this paper is the first to show that there is likely to be a political glass ceiling in local politics in India and to show that local politics is a more crucial pathway to power for women than for men. By conceptualizing local candidates as meta brokers, and drawing attention to local institutions are key sites for party building, this paper shows that women's presence at the grassroots does not only increase women's career progression, but also increases women's political survival at the top. This paper is the first to show and theorize this hierarchical inter-dependence in politics as crucial to our understanding of female representation. The theoretical argument in this paper is consistent with insights from studies of party organization and broker politics in vastly different subnational settings within Latin America (Novaes, 2018; Sells, 2020), South Asia (Auerbach and Thachil, 2018; Bohlken, 2016; Jensenius and Suryanarayan, 2020), to sub-Saharan Africa (Brierley and Nathan, 2020; Ichino and Nathan, 2012), suggesting the broader contours of the argument have few scope conditions. Comparative research in other settings can vastly widen our understanding of how electoral institutions and cultural norms circumscribe the scope local institutions offer to marginalized groups to mount bottom-up pressure.

Chapter 4

The Political Economy of Demonstration Effects

4.1 Introduction

Seeing is believing and seeing women in political office is considered to be one of the most enduring signal of female political inclusion. A visible confirmation that politics is indeed open to women and that government is equally receptive to women's interests (Mansbridge, 1999; Phillips, 1995). But, what information does this signal convey in contexts where an overwhelming majority of women remain wary of women's political and economic inclusion and norms about women's traditional roles remain deeply entrenched.[1] *Do the empowering effects of female representation materialize against a landscape of intractable cultural norms around appropriate gender roles?* Recent experimental evidence suggests that in the shadow of patriarchal norms the relationship between empowering solutions to actual empowerment is tenuous (Barnett, Jamal and Monroe, 2020; Gottlieb, 2016).

This paper advances this research by theorizing the segmenting effects of patriarchal norms - conceptualized as *"internalized reckoning of relative bargaining power"* - in a new arena - descriptive representation (Iversen and Rosenbluth, 2010, p. 49). I draw on scholarship that has centered women's bargaining power within the family in shaping women's political and economic strategies (Agarwal, 1997; Iversen and Rosenbluth, 2006;

[1] Data from the World Value Survey wave 6 shows that in developing countries, majority women believe that men make better leaders than women and that when women work outside the household childcare suffers and. For instance, 55% women in Asia and 61% women in North Africa strongly agree or agree that men make better leaders than women. In contrast, 20% women in Americas and 29% women in Europe and Oceania hold this belief.

Kandiyoti, 1988; Sen, 1990). Gender asymmetries in household division of labour - shaped by economic forces such as lack of labour market options, patrilocality, social norms that punish divorce - reduce women's outside options and lower women's bargaining power. These macro and micro-level asymmetries perpetuate a cycle that constraints women in articulating their political interests, and in developing skills and accessing resources to advance their political interests.

I argue that the relationship between exposure to female representatives and women's political efficacy will depend on women's bargaining power. Building on recent scholarship that examines the role of women's bargaining power, I outline three micro-level mechanisms that explain why female political visibility may threaten women with low bargaining power. First, women who have low bargaining power gain by adhering more strongly to their traditional identity (Blaydes and Linzer, 2008), and therefore are more likely to perceive female visibility in politics as a violation of gender norms and a threat to the traditional identity (Barnes, Beaulieu and Saxton, 2020). Second, evidence suggests that in patriarchal settings, bargaining power shapes the value which women attach to male political preferences (Khan, 2017), and increases women's prosocial behavior that reinforces gender relations (Diekman and Clark, 2015). Within such settings, women with low bargaining power may strongly internalize the threat female politicians pose to male interests. Third, in settings where state access is mediated by male intermediaries (Goyal, 2019*b*). In such settings, female political visibility threatens the male dominance of intermediary politics, and therefore can signal loss of political responsiveness enjoyed by the household - to both men and women.

To provide evidence, this paper uses a novel within-subject survey experiment that was conducted as part of a two-wave panel survey. This original panel survey was further embedded within the natural experiment of randomized gender quotas in the municipal body of India's capital city, New Delhi. This two-wave panel survey enables to test the aggregate relationship between female representation and political efficacy and the causal mechanism of interest using the same subject pool. Using data from the first wave of the survey, I find that there is an overall weak but positive aggregate effect of female representation on women's political efficacy (PE). However, exposing women to as-if randomly assigned male or female politician photograph in the second wave, I find that female political visibility strongly lowers women's PE. This juxtaposition provides the first evidence that drawing conclusions about the presence of the demonstration effects mechanism from aggregate studies can be misleading.

In line with theoretical expectations, results suggest that bargaining power moderates these observed negative effects. I find that these negative effects are solely concentrated

amongst women with low bargaining power which is measured using two proxies - high social status and few social ties - in the Indian setting.[2] Using social ties as an additional proxy demonstrates robustness that it is bargaining power and not only intersectionality that explains these results. Further, high-status men respond slightly positive to female politicians photos, although the difference is not statistically significant. This result implies that group factors that lower women's bargaining power are driving these results, perhaps in addition to intersectional interests (Bauer, 2015; Cassese and Barnes, 2019).

The divergence between male and female outcomes also provides preliminary evidence that observed negative efficacy effects are likely to be due to the threat female political visibility poses to women's traditional identity (Barnes, Beaulieu and Saxton, 2020), and not due to the threat female political visibility poses to male or household interests. This is because female exposure by signaling substantive representation certainly threatens male political interests (Wängnerud, 2009) and if interest based mechanisms are dominant, we should expect that women with low bargaining power respond in similar ways as men. In contrast, because the threat to male identity is at least ambiguous if not non-existent, the identity mechanism raises a greater likelihood that men and women display opposite reactions.

Results from the gender-quota information experiment lend further support to this interpretation. In this experiment, just ahead of exposure to photographs, citizens are randomly assigned to receive information about the extent and implementation of the gender quota policy. Conditional on the sub-mechanism that female exposure activates, the bargaining power hypothesis suggests that information can neutralize or intensify women's backlash. If female political visibility lowers women's efficacy by threatening male or household interests, one would expect the gender-quota policy prompt to intensify this interest threat and further lower women's PE. However, results show otherwise. Paradoxically, by explaining why women are present in politics and enabling female citizens to reconcile female political presence with traditional gender norms, the gender policy prompt lowers identity threat and neutralizes this backlash instead of deepening it.

This paper contributes with a theoretical framework that provides a political economic underpinning to the empowering effects of descriptive representation and contributes to research that examines the consequences of female representation for women's political

[2]I borrow the definition of high-status groups from Suryanarayan (2018) - "Status distinctions between groups arise in societies with hierarchical social orders. We observe persistent social-status distinctions between groups in a number of countries with a history of slavery, aristocracy, colonialism, and the caste-system. Of central importance to 'high-status' groups is their rank in the social hierarchy which they preserve and perpetuate through their control of segregated institutions."

engagement (Barnes and Burchard, 2013; Beaman et al., 2009; Clayton, 2018; West, 2017). The paper extends research that finds that patriarchal norms reverse the potential benefits of community and development solutions targeted at women's political empowerment (Cornwall, 2003; Gottlieb, 2016; Mansuri and Rao, 2013).

More broadly, the findings echo research which find that norms can moderate solutions aimed at women's economic empowerment (Ashraf et al., 2020; Barnett, Jamal and Monroe, 2020) and can restrict women from realizing the full social benefits of legal reforms (Htun, Jensenius and Tønnessen, 2019; La Ferrara and Milazzo, 2017; Roy, 2015). The theoretical framework contributes to the research on citizen support for gender quota policies by highlighting the conditions under which these policies can neutralize or intensity backlash against female politicians (Barnes and Córdova, 2016; Clayton, 2015; Piscopo, 2016).

Empirically, this paper is the amongst the first to explicitly examine the underlying causal mechanism of demonstration effects and is in the spirit of mechanism experiments (Grewal et al., 2019; Ludwig, Kling and Mullainathan, 2011), but also presents comparable point estimates of the aggregate effect in tandem. This paper exploits a natural experiment to expose citizens to real representatives. The low-information setting of local elections makes it possible to expose citizens to real representatives without running into ceiling effects (Bernhard and Freeder, 2020). For such settings, this paper presents a novel approach to study theoretically substantive mechanisms, that are otherwise difficult to activate using hypothetical survey experiments (Clayton et al., 2020) or without using deception, or where there are concerns that such experiments do not provide point estimates that are representative of real-world behavior (Incerti, 2020).

4.2 Bargaining power and descriptive representation

Background

Theories of descriptive representation have long emphasized the importance of female political visibility as a key vehicle for enhancing women's political efficacy (Mansbridge, 1999; Phillips, 1995). Several attitudinal and psychological mechanisms - referred to as demonstration effects - link female political visibility to female political efficacy; by creating an ability to rule, female visibility demonstrates to women that government is responsive to their concerns and increases their engagement (Alexander, 2012; Barnes and Burchard, 2013; Campbell and Wolbrecht, 2006; Wolbrecht and Campbell, 2007), female visibility confers de-facto legitimacy on decision making processes and increases the attachment to the polity

of female constituents and confers institutional trust and acquiescence (Clayton, O'Brien and Piscopo, 2019; Young, 2002).

Yet, the broader link between solutions meant to empower women and actual empowerment is far from straightforward. Recent scholarship shows how bargaining power affects women's decision making in a variety of public spheres - within politics (Iversen and Rosenbluth, 2010) and in the economy (Ashraf, 2009). These studies echo classical scholarship in feminist economics that have the collective model of the household as its foundation where household divisions are cast as "bargaining problems" (Agarwal, 1997; Kandiyoti, 1988).[3]

Within this bargaining approach, intra-household interactions are envisioned as containing elements of both cooperation and conflict. The outcome that emerges depends on the relative bargaining power of the household members. A member's bargaining power flows from the ability to walk away from the deal, an aspect which is captured by the concept of "outside options". In agrarian economies, where men's comparative advantage in physical strength is at premium, men have high bargaining power which over time translates into patriarchal norms that constrain women and influence their decision-making (Alesina, Giuliano and Nunn, 2013; Iversen and Rosenbluth, 2010).

Building on this theoretical foundation, a burgeoning set of studies confirms that bargaining power drives the existence of divergent political preferences between men and women and shapes women's micro-level political behavior. Seminal work in politics by Iversen and Rosenbluth (2006) finds that labor market opportunities for women, which vary systematically with the position of countries in the international division of labor and with the structure of the welfare state, affect women's bargaining power within the family and explain most of cross country variation in the gender division of labor and the gender gap in political preferences in industrialized democracies.

Drawing on data from twenty-seven African countries, Gottlieb, Grossman and Robinson (2018) confirm that macro-level determinants of women's bar gaining power such as labour force participation, explain the variation in the gender gap in policy preferences. Evidence from sub-Saharan Africa confirms that matrilineality —tracing kinship through the female line —is robustly associated with closing the gender gap in political participation (Robinson

[3]Critically revising Becker's 1981 seminal work on the unified household model, economists have explained the gender division of labor as an outcome of a coordination game where complete division of labour is the efficient solution (Chiappori, 1988). Household divisions are cast as "bargaining problems" (Sen, 1990, p.131): *"while technological interdependences make it fruitful to cooperate, the particular pattern of division of fruits that emerges from such cooperations reflects the 'bargaining powers' of respective parties."*. For application of this model in household economics, see review Chiappori and Mazzocco (2017).

and Gottlieb, 2019), and that matrilineality's higher ability to sustain more progressive norms about women's role in the society underpins this association.

At the micro-level, Chattopadhyay and Duflo (2004) and Gottlieb, Grossman and Robinson (2018) show that women in India and Africa are more likely to prioritize access to water relative to men because norms prescribe fetching water as a role for women. In Pakistan, Khan (2017) shows that not only do the preferences of men and women differ, but they do so within the same household. She finds that gender inequality within the household undermines women's likelihood to communicate and assert their political preferences. Conversely, in households where women have greater bargaining power the patterns of political expression are less distorted. In the context of North Africa, Moghadam (2014) shows that women's pre-existing legal status, social positions, levels of intra-household involvement in decision making helped to share the course and immediate outcomes of the Arab Spring in Egypt, Libya, Morocco and Tunisia. Blaydes and Linzer (2008) show women's support for fundamental Islamic beliefs is rooted in their low bargaining power. Women with poor economic prospects are better off on the marriage market by adopting fundamentalist beliefs, relative to what they gain by adopting secular beliefs on the labour market.

Bargaining power segments descriptive representation

I argue that this bargaining power segments the effects of women's empowerment in an unexplored political arena: descriptive representation. At the macro-level, bargaining power - which in turn is shaped by political-economic factors outside the family - shapes the link between female political visibility and women's political efficacy in a cross-country comparative framework (Iversen and Rosenbluth, 2006). At the micro-level, paying attention to individual level variation in women's bargaining power illuminates three key causal pathways that can explain why women with low bargaining power can perceive the otherwise empowering signal of female political visibility as a *threat*. These are: (a) a threat to women's traditional identity and status in society (b) a threat to male interests (c) a threat to household interests. I enumerate these below.

Women with low bargaining power are more likely to both gain socially and economically by complying with traditional beliefs and lose by deviating from them (Blaydes and Linzer, 2008). Evidence from political psychology reconfirms that individuals seek social roles that will facilitate their valued goals (Schneider et al., 2016). However, female leaders by virtue of being a counter-stereotypic figure, can make women's traditional roles appear

lower-status (Beaman et al., 2009; Benstead, Jamal and Lust, 2015).[4] Because women with lower bargaining power are likely to hold a view of women's main role as a traditional family role, they are more likely to experience women's deviation from this norm more strongly and negatively. Asymmetric societal level gender norms can make the deviation appear sharper and therefore the identity threat even more acute. This intensity can generate amongst such women a need to compensate for the deviation from the norm and to reduce cognitive dissonance (Benstead, Jamal and Lust, 2015; van Staveren and Odebode, 2007).

Evidence confirms this paradoxical behavior in the context of community solutions aimed at increasing women's political participation. Mabsout and van Staveren (2010) advance the idea of "resource paradox", a phenomenon in which increasing women's access to individual resources decreases rather than increases their bargaining outcomes. Confirming the existence of a resource paradox in Mali, Gottlieb (2016) finds that a randomly assigned civic education course widened the gender gap when it increased civic activity among men while decreasing it among women. She concludes that in a place where women are traditionally unwelcome actors in the public sphere, female participation in the course constituted deviation from a pre-existing social norm. As compensation, women self-impose limits to future civic participation. Similar findings are observed in India and other settings in Africa (Cornwall, 2003; Morris, 2002) and raise the expectation that patriarchal norms are likely to frustrate the benefits of female representation, particularly for women who experience greater levels of intra-household power inequality.

Secondly, female political visibility can trigger a "backlash" by posing a threat to status-quo or male interests (Mansbridge and Shames, 2008). When marginalized groups who are disadvantaged by the status quo strive for change, that marginalized group challenges an entrenched power structure. The resistance of those in power this change constitutes a *backlash* (ibid.). One would normally expect resistance to change to the male-status quo to come from men. However, in contexts characterized by low bargaining power, evidence suggests that women attach a higher value to male or status-quo interests over their own interests (Khan, 2017), and that such contexts increase the propensity of women's prosocial behavior in ways that reinforce gender relations (Diekman and Clark, 2015). In such settings, if female political visibility poses a threat to male interests, paradoxically, it will also trigger a backlash amongst women who are more willing to tradeoff their preferences to support male interests.

[4]Beaman et al. (2009) find a negative but statistically insignificant effect of exposure to vignettes and recorded speech of hypothetical female candidates amongst women in constituencies reserved for female leaders. In contrast, men react positively. They argue that low level of political knowledge amongst women may be on the reasons for lack of updating amongst women or the threat women pose to women's traditional identity.

Finally, in patriarchal settings with gender regressive norms such as patrilocality and mobility constraints on women, men may act as political agents of the household, while women specialize in household tasks. Women's fewer social connections increase the cost for women to co-ordinate outside the household (Anukriti et al., 2019) and increases the likelihood that women will uphold household interests over gender interests. Because the household benefits from male political visibility, female political visibility poses a threat to the political responsiveness enjoyed by the family. Men's existing networks will be ill-equipped in gaining access to female politicians (Goyal, 2019*b*). Consequently, women may have to step in to these agent roles to negotiate political access for the household. For women who lack skills to engage in claim making activities, this step up may present an insurmountable barrier. Consequently, female visibility is likely to trigger a sense of loss of political power and evoke a negative reaction amongst both women and men who are co-ordinating their political behavior.

The three mechanisms outlined above raise relatively different expectations about how men and women will respond to exposure to female political visibility. Table 4.1 summarizes these expectations. The first mechanism offers a greater scope for divergence between men's and women's responses relative to the other two. At the least, it is plausible that female political visibility does not threaten men's *identity*. For example, Beaman et al. (2009) find that while men positively update their views of female leadership, women show marginally negative effects and do not update their beliefs. Beaman et al. (2012) further find that while fathers primarily increase their desire for their daughters to become a politician, mothers aspirations lie outside of politics.

Table 4.1 Bargaining power hypothesis

Bargaining power moderates the empowering effects of exposure to female politicians			
Threat	Women's traditional identity	Male political interests	Household political interest
Do men and women respond similarly to female political exposure?	Greater scope for divergence	Greater scope for congruence	Greater scope for congruence

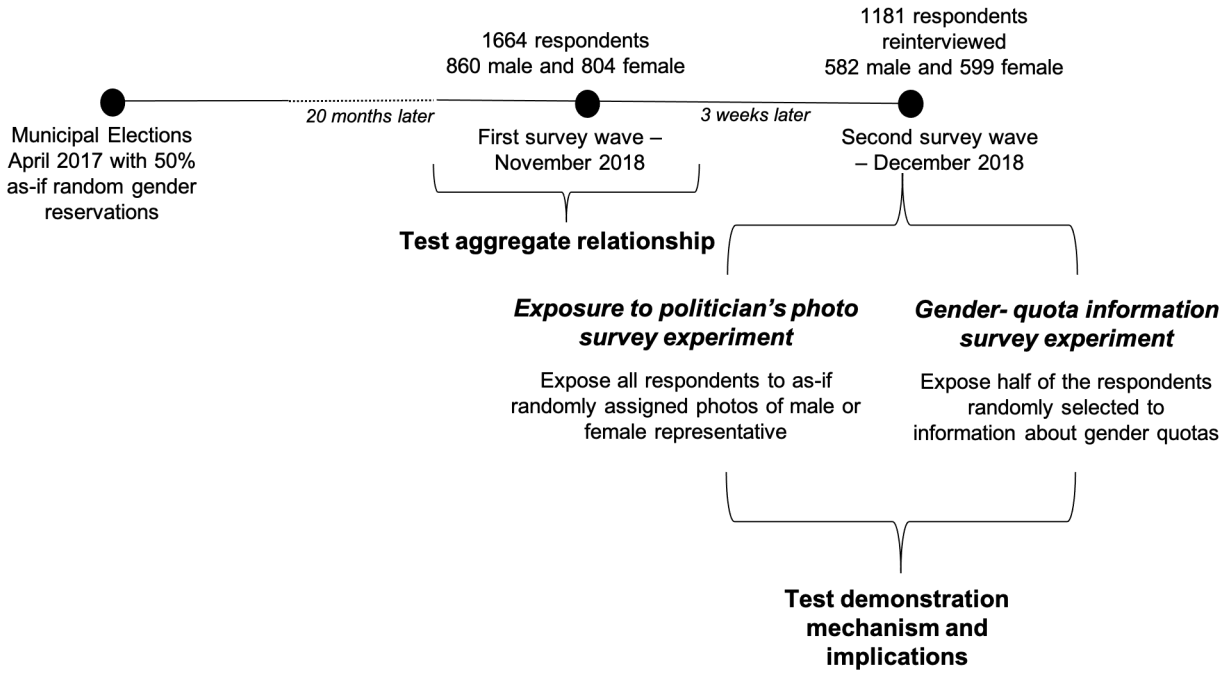
On the other hand, because men and women have divergent political preferences and because female politicians have been noted to improve substantive representation (see Wängnerud (2009)), the dominant status quo, which favors male *interests*, is certainly threatened by female politicians. As a result, if the latter two mechanisms are dominant in driving the negative relationship between female visibility and women's political efficacy, there is less scope for divergence between men and women. By comparing how men and women react to female political visibility, it is possible to provide some preliminary evidence

about which underlying pathway offers a more convincing explanation for the bargaining power hypothesis.

4.3 Research Design

To examine how women's bargaining power segments the empowering effects of exposure to female politicians, this paper fielded a survey experiment that that exposed citizens to a photograph of their incumbent male or female local politician. This survey experiment was a part of a two-wave panel survey conducted within the natural experiment of randomized gender quotas, in the setting of India's capital city, New Delhi. The as-if random assignment of reservations strongly determines whether a constituency will get a male or female politician and therefore whether a respondent is exposed to an actual photograph of her quasi-randomly assigned male or female incumbent in the second survey wave. Figure 4.1 plots the design of the two-wave panel survey.

Fig. 4.1 Design of the two-wave panel survey



This novel within-subject design does not only increase statistical power but enables to address two strong limitations of existing survey experimental and quasi-experimental aggregate studies. On one hand, most experiments that examine citizen's preferences towards female politicians expose citizens to hypothetical female profiles. Candidate-choice

conjoint experiments are one such paradigmatic example (see Schwarz and Coppock (2019)). However, recent evidence raises concerns that hypothetical experiments do not activate bias mechanisms (Clayton et al., 2020) and that point estimates from such experiments may not translate to real world behavior (Incerti, 2020).

On the other hand, quasi-experimental aggregate studies that use observational data, tacitly assume the demonstration effects hypothesis. Studies that find a positive effect of female representation interpret the evidence as confirming the demonstration effects hypothesis (Barnes and Burchard, 2013; Iyer and Mani, 2019), while studies that find weak or negative evidence conclude the contrary (Beaman et al., 2009; Broockman, 2014; West, 2017). But if female representation and the pathways to power set in multiple (countervailing) mechanisms (Barnes and Holman, 2020; Clayton, 2015; Teele, Kalla and Rosenbluth, 2018), aggregate studies are by design ill-equipped to test for causal mechanisms and tell us little about *how* the effects of female representation materialize. This research design addresses both these concerns.

Context: The natural experiment of gender quotas in Delhi

Delhi, India's capital city, with a population of over 17 million, has a strong track record on placing women in power positions. Unlike most other Indian citizens, Delhi citizens have enjoyed a long history of seeing women in powerful positions ranging from Party President and City Mayor to Chief Minister, the top-most political position at the state-level. Delhi had the longest-serving female Chief Minister of any Indian state, who served for a period of 15 years. This political history situates Delhi as a relatively less likely case for observing the hypothesis relationship within India.[5]

In addition to several high-profile female leaders, Delhi has high levels of female political visibility in its civic body, called the Municipal Corporation of Delhi (MCD), which is amongst the largest municipal bodies in the world. The paragraphs that follow discuss the successful implementation of a "randomised" gender reservation policy, which has led to high levels of female visibility in the MCD.

[5]Delhi is one of the few Indian states, that has had a female Chief Minister, Shiela Dikshit from the Indian national congress (INC), who was also the longest-serving female chief minister of any Indian state and served from 1998 until 2013. She also preceded another prominent figure, Sushma Swaraj from the Bharatiya Janta Party (BJP), who later served as the Minister of External Affairs in India's national cabinet. In 2013, the BJP fielded another prominent figure as their Chief Ministerial candidate - Kiran Bedi, a powerful senior police officer from the Indian Police Services, who is an influential and well-regarded leader in Delhi and Indian politics. Additionally, the presence of international female leaders such as, Sonia Gandhi, ex-President of INC, and her daughter Priyanka Vadera is prominent with their residence in Delhi.

Delhi's MCD is composed of 272 seat single member districts called "municipal wards" (or simply wards), that each elect a representative called "councillor" every 5 years through a first past the post system. Delhi MCD inline with India's national quota reforms observes a gender reservation policy through which these single member constituencies are exclusively "reserved" for women, that is, only women can contest elections from reserved seats. The wards that are not-reserved are known as "general" or "non-reserved" constituencies, and are open to both male and female candidates. The last municipal elections held in 2017 featured 50% gender reservations. Due to reservations, over 1000 female candidates jostle for the post of the municipal councillor each election. Every alternate year, three female mayors preside over the North, South and East wings of the MCD. Together, this significantly sharpens female political visibility in local politics.

Constituencies that are reserved for women are determined through an as-if random process.[6] Majority of local elections across the whole of India use some variation of this as-if random process of implementing reservation and similar designs have been used by other scholars (Beaman et al., 2009; Bhavnani, 2009). Because of this "as-if" random assignment of female reservations, comparisons of constituencies that were reserved and not reserved therefore does not suffer from selection bias.

The Appendix provides further qualitative evidence and Table A.2 reports balance tests which re-assure that the reservations process indeed lead to as-if random reservation of constituencies for women. To estimate the reduced-form aggregate effect of female representation on women's political efficacy, I simply compare the mean of outcomes in reserved and non-reserved constituencies. Since all reserved constituencies, but relatively few unreserved constituencies, have a female leader, this reduced form effect is close to what would be obtained by instrumenting for women's gender by the reservation status.[7] All results therefore are reduced-form estimates.

[6]This process, briefly put, involves reserving every other municipal constituency from a serially ordered list of municipal constituencies, and these serial numbers are in-turn assigned by starting at the northernmost point within (serially ordered) state level constituencies and going in a zigzag clockwise (or anti-clockwise) pattern. This serial ordering is a standardized process that is used by Census and Election commissions across the whole of India (over time) for the purpose of assigning serial numbers to political or administrative units. Appendix section A.2 summarizes the reservation policy used in 2017.

[7]Only 6 women won out of 134 non-reserved constituencies in 2017. In the survey sample, only one of non-reserved constituencies has a female winner. The first stage coefficient obtained by regressing incumbent gender on reservation status is 0.859. The LATE can be obtained by dividing the reduced form effect or ITT by this first stage coefficient.

Survey experiments

Two survey experiments were included as part of the two-wave panel survey which was fielded in 17 randomly selected municipal constituencies or wards. These included 8 non-reserved and 9 reserved wards.[8] Digital tablets with pre-loaded survey software were used to conduct the survey experiment and collect data in both survey waves. Note that because the natural experiment starts in April 2017, all measures from first wave of the survey are "post-treatment" with respect to the 2017 natural experiment, but are "pre-treatment" with respect to the survey experiment.

Figure 4.1 gives an overview of the sample size in both waves. 1304 (78.37%) citizens were successfully re-interviewed and 1181 respondents that were successfully re-interviewed, completed the survey experiment and political efficacy battery - comprise the main sample. The appendix provides balance checks that reassures the external validity of this main sample. Citizens (women) in reserved wards were no more likely to be re-interviewed (completed) than citizens (women) in non-reserved wards and re-interviewed (completed) citizens do not differ from those who were not interviewed in the second wave on several pre-treatment variables.

The design of the survey experiments is summarized in Table 4.2. For the survey experiment, the respondents are exposed to a male or female photograph depending on whether they are in a reserved or non-reserved ward, that is, the quasi-random assignment to male or female photograph is derived from the natural experiment of quotas in 2017 elections.

Table 4.2 2 $\times$ 2 factorial survey experimental design

	Randomized policy prompt	
Natural experimental assignment to photos	No Policy	Policy
Non-reserved / Male politician's photograph (control)	A	C
Reserved / Female politician's photograph	B	D

To identify the effect of exposure to quasi-randomly assigned male or female photograph, the design makes an assumption that the survey experimental ATE, which refers to the difference in the change in political efficacy in between two waves, indeed refers only to the effect of exposure to the photograph. Several factors suggest that this is a reasonable excludability assumption. The second interview was conducted shortly after (within three weeks) to reduce the scope of any event happening in the meanwhile. No major national,

[8]Municipal wards were randomly selected from three national level political constituencies in Delhi: North, South and North-East Delhi after excluding wealthy state level constituencies. The Appendix provides details about Delhi's municipal politics, reservation policy and the process of random selection of municipal wards.

state or municipal event or outreach happened during the three weeks. There is also no reason to suspect that respondents are more or less likely to remember questions in reserved constituencies as compared to non-reserved constituencies.

It is also unlikely that being shown a photograph of their representative makes the reservation status more salient to citizens and triggers interactive mechanisms that contaminate the causal estimate of interest which is the exposure to the quasi-randomly assigned photograph. Data from the first wave shows that very few female respondents - 2.8%- were aware of the reservation policy and only 0.1% could correctly identify the reservation status of their constituency.[9] Moreover, citizens were answering a general survey about Delhi's multi-level governance and public services and were not answering any gender specific political questions or solely questions related to municipal governance.

The experiment introduces the name and photograph of the politician in a matter-of-fact conversational form, to reduce any concerns that the respondents are aware of being explicitly treated with gender via photographs. The photographs refer to the respondent's own municipal councilor as opposed to a prominent female leader or a hypothetical candidate, the latter of which make gender explicitly salient.

To estimate the effect of exposure to female photograph relative to male photograph (control), I rely on the reduced form effect of the quasi-randomly assigned female photograph, that is, the reservation status of the constituency on the change in political efficacy in between the two waves. Female respondents in non-reserved constituencies comprise the control group. Instead of a control where no photograph was shown, exposing women to photographs of male politicians has two advantages. First, in reality women and men are exposed to male politicians which is the status quo and therefore exposure to male politicians is the relevant baseline comparison. Second, merely providing information about the name and photograph of a politician increases the respondent's political knowledge which is positively linked with political efficacy.[10] To hold this political knowledge constant, comparing a scenario where women are shown female photographs with a scenario where they are shown male photographs, ensures that all respondents are treated with the same amount of information.

Just before being exposed to the photograph of their councillor, each respondent has a 50:50 chance of being treated with the gender-quota policy information prompt. This

[9]Comparatively, these figures suggest lower political knowledge levels amongst both women and men and a larger gender gap in Delhi than in rural Uttar Pradesh, which is India's poorest and one of the most gender regressive state (Iyer and Mani, 2019), reinforcing the increasing importance of studying urban developing contexts.

[10]An increase in political efficacy can also be a result of participating twice in a survey which is about politics. However, this opportunity is constant across all respondents.

I want to share some information about how the MCD is organized. I will then give you some information about your MCD ward. Perhaps you may also know some of this already. Delhi MCD is composed of 272 wards. In 2012, MCD was divided into three bodies - EDMC, SDMC and NDMC - each of which serve the East, South and North of Delhi respectively. MCD has elections every 5 years and any Delhi resident can vote in these elections.

Randomized policy prompt *- "In addition, as you may know, Delhi's MCD has gender reservation, that is in 50% of all wards only women can contest elections, while rest of the wards are open for both men and women to contest. In 2017, women wards were reserved through a random process - for all wards based on their geographic location they are given a serial number and every 3rd ward was reserved for women. The benefit of this process is that no politician can influence whether their ward can be reserved or not. Every ward has an equal chance which is 50:50 chance of getting reserved."*

Your MCD ward is called [***ward name***]. This ward is part of [***EDMC*** | ***SDMC*** | ***NDMC***]. The name of your MCD councillor [***show photograph***] is [***read full name of councillor***].

Now I will ask you some questions about your ward, should we proceed?

Box 4.1 Survey experiment text (translated in English)

comprises the second survey experiment. This additional survey experiment enables to probe mechanisms outlined in the Table 4.1 and to illustrate how the bargaining power framework enables to draw out additional hypothesis about women's reaction to quota women. The text of the policy prompt is available in Box 4.1. The random assignment to this information prompt is at the level of the in-person survey session and automatically assigned by the pre-loaded survey CTO software loaded on the digital tablet. The tablet also has pre-loaded photographs of all the councillors and are official colored photographs that are shared by the politicians on the election commission website.

4.4 Data and measurement

Measurement

Political efficacy: Political efficacy examines how evaluations of experiences in political life shape participatory behaviors and is a multi-dimensional construct alongside internal and external dimensions (Craig, 1979). Internal efficacy refers to citizens' feelings of

personal competence to understand and to participate effectively in politics. External political efficacy refers to citizens' perceptions of the responsiveness of government to citizens' demands (Niemi, Craig and Mattei, 1991). External political efficacy captures key concepts and mechanisms that are highlighted in the political theory of descriptive representation (Mansbridge, 1999; Pitkin, 1967; Young, 2002), such as signals about the approachability of the representative, quality of communication and ability to influence and take part in politics.

To measure external PE, this paper relies on an index that is the average of five distinct measures of external political efficacy. The survey experimental outcome measure is created by taking the difference between responses from wave 1 and wave 2 responses and ranges from -10 to +10. An index is then created by taking the average of the difference across the five measures. The appendix explains the construction of this index.

Bargaining power: The literature lists several individual and macro-level proxies of women's bargaining power, such as, income and asset ownership, age, social status, social ties, employment, men's consumption of alcohol, having a first born son and so on (see Doss (2013) for a review). I borrow from this literature to use two key proxies of women's bargaining power that tap into group as well as individual level determinants of bargaining power in the Indian context. These are: caste and social ties respectively. The appendix explains the rationale for using these two indicators. Note that appendix contains results using three other proxies of (low) bargaining power: young age, low education and lack of employment.

Relevant to Delhi's context, I construct a binary measure of high-status (upper caste, land-owning/ dominant castes, and Jain/ Sikh minorities) and low-status groups (Scheduled Castes, Scheduled Tribes and Muslim women). To specifically tap into social ties that have political content, I use a measure which captures whether women have social ties, that is, connections with whom they engage in regular conversation about politics. 30% women (51% men) report have some regular in-person contact with someone who talks about politics with them. For women, the biggest category is a female friend (20% of women who have social ties). For the main results, I use the binary measure of 0/1 about whether woman is connected to someone (including a family member) with whom she discusses politics regularly. Because few women have social ties and in the Indian context, where women are rarely engaged in political conversations, doing so suggests a higher level of influence enjoyed by the women. Women's politically infused social ties presents a compelling proxy that is most likely to play a role in influencing how women will react to political solutions.

Balance checks

Table 4.3 shows that the sample of female respondents is balanced on a wide variety of pre-treatment variables for both the "natural experimental" treatment and the survey experimental policy prompt.

Table 4.3 Balance tests

	Natural experiment/ Exposure to photos				**Randomized policy prompt**			
	Non-reserved (male photo)	Reserved (female photo)	Diff.	P-value RI	No policy (control)	Policy (treated)	Diff.	P-value RI
Age (yrs.)	34.888	33.967	-0.456	0.652	34.612	34.156	-0.921	0.369
Household size	5.543	5.783	0.219	0.233	5.564	5.782	0.240	0.270
Delhi born	0.515	0.480	0.009	0.842	0.491	0.500	-0.035	0.678
Has children	0.712	0.783	-0.049	0.184	0.777	0.727	0.072	0.293
Married	0.753	0.813	-0.035	0.307	0.804	0.769	0.060	0.276
SC/ST	0.399	0.380	-0.026	0.526	0.402	0.376	-0.019	0.854
OBC	0.227	0.264	0.032	0.358	0.230	0.263	0.037	0.540
Muslim	0.139	0.112	-0.019	0.509	0.134	0.115	-0.027	0.600
Other minorities	0.015	0.018	-0.021	0.058	0.027	0.007	0.003	0.734
Illiterate	0.154	0.193	0.000	1.000	0.175	0.175	0.039	0.319
Some education	0.846	0.807	-0.000	1.000	0.825	0.825	-0.039	0.319
Higher education	0.307	0.301	0.043	0.278	0.282	0.325	-0.006	0.863
Employed	0.176	0.127	0.015	0.644	0.141	0.156	-0.050	0.207
Home owner	0.801	0.804	0.025	0.485	0.790	0.815	0.003	0.942
Income level	2.815	3.027	0.152	0.388	2.855	3.007	0.212	0.292
Std. index household items	-0.099	0.024	0.113	0.147	-0.089	0.024	0.123	0.330
Has TV	0.940	0.915	-0.035	0.133	0.944	0.909	-0.024	0.376
Use bus	0.830	0.873	0.044	0.130	0.832	0.875	0.044	0.275
Use metro	0.891	0.904	0.009	0.784	0.893	0.903	0.012	0.781
Enumerator gender	0.640	0.657	0.007	0.938	0.646	0.653	0.016	0.656
Observations	267	332			291	308		

Notes: All variables are binary unless indicated. The total number of female respondents is 599 and municipal constituencies is 17 (9 reserved and 8 non-reserved). Each constituency has 35 female respondents on an average, ranging from 22 to 55. All respondents, in non-reserved constituencies (except for one) are served by a male incumbent and therefore see a male photo.*** $p<0.01$, ** $p<0.05$, * <0.10

The difference in mean is close to zero for most of the variables and is also statistically insignificant. For all causal estimates of interest, I provide the heteroskedasticity robust standard errors clustered at constituency level as well as p-values from a two-sided randomization inference test of zero treatment effects. The randomization inference procedure has the advantage of providing inference with correct size regardless of sample size. The randomization inference test I employ consists of writing a program to mimick the actual pseudo-random reservation process and reassigning this placebo treatment and control status in the sample. I use the ritest package in Stata written by Hess (2017) to implement this program.

4.5 Results

Aggregate effects

Using outcome data from the first survey wave and relying on the identification from the natural experiment of randomized gender quotas, I examine the aggregate relationship between female mandated representation and women's political efficacy. Table 4.4 shows that there is a minor increase in women's political efficacy in constituencies that were reserved and therefore represented by female councillors in 2017. Women in constituencies represented by women show an increase of 0.306 (4.6%) on the political efficacy index from a control mean of 6.709. Table B.17 shows that men or women do not perceive any differences in the quality of male or female councilors, suggesting that, these differences are unlikely to be a result of difference in better quality governance enjoyed by women in female constituencies. Column 2 shows that there is no aggregate effect on men's PE.

Table 4.4 Aggregate effects: Female representation positively affects women's political efficacy

	Female PE-index (1)	Male PE-index (2)
Female constituency (2017)	0.306***	-0.091
	(0.090)	(0.150)
RI p-values	0.021	0.492
Control mean	6.709	6.955

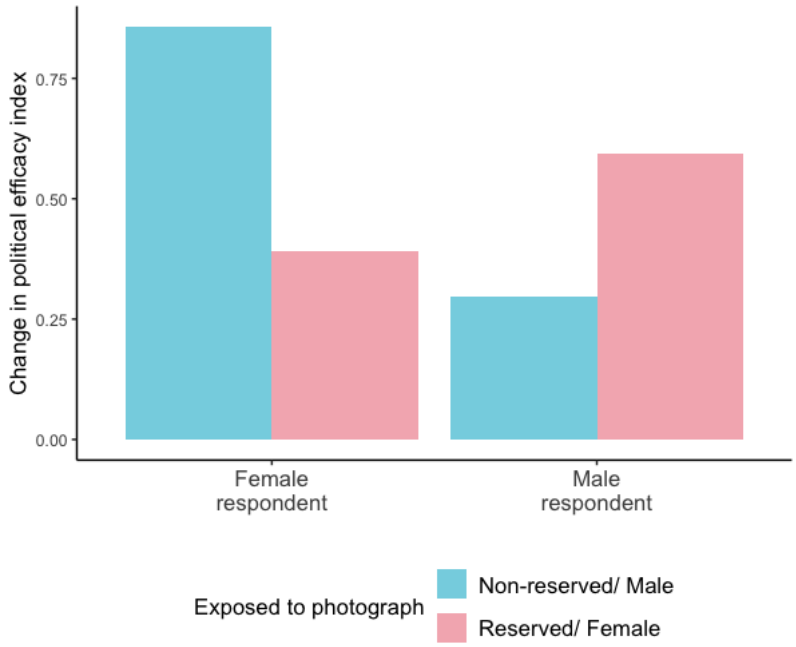
Notes: N = 725 female respondents and N = 829 male respondents in 17 municipal constituencies: 9 reserved wards and 8 non-reserved constituencies. Standard errors are clustered at the treatment (constituency) level. *** p<0.01, ** p<0.05, * <0.10

This positive aggregate result amongst female respondents implies that quota induced female representation sets in gender-specific positive sub-mechanisms that at least prevail over countervailing mechanisms in positively increasing women's PE. This is inline with evidence from the Indian context suggests that female representation improves women's substantive representation (Chattopadhyay and Duflo, 2004) and increases political campaign contact targeted at women (Goyal, 2019*b*). These various sub-mechanisms can underpin this positive effect of female representation on women's PE. Aggregate studies therefore offer us limited traction in advancing an understanding of how the effects of female representations materialize.

Demonstration mechanism

Figure 4.2 plots means from the sub-sample of women who are not exposed to gender-quota policy prompt. The figure shows that women's PE increases, relatively more than men, in the second wave regardless of whether they are exposed to male and female photos. This positive change may be due to being interviewed twice or due to an increase in the political knowledge about Delhi. However, exposure to female politicians, relative to being exposed to male politicians which comprise the control group, lowers the change in women's PE by half. The ATE is both substantively ($\beta = -0.467$) and statistically significant close to 95% level (see Table 4.5 column 1). Contrary to women, men react slightly positive to female photos, although the reaction is statistically insignificant. These results confirms that it is unlikely that demonstration effects are the mechanism that drive the aggregate effects.

Fig. 4.2 Exposure to female photograph has a negative effect on women's political efficacy



Bargaining power segments descriptive representation

Figure 4.3 confirms the expectations of the bargaining power framework. The negative effect of exposure to female politicians is concentrated amongst high-status women. The negative effect is strong, $\beta = -0.902$ and statistically significant at the 10% level. Women from low-status group react similarly to male or female political exposure.

Fig. 4.3 Negative effects of exposure are limited to women with low bargaining power

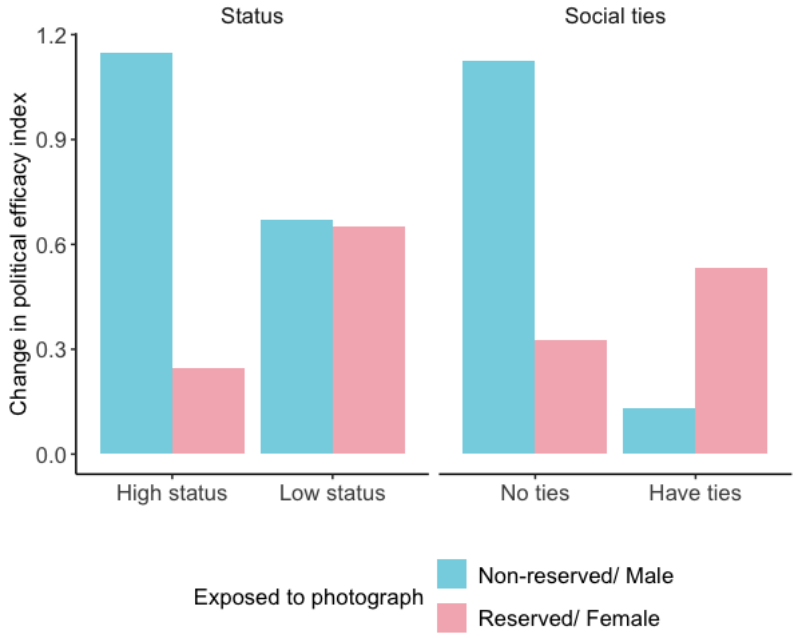


Table 4.5 Corresponding p-value of the difference in mean

	(1) All female respondents	(2) High status women	(3) Low status women	(4) No social ties	(5) Have social ties
Reaction	Negative	Negative	Same	Negative	Positive
P-values T-test	0.042	0.026	0.935	0.009	0.177
P-values RI	0.054	0.071	0.947	0.030	0.190
N	291	125	140	206	84

*Notes:*Female respondents are clustered in 17 municipal constituencies. Table consists of all women exposed to politician photographs but are not provided any policy information. OLS uses heteroskedasticity robust standard errors clustered at constituency level.

It is plausible that high-status caste women are threatened by female political visibility not due to bargaining power but because clashes with their caste identity. However, the results show that high-status men do not react negatively to female exposure. To the contrary, men are either indifferent to male or female photos or positive to female photos, across various sub-groups, although positive effects are statistically insignificant (Appendix Figure B.7).[11]

Additionally, using social ties as a proxy yields the same interpretation. As seen in Figure 4.3, the negative PE effect is again concentrated amongst women with low bargaining

[11]In the appendix, I use the same measures to examine men's reactions to female political visibility. As a group, men react slightly positively to female political visibility, although the point estimate is small and not statistically significant. Moreover, high-status men are indifferent to male or female photos, while this positive effect is largely concentrated amongst low-status men. The figure also shows that men react slightly or more positively across all sub-groups and the measures of household bargaining power do not offer the same conceptual leverage for men as they do for women.

power, measured as no social ties; and is both substantive and statistically significant. In contrast, women who have social ties react positively to female political presence, although this effect is not statistically significant. The appendix shows that the results replicate using other measures of (low) bargaining power that are highlighted in the literature: young age and low education. As expected, I find substantive and statistically significant negative effects are concentrated amongst younger (below the age of 35 years) and amongst women who have below secondary school level of education.[12]

Male and female have opposite reactions to female political visibility. Men experience a marginal but statistically insignificant increase in political efficacy, while women's PE is substantively lowered. As illustrated in the Table 4.1, these results provide suggestive evidence that the identity threat mechanism dominates over interest mechanisms. Further support for this interpretation comes from the second survey experiment where respondents are treated with information about the gender quota policy. The next section discusses these results.

4.6 Exposure, bargaining power and gender quotas

Across the world, women have entered politics on the back of gender quotas. Gender quotas are active in over 140 countries in the world today (Clayton and Zetterberg, 2018). The literature finds that "quota-women" face backlash from male peers and elites (Franceschet, Krook and Piscopo, 2012), and there is qualitative evidence to suggest that quotas might induce backlash from citizens too (Clayton, 2018). However, there is little theoretical or experimental research that examines how citizen's will react to female political exposure with the knowledge that it may be quota-induced.

Theoretically, the bargaining power framework enables to draw further hypothesis about citizen's reactions to the gender-quota policy. Contrary to views that quotas will deepen any existing backlash against women, the bargaining power framework illuminates the conditions under which quotas can instead neutralize backlash. On one hand, if women prioritize male or household interests, gender quota policies that directly reduce opportunities for men,

[12]Unfortunately, sample size limitations and the nature of women's employment make it difficult to use employment as a measure of bargaining power. While 89 (14.86%) women are employed in the sample, they are majorly employed in precariat informal sector jobs such as artisans, daily wage workers/ laborers, domestic help, which cross-cuts with poverty and low education. Evidence suggests that employment in these jobs reinforces women's perceptions as supportive rather than primary household earners (Barnett, Jamal and Monroe, 2020). Moreover, low earnings may improve women's lives materially but enable them little to challenge deep rooted patriarchal norms (Robinson and Gottlieb, 2019).

should amplify and deepen the backlash to female political visibility. On the other hand, if female politicians pose a threat to women's traditional roles, quota policy may neutralize backlash by providing information that explains *why* women are present in politics.

Quota women may come across as less threatening to women's traditional identity. Quota women may be seen as complying with a government policy or as rubber-stamp figures, that is, as sit-in for male relatives and therefore less threatening. This latter explanation finds support from studies on citizens reaction to gender quotas that show that "benevolent sexism" fosters support for gender quotas as policies that fulfill paternalistic views and expectations about women as politicians (Batista Pereira and Porto, 2020). Benevolent sexism involves stereotypes about leadership roles and traits, resulting in beliefs and prescriptions about how women and men have different styles of acting and thinking in politics. Benevolent sexism leads to increase in backlash when female politicians are seen as breaking norms (Barnes, Beaulieu and Saxton, 2020), but to increased support when female politicians are seen as vulnerable (Cassese and Holman, 2019).

Because quota-policy reconciles female presence with traditional gender norms, it can paradoxically channel support for female politicians. However, if the increase in the number of women intensifies the identity threat, quota policy can also intensify backlash.

Figure 4.4 shows that gender quotas neutralize backlash. This lend further support to the threat to traditional identity mechanism as being dominant in driving women's behavior. Amongst the sub-sample of respondents who were exposed to policy, exposure to female or male photos leads to similar change in women's PE. These results contrast with Figure 4.2 which showed that exposure to a female politician lead to lowering of women's PE, as compare to women who were exposed to a male politician. Figure 4.5 gender quotas neutralizes backlash across all groups of women. Unlike as reported in Table 4.5, there is no significant no backlash to female politicians in this sub-sample where all women are exposed to gender quota policy.

Table 4.5 panel B further shows that women with low-bargaining power are more likely to update positively. Panel B shows that in the case of high-status women, exposure to policy in addition to female photo more than doubles the change in high-status women's PE ($\beta = 0.510$ compared to high-status women only exposed to photos that have a mean PE $= 0.244$). In the case of women with social ties, being exposed to the policy (in addition to female photo) seems to very marginally lowers women's PE, but the drop in the point estimate is very small and is statistically insignificant. Moreover, this is because when women with social ties are exposed to gender quota policy, they react more positively to male photos, while their reaction to female photos is largely similar regardless of exposure to policy.

Fig. 4.4 Gender quota neutralizes the backlash to female political visibility

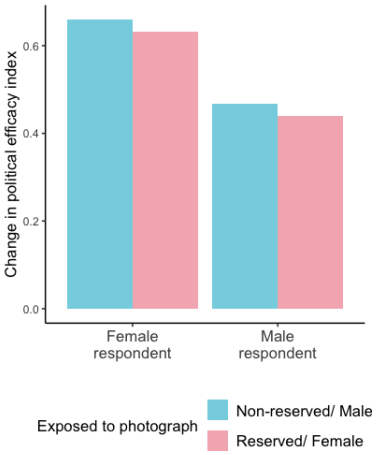


Fig. 4.5 Gender quota neutralizes backlash amongst women with low-bargaining power

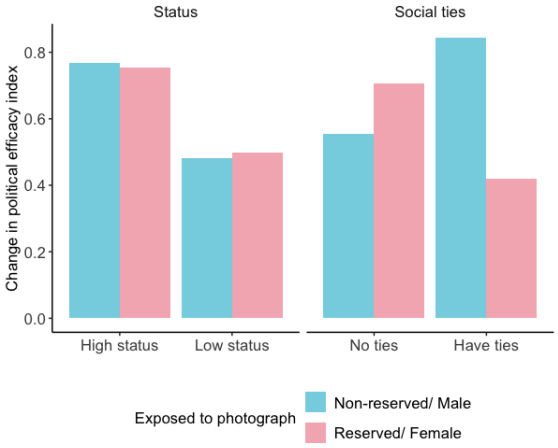


Table 4.6 Corresponding p-value of the difference in mean

Panel A: Difference between exposure to male and female photos for women exposed to policy					
P-values	All female respondents	High-status women	Low-status women	No social ties	Have social ties
Reaction	Similar	Similar	Similar	Positive	Negative
T-test	0.855	0.954	0.957	0.408	0.236
Randomization inference	0.885	0.969	0.969	0.417	0.305
N	308	148	135	214	94
Panel B: Difference between no-policy and policy for women exposed to female photo					
P-values	All female respondents	High-status women	Low-status women	No social ties	Have social ties
Reaction	Positive	Positive	Negative	Positive	Negative
T-test	0.221	0.077	0.606	0.112	0.737
Randomization inference	0.211	0.059	0.607	0.111	0.752
N	332	155	144	238	94

Notes: Panel A consists of subsample of female respondents that are all exposed to the gender-quota policy prompt. Panel B compares subsamples of women who are all exposed to female photographs but vary along exposure to quota policy. T-test P-values are estimated using standard OLS regression with heteroskedasticity robust standard errors.

4.7 Conclusion

Today, many countries worldwide are reporting the highest levels of female representation in their legislative assemblies and the latest round of elections has been dubbed as "the year of the women" in many large democracies. Political theorists posit that female representation increases women's political efficacy via demonstration effects. This mechanism features strongly in empirical studies that investigate this fundamental relationship. Consequently, research that finds positive effects interpret the evidence as confirming the demonstration effects mechanism, while research that finds weak or null effects interpret the evidence as confirming a lack of demonstration effects. To begin with, this paper shows that while the aggregate relationship is positive, exposure to female politicians lowers women's political efficacy. This result suggests that female representation can set in multiple countervailing mechanisms and aggregate studies therefore offer us limited understanding of *how* the effects of female representation materialize. This result is also line with research that concludes that female representation has a more tenuous relationship amongst women than is currently theorized (Beaman et al., 2009; Clayton, 2015; West, 2017).

To address this theoretical gap, this paper offers a political economy framework that explains why descriptive representation may not always political empower female citizens. Patriarchal norms can segment the effects of descriptive representation. In other words, role model-effects may pertain to women who are somewhat empowered enough to benefit from them. For women who are constrained by intra-household inequalities, the link between empowering solutions and actual empowerment is far from straightforward. This explanation echoes research which shows that women with low bargaining power may endorse beliefs that are incompatible with their gender interests, such as support for fundamental Islam (Blaydes and Linzer, 2008). The findings are also inline with a growing body of work in the U.S. context that shows that white women with low educational attainment and household income endorse sexist beliefs (Cassese and Barnes, 2019).

The findings are inline with experimental research in developing contexts which shows that community and development solutions that are meant to politically empower women instead make them even worse off (Cornwall, 2003; Gottlieb, 2016). The paper provides a framework that scholars and policy makers can deploy while designing interventions that target women's political behavior (Mansuri and Rao, 2013). For instance, theoretically or qualitatively probing the proximity of the mechanisms the intervention may activate vis-a-vis the three underlying threat mechanisms outlined in the framework can be useful in anticipating and diagnosing potential sources of backlash and thinking about ways of pre-empting them. Additionally, in low-information settings, I expect that providing information about

female representation in female dominant group such as, women's community groups, can mitigate household constraints on women's political participation (Mendelberg, Karpowitz and Goedert, 2014).

More generally, these results speak to broader efforts to document how patriarchal norms segment the effects of empowering solutions aimed at women, ranging from economic interventions (Barnett, Jamal and Monroe, 2020), to legal reforms (Htun, Jensenius and Tønnessen, 2019), and the findings provide the first explanation elucidating the role of bargaining power in moderating the relationship connecting female representation to women's diminished political efficacy. At the macro-level, I expect that variation in bargaining power to explain women's aggregate lack of support for female political or economic inclusion and echo research by Iversen and Rosenbluth (2006).

The theory and results also serve as an inspiration for a much broader research agenda. Moving beyond *whether* female representation matters, I intentionally focus on *how* female representation matters and investigate the demonstration mechanism which is a key normative argument for descriptive representation. Future research should pay attention to alternative mechanisms that underpin and introduce heterogeneity in this important aggregate relationship (for an example see, Goyal (2019*b*)) and add to our understanding of *how* descriptive representation matters.

In this regard, the paper offers a reason for cautious optimism by showing that gender-quota policy can mitigate backlash by explaining to female citizens *why* women are present in politics. These findings are inline with research which shows that women's pathways to power can influence citizen's support for female candidates (Folke, Rickne and Smith, 2020), and that stereotypical female profiles may enjoy higher levels of citizen support (Bauer, 2017; Teele, Kalla and Rosenbluth, 2018). However, the explanation for why this is the case paints a less sanguine picture. Gender quotas mitigate this backlash by reconciling female political presence with pre-existing norms. This explanation is inline with research that shows how "benevolent sexism" can trigger unexpected support when female politicians are seen as vulnerable (Cassese and Holman, 2019).

This is one of the first papers to examine citizen's reactions to gender quota policy and affirmative action policy in India and contributes to the research on citizen support for gender quotas (Barnes and Córdova, 2016; Batista Pereira and Porto, 2020). Despite two decades of employing gender quotas and over half-a-century of ethnic quotas, citizens awareness of affirmative action policies remains remarkably low in India. Consequently, India provides a ripe ground for theory building and testing how citizens response to information about tandem and ethnic quotas may temper support or backlash against minority (female) candidates.

Future research can build on these findings to improve our understanding of how affirmative action policies moderate citizen support for doubly marginalized - minority female candidates (Hughes, 2011).

Chapter 5

Mobilizing at the Booth

5.1 Introduction

> There is limited evidence on the impact of quotas on voter turnout. This is one area where it would be useful to have more research.
>
> Pande and Ford (2012, p. 17)

Do female politicians increase women's electoral participation? I investigate this question using the natural experiment of gender quotas in the municipal council of India's capital city, New Delhi, one of the world's largest municipal bodies. Using the random assignment of electoral gender quotas, known as "reservations", which exclusively reserve electoral seats for only women to contest, enables to overcome the selection bias that female politicians are likely to select into constituencies where women are politically active. A compelling feature of this design is that it enables to estimate an average treatment effect at scale: spatially and longitudinally.[1]

Few studies have examined the effects of female representation on female turnout, mainly due to lack of female turnout data or a design that can overcome the endogeneity problems inherent in such an investigation. Unobservables may influence both the likelihood that female politicians contest elections as well as increase female turnout, posing challenge to studies that mainly rely on an observational designs. The few quasi-experimental studies

[1] Quasi-experimental studies that investigate the effect of female politicians on turnout rely on close elections regression discontinuities estimate a local average treatment effect of female incumbency that is specific to close elections. Studies that use the natural experiment of gender quotas in India or regression discontinuities have not examined female turnout due to a lack of administrative data.

that have investigated this relationship find female representation has largely positive effects, except for in the setting of the United States. In the setting of Spanish municipal elections, using a triple-difference design, Casas-Arce and Saiz (2015) find that gender quotas resulted in slightly better electoral results for the parties that were most affected by the quota. Instead of female leaders, they attribute these results to party leaders who they argue were not maximizing electoral results prior to the quota, suggesting the existence of agency problems that hinder female representation in political institutions. In Italian municipalities, De Paola, Scoppa and De Benedetto (2014), also use a difference-in-difference design and find that while electoral turnout shows a decreasing trend, it has decreased significantly less in municipalities affected by the quota reform, suggesting that gender quotas have produced an increase in electoral participation. They further note that the effect on electoral turnout is driven by an increase in valid ballots and because female electors react more than males. The evidence from the U.S. is less optimistic. Broockman (2014) employs a regression discontinuity design and finds no effect of female officeholding on women's voter turnout or other women's candidacies in the setting of US state legislative elections.

Outside of industrialized democracies, two quasi-experimental studies in India find a positive effect. Using a close election regression discontinuity in the setting of India's state elections that do not have gender quotas, Bhalotra, Clots-Figueras and Iyer (2018) find that both female and male voter turnout are significantly greater (by 5.5 percentage points) in constituencies that were won by women in the preceding election but only in states with more equal gender ratios, there being no significant response in the more gender-prejudiced states. However, they are unable to test for long-term effects because there are very few constituencies in India in which women win a state assembly seat in a competitive election for two consecutive terms and winning the second time is endogenous in the competitive setting. O'Connell (2020) is the only study in India that uses a difference-in-difference design to investigate the effect of gender quota adoption at the district-level on female turnout in state-level constituencies. However, because the study examines spillovers in vastly different elections (rural district elections on state-level elections), and at different as well as highly aggregated geographic levels (districts on state constituencies), it uncovers only weakly positive effects.

Despite a rich scholarship on gender quotas in India, no study has yet examined the relationship between gender quotas and female turnout at the same electoral-level in India. To address this gap, I collected administrative data on male and female voter turnout at the polling station level for the latest round of municipal elections in Delhi that took place in April 2017. To the best of my knowledge, this paper is the first to collect and use administrative gender-wise turnout data at the most micro-level of Indian electoral landscape: the polling

booth. This paper uses data on all of Delhi's polling booth that are 12,485 in number. Crucially, the polling booth is a crucial site for ground campaigns in India and is the level at which candidates and party activists plan and conduct door-to-door campaigns to mobilize voters. India features the world's most intensive yet understudied ground campaigns. As per recent National Election Studies approximately 500 million citizens reported contact by party activists. As per NES-Post-poll 2014, published online by Lokniti, CSDS, 61.1% of electorate reported contact by a party activist (page 49). As per NES-Post-poll 2009, 57.9% reported contact by party activists (page 17). Post poll surveys from Delhi state elections report similar intensity of party activist contact. While there are no post-poll surveys for local elections, I find that 60% citizens report contact by party activists in local elections.

I investigate the observable implications of two key mechanisms that can explain why female politicians are likely to increase female turnout. The first set of mechanisms are "mobilization effects". Goyal (2020*a*) draws attention to how local institutions are the foundational site of party organization and therefore key for grassroots party building. Female politicians are more likely to recruit female party activists and, consequently, female-run campaigns lower the gender gap in partisan contact. This partisan contact increases women's political participation. Furthermore, while gender gap in partisan contact lowers (but persists) in the short-term, it reverses in the long-term, which suggests that in constituencies where female politicians have engaged in un-interrupted organization building are most likely to increase female turnout due to higher intensity of female-led grassroots mobilization.

Another key mechanism of interest is demonstration effects. Building on Pitkin's (1967) seminal work on representation, theoretical scholarship contends that female visibility at the elite level in politics can lower political gender gaps through "demonstration effects" (Mansbridge, 1999; Phillips, 1995). Demonstration effects inspire agency from women: female politicians act as role models, break down psychological barriers, signal to women that their interests will be taken seriously, and raise the value of women's political participation. The logic of demonstration effects emphasizes universality- because women will react positively to female politicians and will be inspired to turnout to vote, this will add up to positive aggregate effects on female turnout. Yet, demonstration effects are unlikely to be universal or sufficient to increase female political participation, given that few women actually know who their representative are. Moreover, in highly patriarchal settings, as families impose high costs on women's political participation such as by restricting women's mobility or access to information technologies which can frustrate demonstration effects, as outlined in chapter 2.

To examine whether female politicians increase turnout in the long-term, I rely on Delhi's gender reservations policy which features three natural experiments in 2007, 2012 and 2017, each of which is a fresh experiment - that is, past status does not predict future reservation status. Throughout these three elections, the number of municipal constituency remains the same which is 272. However, there is a border-redistricting that takes place in 2017 and municipal constituency boundaries change considerably. Border-redistricting is both pre-reservations and orthogonal to reservations. Once border-redistricting in complete, reservations are then randomly assigned to newly delimited constituencies. Using polling booth data from 2012 and 2017, I am able to confidently match 12,800 (all but 200 polling booths) by a combination of name and polling booth number. By using data on reservation history, I assign reservation history to each polling booth. These set of natural experiments leads to $2 \times 2 \times 2 = 8$ factorial design and enables to study the long-term effect of gender reservations. However, some of the 2012 constituencies retain a substantial part of their 2012 electorate, while others enter 2017 elections with a great degree of change in their electorate.

Crucially, border redistricting in India is largely known to be free from political bias and therefore creates an interesting opportunity to gain some traction on mechanisms: it ruptures the long-term benefits of grassroots mobilization in some constituencies as per 2012 boundaries, but polling booths remain exposed to female politicians throughout the last three elections. Re-districting also has a disproportionally larger disruptive effect on female politicians as they have narrower networks and rely more heavily on female activists. Consequently, re-districting and the unpredictability of gender quota shocks negatively affects women's grassroots capacity more than male politicians, as many women highlight in interviews.

Using the polling booth data, I find that the average male turnout is 54.32%, while female turnout is 52.95%. These figures reveal a gender-gap of 1.37%. There is substantial variation in both male and female turnout as well as the gender gap at the booth level. Using the long-term treatment variable, I find that female politicians increase female turnout in booths that are reserved for past three electoral cycles, but only in those always reserved booths that remain in municipal constituencies that are less disrupted by the border redistricting. Female politicians increase female turnout by 2.89% in these booths. In such booths, women's capacity to rely on (female) party activists is least affected and female voters benefit from the greater mobilization effort that is targeted at them. Within always reserved booths, female turnout increases by 1.4% points with one standard-deviation move to constituencies that are less disrupted by border re-districting. Because demonstration effects accrue as a result of exposure to female politicians, and therefore are expected to occur regardless of re-districting, I interpret this result as supporting the mobilization mechanism.

5.2 Polling booths: The site of ground campaigns in India

Ground campaigns remain understudied in India and this project is the first to investigate gender inequalities in the conduct of ground campaigns. I present a stylized sketch of a ground campaign that is derived inductively from conducting door-to-door campaign as an activist in Delhi in 2011-2013 and observing political campaigns in several states in India. Appendix section B provides visuals and few quotes from fieldwork on which this description is based. Ground campaigns, that is, in-person campaigns, generally begin 3-4 weeks in advance of the election date and share many similar features across electoral levels in India. Candidates have an overview of constituent socio-economic backgrounds such as, class, caste, religion, partisan support at the booth level and target their in-person campaigns most intensely at neighborhoods where they have more support. While parties conduct centralized campaigns such as large rallies or other events ahead of the elections, the in-person contact is entirely managed by the candidate. In case the candidate has invested in building the party, she might benefit from a larger pool of party activists that she recruits into the party and therefore are loyal to her. The labyrinthian nature of densely packed neighborhoods in India, makes it impossible to conduct ground campaigns without local knowledge. Consequently, party activists that conduct booth-level mobilization are from the same neighborhood where they live and rarely campaign outside their territories.

In a typical door-to-door campaign or neighborhood walk, a group of 10-15 of candidate's party activist from the local area walks in a pre-selected neighborhood and are not always accompanied by the candidate. While these walks and door-to-door campaigns are standalone events, they also precede candidate debates or town-hall meetings as a means to gather crowd and invite citizens to attend. Volunteers often carry megaphones or are accompanied with loud music with the aim to draw people out from their homes or neighborhood shops. They then proceed to break into smaller groups and attempt to talk to people who are gathered in public spaces or around small tea stalls or shops in residential areas, those who are standing on their porches or are out on their balconies and to knock on doors.

Party activists engage in un-scripted conversations with constituents and provide them with information about the candidate's socio-political background, policy platform, and her party affiliation - often emphasizing the aspects of the candidate profile that they judge may resonate with the voter, such as language, caste, or candidate's family background or discuss what the candidate aims to do about the dominant service issue the neighborhood is facing, such as water shortage or garbage disposal. They may also contrast the candidate with her competitors, draw on the party's manifesto or a party's prominent leader who supports the candidate as well as highlight the work the candidate has done for the neighborhood. These

conversations can can last anywhere from 3-5 minutes to 15-20 mins depending on how many people are around and the format of the campaign (walks involve less and shorter conversations than door-to-doors). Party activists often distribute items such as calendars or pamphlets and try to get hold of constituents' personal information such as, mobile or Watsapp number or social groups, which they use to send invites for other campaign events, such as, town hall meetings etc. and reminders to turnout to vote. Finally, a great deal of ground campaigning is un-monitored, that is, it is done by party activists on behalf of candidates.

5.3 The natural experiment of gender quotas in Delhi

In municipal elections in 2017 one half of all municipal constituencies were reserved for women through an as-if random process, which very briefly put, involves reserving every 2nd constituency from a serially ordered list of municipal constituencies, and these serial numbers are in-turn pseudo-randomly assigned. Delhi has had five elections with the reservation policy in 1997, 2002, 2007, 2012, and 2017. 33% constituencies or seats were reserved for women until 2007, which was later expanded to 50% from 2012 and onwards. However, no electoral or spatial data is available for the elections and municipal boundaries prior to 2007. In 2007, Delhi's municipal body was trifurcated, municipal constituencies were re-districted and doubled in numbers, and the MCD's powers and jurisdiction was expanded. Due to the major overhaul of the MCD system in 2007, I take 2007 as the starting point for the analysis in the paper. Table A.1 in the Appendix section A.2 summarizes the reservation policy and gives an overview of the three-step reservation process that was used to implement gender reservations since 2007. All these elections used the same process to assign reservations.

The Appendix provides further qualitative evidence and Table A.2 reports balance tests which re-assure that the reservations process indeed lead to as-if random reservation of constituencies for women. Note that unlike the experiment in rural India, the past reservation status is un-correlated with the reservation status in the future. This means that each electoral year is a fresh as-if random "cluster" experiment where citizens in an entire constituency (cluster) are treated with female reservation. In other words, politicians do not face any term limit which is an indirect feature of the reservation policy in other Indian settings.

Crucially, because this natural experiment takes place each electoral year, it is possible to long-term effects of gender reservations. Because there are three electoral years and a constituency is either reserved or not reserved for females (two levels), this yields a 2^3 factorial design with the long-term treatment status having 8 levels as seen in Table A.3.

Constituencies which were never treated, that is, never reserved for women in 2007, 2012 and 2017 comprise the control group and I refer to them as "never-reserved". On the other hand, constituencies that received the highest dosage of treatment in all three natural experiments, that is, constituencies that were always reserved in 2007, 2012 and 2017 comprise the "always-reserved" treatment arm.

Table 5.1 Factorial experimental design with 8 treatment arms

Treatment	N Polling stations	% Polling stations
Never reserved	1,988	15.92
2007	1,059	8.48
2012	1,980	15.86
2007 & 2012	1,220	9.77
2017	2,297	18.40
2007 & 2017	846	6.78
2012 & 2017	2,020	16.18
Always reserved	1,075	8.61
Total	12,485	100

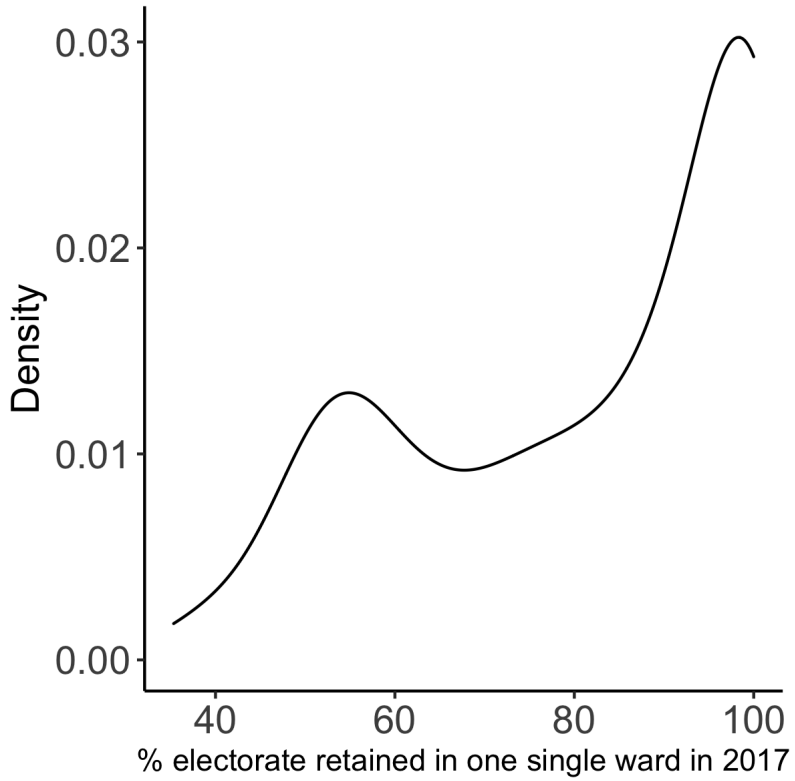
Ordinarily, the long-term treatment status would vary at the municipal constituency level. However, in 2017 municipal constituencies were re-districted. While the number of constituencies remains unchanged across the pre and post-redistricting period, merging polling stations shows that the 2007/ 2012 constituencies split into an average of 2 sub-units in 2017 and to a total of 526 distinct sub-units. Due to this border redistricting, the long-term treatment status no longer varies at the constituency level, but instead at this municipal sub-constituency level.

Table A.3 further shows the treatment levels and the distribution of these sub-constituency units across the 8 levels. Note that the probability of being always reserved is the probability of being reserved in 2007 $\times$ probability of being reserved in 2012 $\times$ probability of being reserved in 2017 which is $0.33 \times 0.5 \times 0.5 = 8.25\%$. This is close to the actual % of observations that are always reserved which is 8.61%, and this is also the case for other levels of treatment.

5.4 Border re-districting in Delhi

The 2017 redistricting fundamentally re-shapes 2012 constituency boundaries. Because the number of wards remains the same at 272 in both elections, ward boundaries are simply

Fig. 5.1 % electorate retained by a 2012 constituency within one single ward in 2017



re-organized to distribute the electorate more evenly as per 2011 census. Using municipal constituency wise polling station data from 2012 and 2017 elections, I create a panel of polling stations and their location as per 2012 and 2017 constituencies. This enables me to estimate the extent to which 2012 constituencies retain their erstwhile polling stations and therefore to create a measure of extent to which constituencies are impact: the % of electorate that a ward retains in its original 2012 boundaries within one single 2017 ward ahead of stepping into 2017 elections. For example ward no.1 is re-organized into 3 wards in 2017: 1-N with 59.47% of electorate, 2-N with 30.21% of the electorate, and 5-N with 10.31% of the electorate. On the other hand, ward no.9 retains 100% of electorate and becomes ward 13-N in 2017.

To summarize, some 2012 constituencies experience a great deal of re-organization into many smaller units, while others retain a large part of their electorate in one single chunk. On an average 2012 constituencies, retain 78.5% of their electorate as part of one single 2017 ward, but there is substantial variation - with a range from 35% to 100% and std. deviation of 20%. I classify constituencies that retain at least 80% (above average) of their 2012 electorate as part of one single ward in 2017 as “unaffected constituencies”, and those that are below 80% as “affected constituencies”.

On an average a 2012 ward gets re-organized into 1.93 wards in 2017, with a median of 2. Table 5.2 shows that a majority of wards ($N = 132$) splits into two.

Table 5.2 Impact of border-redistricting on 2012 constituencies

Sno	N Splits	N 2012 Constituencies
1	1	85
2	2	132
3	3	47
4	4	4
5	5	4

Evidence from India confirms that border redistricting is largely fair and free from political bias (Iyer and Reddy, 2013). Table 5.3 presents balance checks to that show that affected and unaffected constituencies are balanced on key observables. The difference between these constituencies is substantively insignificant. [TBA p-values]

Table 5.3 Affected and unaffected constituencies are balanced on population

	Affected constituencies (1)	Unaffected constituencies (2)	Difference (1)-(2)
Constituency pop. 2001	50,125.09	49,364.60	760.49
Constituency SC pop 2001	8,048.62	8,350.59	-301.96
Constituency SC % pop 2001	0.16	0.17	-0.01
Constituency pop 2011	61,697.85	60,821.35	876.50
Constituency SC pop 2011	10,062.40	10,351.89	-289.49
Constituency SC % pop 2011	0.16	0.17	-0.01
Booth-level total electorate	1,011.12	1,048.09	-36.98
Booth-level Male	562.20	578.01	-15.80
Booth-level Female	448.84	470.03	-21.19
Booth-level Other	1.19	1.20	-0.004

Fieldwork of turnout data collection

Gender-wise turnout data despite being in the "public" domain - is not easily available in India, especially at the constituency level, in local elections, and rarely at the polling booth level. It was incredibly difficult and time-consuming to gain access to this data and the process took roughly 5 years. I was able to get municipal elections data at the booth-level,

Table 5.4 Affected and unaffected constituencies are balanced on electoral variables

	Affected constituencies (1)	Unaffected constituencies (2)	Difference (1)-(2)
Reserved women 2012	0.49	0.52	-0.02
Reserved SC 2012	0.15	0.17	-0.01
N candidate 2012	10.51	8.70	1.81
N independent candidate 2012	5.48	4.20	1.28
N party candidate 2012	5.03	4.51	0.52
N viable candidate 2012	3.79	3.49	0.30
BJP winner 2012	0.50	0.52	-0.02
INC winner 2012	0.27	0.26	0.01
Other winner 2012	0.23	0.22	0.01
Margin of victory 2012	12.91	12.87	0.04
Close elections (5%) 2012	0.29	0.27	0.01

but was unsuccessful in gaining data to national and state elections. As Jensenius (2014) puts it - *"The main surprise was how easy it proved to get interviews, whereas considerable time and effort were needed to get access to 'publicly available data.'"* I describe the process through which I obtained this data.

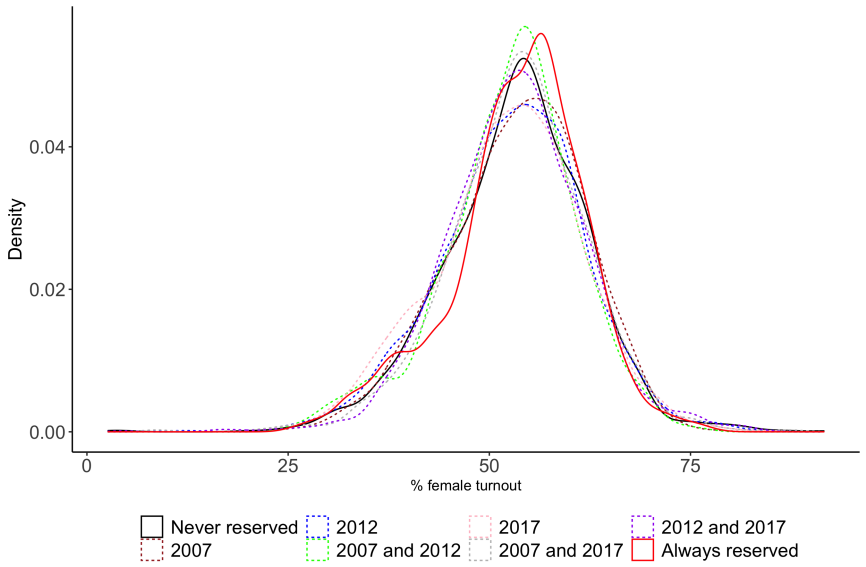
I began the fieldwork to collect turnout data in July 2014 by turning up at the State Election Commission (SEC) in Delhi. I did not use any political or bureaucratic connections and submitted a fieldwork letter from my university indicating my intentions for using the data for academic purpose. My aim was to collect any gender-wise turnout data at the booth level for any level of elections. Because I was successful in maintaining and retaining initial contact, I continued to make 3-4 visits per year to request this data, in addition to following up on email and WhatsApp. Research assistants also made independent visits which did not yield much success with regards to turnout data.

After relentless follow-ups and finally on advice from a newly appointed bureaucrat at the SEC in 2018, I filed a citizen's formal right-to-information application to collect this data in 2018. I eventually got access to turnout data for the 2017 municipal election in July 2019 through a bureaucrat who emailed me municipal constituency wise temporary online links. Data from each of these links was then scraped, processed and merged with data on reservations.

5.5 Main results

Figure 5.2, Figure 5.3, and Figure 5.4 show that there is a great degree of variation in fe(male) turnout and the gender-gap in turnout and it is not easy to discern the effects of reservation on these outcomes. Comparing the red (always reserved), dotted lines (other treatment arms) and black (never reserved) shows that female turnout has increased substantively in always reserved booths as well as in some of the reserved booths. However, due to enormous variation in the dependent variable, the point estimates are not precise and the results are statistically insignificant as seen in Table 5.5 column 1.

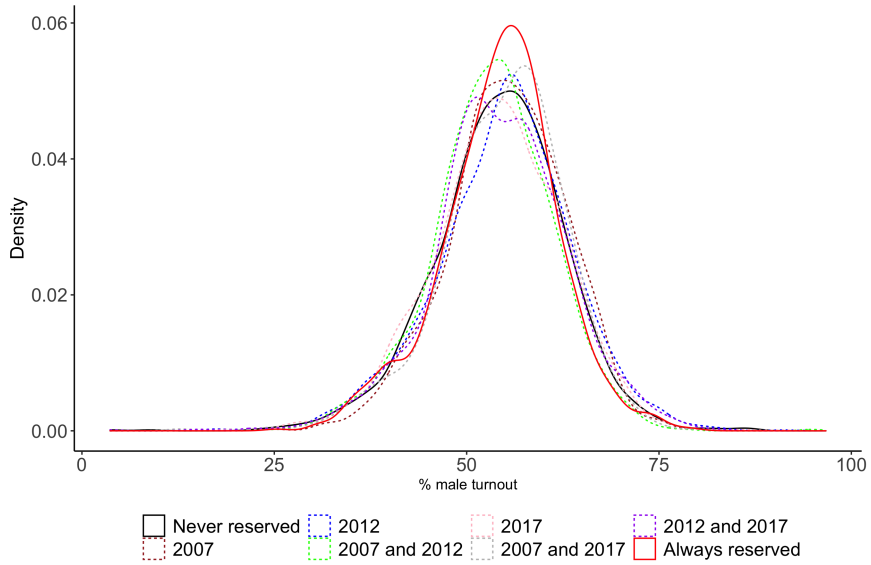
Fig. 5.2 Long-term effects of gender reservations on female turnout



Notes: This plots the % female turnout in each polling booth across the 8 treatment arms.

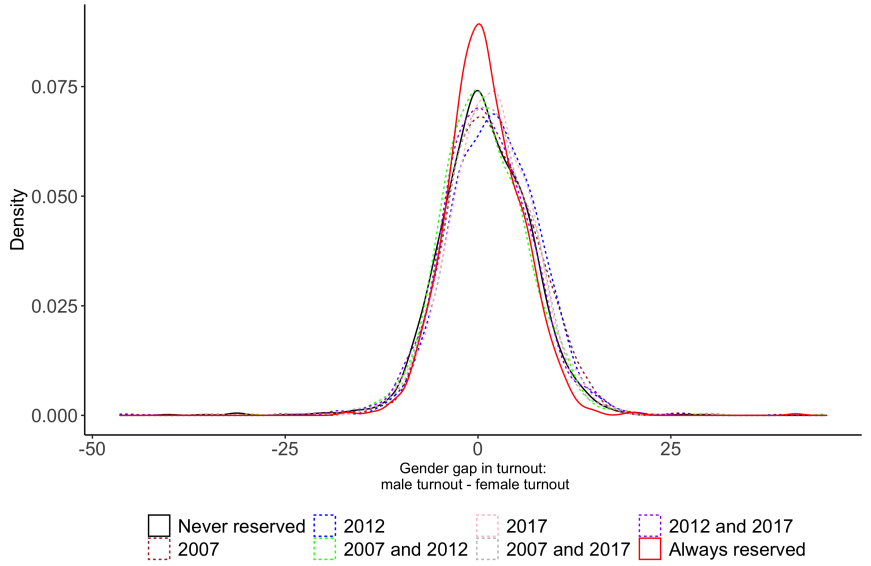
Table 5.5 reports the effect of reservations on female turnout. Standard errors are clustered at the 2017 constituency level. However, examining booths in unaffected constituencies reveals the importance of un-interrupted grassroots mobilization. Female turnout increases substantively by 2.8%, which is more than twice the gender-gap in Delhi, points in constituencies that are largely unaffected by re-districting and this effect is statistically significant at the 10% level. The estimates are noisy due to large extent of unexplained variation in female turnout that is orthogonal to reservations. Unfortunately, I lack pre-treatment predictors of female turnout at the municipal constituency level to improve statistical precision. Crucially, female turnout suffers in booths in affected municipal constituencies which were previously reserved but are no longer reserved or are reserved for the first time. This suggests that

Fig. 5.3 Long-term effects of gender reservations on male turnout



Notes: This plots the % male turnout in each polling booth across the 8 treatment arms.

Fig. 5.4 Long-term effects of gender reservations on the gender gap in turnout



Notes: This plots the % gender gap which is male turnout % - female turnout % in each polling booth across the 8 treatment arms.

gender quotas have long term durable effects on female turnout in so far female politicians are not affected by the disruption caused by border-redistricting.

Table 5.5 Long-term effects of reservation on female turnout at the booth level

	Dependent variable: % female turnout		
	All booths	Booths in unaffected constituencies	Booths in affected constituencies
	(1)	(2)	(3)
Reference: Never reserved			
Reserved 2007	0.118	1.441	−1.254
	(1.183)	(1.819)	(1.324)
Reserved 2012	−0.509	−0.368	0.160
	(1.044)	(1.470)	(1.659)
Reserved 2007 and 2012	−0.721	1.376	−2.904**
	(1.050)	(1.688)	(1.146)
Reserved 2017	−1.033	0.313	−2.547*
	(1.074)	(1.553)	(1.425)
Reserved 2007 and 2017	0.222	3.027*	−1.914
	(1.117)	(1.591)	(1.349)
Reserved 2012 and 2017	−0.063	1.383	−1.402
	(1.043)	(1.596)	(1.134)
Always reserved	0.163	2.887*	−2.065
	(1.068)	(1.507)	(1.351)
Constant	53.265***	52.466***	53.986***
	(0.739)	(1.205)	(0.822)
Observations	12,485	6,687	5,798

Note: *p<0.1; **p<0.05; ***p<0.01

Unaffected and affected constituencies relies on an arbitrary classification and splits up the sample. To overcome these disadvantages, I re-run the above regressions on the full sample and interact gender quotas with the % of electorate retained by the newly formed constituency. Table 5.8 displays the results from this regression. The coefficient of the interaction term is always positive and in some cases also statistically significant, reframing that mobilization by female politicians is one key reason for this increase in female turnout and lowering of the gender gap in turnout. The coefficient for the interaction between male turnout and gender quotas is also positive, suggesting the women lower gender gap in turnout by increasing female turnout and at no cost to male mobilization.

Table 5.6 Long-term effects of reservation on male turnout at the booth level

	Dependent variable: % male turnout		
	All booths	Booths in unaffected constituencies	Booths in affected constituencies
	(1)	(2)	(3)
Reference: Never reserved			
Reserved 2007	0.982	1.735	−0.020
	(1.147)	(1.772)	(1.236)
Reserved 2012	0.659	0.308	1.168
	(1.065)	(1.483)	(1.729)
Reserved 2007 and 2012	−0.879	−0.087	−1.812
	(1.072)	(1.720)	(1.209)
Reserved 2017	−0.252	1.032	−2.217
	(1.046)	(1.477)	(1.368)
Reserved 2007 and 2017	0.540	2.797*	−1.016
	(1.160)	(1.633)	(1.348)
Reserved 2012 and 2017	0.061	0.369	−0.243
	(1.109)	(1.675)	(1.216)
Always reserved	0.050	1.957	−1.419
	(1.050)	(1.544)	(1.269)
Constant	54.222***	54.412***	54.049***
	(0.744)	(1.189)	(0.871)
Observations	12,485	6,687	5,798

Note: *p<0.1; **p<0.05; ***p<0.01

Table 5.7 Long-term effects of reservation on the gender gap in turnout at the booth level

	Dependent variable: % gender-gap in turnout		
	All booths	Booths in unaffected constituencies	Booths in affected constituencies
	(1)	(2)	(3)
Reference: Never reserved			
Reserved 2007	0.864	0.294	1.234*
	(0.679)	(1.100)	(0.663)
Reserved 2012	1.168**	0.676	1.008
	(0.511)	(0.766)	(0.703)
Reserved 2007 and 2012	−0.157	−1.463*	1.092
	(0.607)	(0.821)	(0.877)
Reserved 2017	0.781	0.720	0.330
	(0.521)	(0.767)	(0.601)
Reserved 2007 and 2017	0.317	−0.230	0.899
	(0.715)	(1.127)	(0.851)
Reserved 2012 and 2017	0.124	−1.014	1.159
	(0.561)	(0.781)	(0.758)
Always reserved	−0.113	−0.930	0.646
	(0.531)	(0.840)	(0.612)
Constant	0.956**	1.946***	0.063
	(0.384)	(0.621)	(0.382)
Observations	12,485	6,687	5,798

Note: *p<0.1; **p<0.05; ***p<0.01

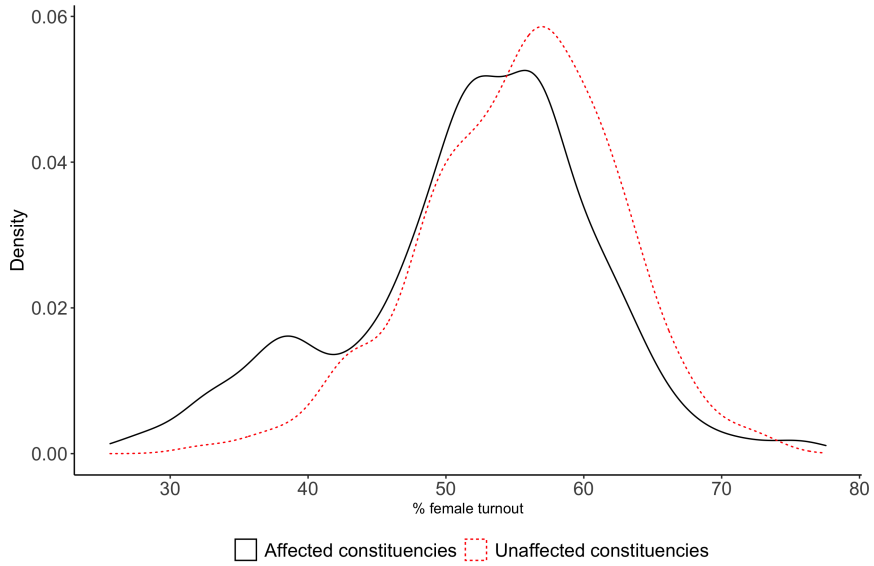
Table 5.8 Reservations interacted with % 2012 electorate retained

	(1) Female turnout	(2) Male turnout	(3) Gender-gap
Reserved 2007	−3.230	−0.604	2.626
	(3.422)	(3.119)	(2.156)
Reserved 2012	0.649	1.289	0.640
	(3.225)	(3.240)	(1.804)
Reserved 2007 and 2012	−7.101**	−2.712	4.389*
	(3.330)	(3.622)	(2.243)
Reserved 2017	−5.994	−5.848*	0.145
	(3.731)	(3.307)	(1.743)
Reserved 2007 and 2017	−6.704**	−3.483	3.221
	(3.045)	(3.279)	(2.147)
Reserved 2012 and 2017	−4.411*	−1.217	3.195*
	(2.566)	(2.732)	(1.891)
Always reserved	−8.435**	−4.824	3.610*
	(3.933)	(3.834)	(2.023)
% 2012 electorate retained	−0.032	0.022	0.053***
	(0.026)	(0.027)	(0.015)
Reserved 2007 * Retained	0.044	0.019	−0.025
	(0.047)	(0.045)	(0.032)
Reserved 2012 * Retained	−0.010	−0.010	−0.0005
	(0.041)	(0.042)	(0.024)
Reserved 2007 and 2012 * Retained	0.082*	0.022	−0.061**
	(0.047)	(0.050)	(0.028)
Reserved 2017 * Retained	0.064	0.068	0.004
	(0.047)	(0.043)	(0.023)
Reserved 2007 and 2017 * Retained	0.095**	0.057	−0.039
	(0.041)	(0.045)	(0.030)
Reserved 2012 and 2017 * Retained	0.058	0.016	−0.042*
	(0.037)	(0.040)	(0.025)
Always reserved * Retained	0.112**	0.061	−0.050*
	(0.050)	(0.050)	(0.027)
Constant	55.618***	52.600***	−3.018***
	(1.736)	(1.756)	(0.979)
Observations	12,485	12,485	12,485

Re-districting and female turnout in always-reserved booths

Figure 5.5 shows that in polling booths are always-reserved, which means that they are all exposed to the same extent to female politicians, female turnout is still substantially increased in booths that are in constituencies unaffected by border-redistricting. Table 5.9 shows that for every standard deviation increase in electorate retained, female turnout increases substantively by 1.39% points.

Fig. 5.5 Female turnout in always reserved booths in affected and unaffected constituencies



Notes: This plots the % female turnout in always reserved booths for constituencies that are either affected or unaffected by re-districting in 2017.

Table 5.9 Effect of re-districting on female turnout within always reserved booths

	% female turnout
Std. % electorate retained	1.394*
	(0.736)
Constant	53.429***
	(0.732)
Observations	1,075
Note:	*p<0.1; **p<0.05; ***p<0.01

5.6 Conclusion

This chapter provides the first evidence of the relationship between gender quotas and female turnout in local elections in India. I find gender reservations do not universally increase female turnout, instead gender reservations increase female turnout in the long-run and only in constituencies that are less affected by border-redistricting, which is a key disruption to female politician's ability to mobilize at the grassroots. In addition, holding constant exposure to gender quotas, female turnout is substantially larger in booths that are in constituencies that are unaffected by border re-districting. Using border-redistricting as a shock to gain traction on the mechanisms, and by contrasting this evidence with findings from qualitative and survey experimental data presented in earlier chapters, I conclude that mobilization mechanism are a key driving force underlying these positive effects.

This chapter improves our understanding of the relationship between descriptive representation and women's electoral participation. GOTV field experiments in Pakistan that target non-partisan contact at women find that contact increases female turnout by 8 to 11% points amongst those who are contacted (Cheema et al., 2020; Giné and Mansuri, 2018). Chapter 2 shows that gender quotas reverse the gender-gap in contact. I find that women are roughly 20% more likely to be contacted by party activists in always-reserved (68%) vs. never-reserved wards (48%). Assuming contact increases turnout by 8 to 11% points at the individual level, a back-of-the-envelope calculation suggests that gender quotas in the long run should increase aggregate turnout by close to 1.6 - 2.31% increase in aggregate turnout. This back-of-the-envelope calculation comes very close to what I find in this investigation, further bolstering support for the mobilization mechanism.

Chapter 6

Women and Party Building in Brazil

6.1 Introduction

Decentralization combined with local democracy has heralded a new era of democratic politics in low- and middle-income countries. Coined as *"democracy's quiet revolution"*, these twin reforms have been profound in their reach and in their capacity to shift power from central to local authorities.[1] Scholars and governments alike value these reforms for the promise they hold to increase democratic accountability. This quiet revolution has enabled progress on two other democratic ideals: descriptive representation and party building.

Local politics enables marginalized groups to access political opportunities. Indeed, while, the number of female politicians shrinks on the way up the electoral hierarchy, women are represented in greater numbers in local politics worldwide. Evidence shows that women in local politics increase women's political participation (Goyal, 2019*b*; Schwindt-Bayer, 2010; Zetterberg, 2009), enhance substantive representation (Barnes, 2016*a*; Chattopadhyay and Duflo, 2004; Franceschet, Krook and Piscopo, 2012), and lower corruption (Brollo and Troiano, 2016; Esarey and Schwindt-Bayer, 2018). At the same time, local politics offers national party leaders a tool to screen talent, decentralize party activities, while local incumbency bolsters access to state resources to build strong territorial organizations, paving the way for resilient parties (Bohlken, 2016; Levitsky, 2001; Samuels and Zucco, 2016; Sells, 2020).

[1] See, Decentralization and Local Democracy in the World : First Global Report by United Cities and Local Governments 2008. Washington, DC: United Cities and Local Government and the World Bank; and Campbell (2003).

This paper highlights a novel way in which descriptive representation enhances democracy, via grassroots party building. We introduce a link between descriptive representation and party building and develop a gendered theory of party building to explain this relationship. We build on a vibrant literature on gender in politics to argue that the political economy of gender inequality incentivizes female incumbents to invest more in party building, relative to their male counterparts. We locate two dimensions of gender inequality that motivate female-led party building: social roles that limit women's strategic substitutes to party building (Teele, Kalla and Rosenbluth, 2018); and women's greater reliance on local politics as a pathway to power (Goyal, 2020*a*). The second part of our argument takes cognizance of the gender inequality in access to state resources that are relevant to party building (Brollo and Troiano, 2016; Fisman, Schulz and Vig, 2014). We argue that because female incumbents have lower access to rents and patronage, they optimize by recruiting female and higher quality members. Our argument enables us to draw out observable implications of female incumbency for both the quantity and quality of grassroots party building.

We provide evidence for the observable implications of this argument in the context of municipal government in Brazil. In addition to being a substantive case, which has high gender gaps on political participation as well as weak parties, Brazil offers several advantages for empirical investigation. Brazil's municipal governments enjoy considerable discretionary power over budgets and jobs allocation. As Samuels and Zucco (2016) point out, municipal executive positions are politically appealing and a pathway to higher-level of politics. Furthermore, we can rely on close elections regression discontinuity design to overcome selection bias of female mayors selecting into place ripe with women eager to enter party politics. We measure party building through a rich dataset that contains name, gender and the timing of joining of all party members across Brazilian parties. This uniquely rich administrative data on party membership enables us to examine our argument at scale and provide descriptives about the gender-gap in party recruitment.

Using this design, we find that male and female incumbents are equally likely to increase party membership, but only female mayors lower the gender-gap in party membership. While female mayors in Brazil are known to have lower access to rents or state resources (Brollo and Troiano, 2016), these disparities do not lower women's party building capacity. We find that these effects are stronger amongst women who are party outsiders, that is, women who are more likely to rely on local politics to rise up in the party hierarchy and are yet to develop a reputation, as well as amongst female mayors who have climbed the political ladder after serving in other lower-tier positions. Supporting the observable implications of our theory, we find that female-led party building is more inclusive in settings where patronage is a less appealing strategy for recruitment and the costs for recruiting female

members are lower, such as constituencies with higher female labour force participation, higher human development, and smaller electorates. Furthermore, consistent with our theory, we find that female incumbents have higher odds of political career progression, especially in municipalities that had lower baseline levels of party membership. These findings confirm that women can use local representation as a pathway to power, and they do so through grassroots party building.

Our findings are of interest to scholars of party institutionalization and democracy (Jensenius and Suryanarayan, 2020; Mainwaring, 2018), and to the scholarship on party building in Latin America (Holland, 2016; Levitsky, 2001). Nearly four decades since the onset of the third wave, political parties remain weak in Latin America and most new party-building efforts have failed, hindering the prospects of a stable democracy. Our findings show that descriptive representation can enable parties to build territorial organizations and cement partisan attachments, sowing the seeds for long-term party stability and lowering the risk of democratic breakdown. We contribute to the vast literature on female representation (Barnes and Holman, 2020; Franceschet, Krook and Piscopo, 2012; Wängnerud, 2009), by showing that, female-led party building, by mobilizing women inside parties, can lower political gender inequalities and enhance democracy.

6.2 Local incumbency and party building

Political parties are the basic building blocks of representative democracy, and as Schattschneider famously exclaimed, that democracy is unthinkable without political parties. However, the experience in most parts of the world in Africa (Riedl, 2014), Latin America (Levitsky, Loxton and Dyck, 2016; Mainwaring, 2018), and Asia (Hicken and Kuhonta, 2014), shows that successful party building is challenging but not altogether impossible. Scholars of party building and party system institutionalization conclude that one of the key element of successful party-building is the construction of a territorial organization which ensures that party leaders can rely on local political support. Territorial organization enables parties to win votes and build partisan attachments. Parties use grassroots activists to communicate their brands, build ideological or patronage linkages to recruit party members, and execute ground campaigns to mobilize voters. Because party members are more likely to stick it out and remain loyal to their party regardless of its electoral success, parties with grassroots activist bases survive electoral success and failure.

Towards this end, decentralization and local democracy provide party leaders with a tool to build a robust territorial organization that increase their odds of political survival. In fact,

party building goals are a key explanation for why party leaders devolve power and extend local democracy in the first place. Investigating the logic of local democracy in developing countries, Bohlken (2016) concludes that, *"an important motive behind the implementation of local democratization is to allow government elites to at least partially solve the principal-agent problem involved in ensuring the effectiveness of local intermediaries."* Party leaders (principal) would like local incumbents (agents) to invest their resources in party building. Party elites can use the information they glean from local electoral contests to gauge grassroots support for the party (Samuels and Zucco, 2016), and as a screening device for talent that invests in party building. Crucially, incumbency enables local politicians to access to state resources, which these agents can use to many ends. A rich literature investigating incumbents effects shows that local incumbents accumulate wealth (Fisman, Schulz and Vig, 2014), engage in corruption (Ferraz and Finan, 2011; Klasjna and Titunik, 2017), and divert resources to build their own political machines (Bohlken, 2018; Chhibber and Jensenius, 2018; Fried, 2012), jeopardizing party's electoral (Klašnja, 2015), and organizational survival (Novaes, 2018).

Party leaders have many tools that they can deploy to lower agency costs and guard against this opportunism, including their control over higher-level nominations, ideology, and disciplining mechanisms. These tools are particularly effective in strong parties, as seen in many different settings. Evidence shows that in strong parties in India incumbents at different levels of the party hierarchy support each other at election time and parties benefit electorally from this hierarchical co-operation (Nellis, 2017). Sells (2020) argues that local incumbents can indeed bolster party building, but in parties that are strongly institutionalized parties in Brazil where party leaders have the capacity to discipline local incumbents. He finds that municipal incumbency increased membership recruitment only among centralized and programmatic parties that already had a strong territorial presence in the municipality, and it was ineffective for weaker parties.

Yet, the resources and expectations that align local incumbents' incentives to engage in party building are not equally distributed between genders. We argue that, paradoxically, the political economy of gender inequalities pushes women more in the direction of party building, relative to male incumbents. Our augment has two parts. We build on a vibrant literature on gender and politics to highlight two relevant dimensions of disparity between male and female incumbents that increase women's investment in party building: social roles that limit women's strategic substitutes to party building and women's greater reliance on local politics as a career launchpad.

Existing research provides evidence for how these gendered inequalities affect women's legislative behavior (Barnes and Córdova, 2016; Clayton and Zetterberg, 2021; Piscopo, 2016), and electoral success (Eggers, Vivyan and Wagner, 2018; Teele, Kalla and Rosenbluth, 2018). Our argument focuses on grassroots party building - an under explored yet crucial arena which influences party institutionalization, and therefore the health of democracy (Mainwaring, 2018). The second part of our argument takes into account the gender inequality in access to state resources that are relevant to party building (Brollo and Troiano, 2016; Fisman, Schulz and Vig, 2014). Furthermore, we go beyond showing that these inequalities affect women to investigating how women push back against these inequalities. We argue that because female incumbents have lower access to rents and patronage, they optimize by recruiting female and higher quality members. Our argument enables us to draw out observable implications of female incumbency in local politics for both the quantity and quality of grassroots party building.

A gendered theory of party building

We theorize that female incumbents will invest more in party building than male incumbents due to gendered inequalities along two dimensions. Women's social roles will limit women's strategic toolkit and bolster reliance on party building as the strategy for political and electoral survival. Second, women's greater reliance on local politics as a career launchpad will lead them to invest more heavily in grassroots party building, which can enable them to progress upwards in the party hierarchy and is a resource on which they can continue to bank on when they reach top positions. The second part of our argument considers gender inequality in access to state resources and its implications for female-led party building. We argue that these disparities require women to optimize. They respond by recruiting female party members and investing in higher quality recruits that are more likely to remain affiliated with the party over the long term. In other words, recruiting female party members is women's best response strategy to building a political career in male-dominant parties.

Research on how social expectations about women's familial commitments undercuts women's strategies shows us that female politicians face double binds, which means that the attributes that are valued in leaders might create larger burdens for some people (Teele, Kalla and Rosenbluth, 2018). For example, a desire for politicians to display traditional family roles as well as being highly successful in careers might constitute a double bind for women. These double binds can render some political strategies implausible or costlier for women to pursue, limiting the strategies that can substitute for party building. Men can strike other more lucrative win-win bargains that party leaders may value such as, organizing corruption

or crime networks, substituting for the investment in party building. On the other hand, even when female incumbents have the latent skills or resources to engage in these role-deviant strategies, the tradeoff is more costly.

Using survey data from over 800 parliamentarians across 17 African legislatures, Clayton and Zetterberg (2021) find that gendered expectations about proper behavior limit women legislators' ability to act independently from their parties and compel women to act in ways that are less assertive than those of the men in their parties. They find that women report significantly higher levels of party discipline then do their male co-partisans. Women may also face higher standards in politics than men (Bauer, 2020), and party leaders may be less likely to value women's engagement in deviant behavior (Morgan, 2018). While there may not be an explicit division of labour, where party leaders assign different roles and tasks to male and female party members, women, broader patriarchal norms will suffice to reinforce create this division inside parties, with women specializing in party specific skills (Iversen and Rosenbluth, 2010). For example, Clayton and Zetterberg (2021) find that while female MPs speak less than men in legislatures, when they do speak, women refer to their parties more frequently than do men. Voters can also reinforce these norms, disciplining women from the polling booths. Eggers, Vivyan and Wagner (2018) show that women face higher-levels of electoral backlash for engaging in corruption.

The second is research on political career progression. Despite a political gender-gap in career progression that is observed in many settings (Carroll and Sanbonmatsu, 2013; Folke and Rickne, 2016), female incumbents in higher-level politics are still more likely than men to have prior background in lower-level politics, ranging from India (Goyal, 2020*a*) to Africa (Clayton and Zetterberg, 2021). While local politics is often described as a springboard to higher office, men face fewer challenges and obstacles in contesting directly in higher-level politics, bypassing the grunt work that local politics requires altogether. On the other hand, female politicians aspirants rely more heavily on local politics to gain visibility and to overcome the sticky floor that they uniquely face in directly contesting higher-level elections. Women's greater dependence on local politics means that local female incumbents, on an average, have stronger incentives to invest in party building than men. Although women have greater incentives to engage in party building, they have fewer resources to do so. Existing scholarship on gender and incumbency effects suggests that female incumbents are less likely than their male counterparts to accumulate wealth (Fisman, Schulz and Vig, 2014), or secure other valuable resources such as access to patronage or campaign contributions (Brollo and Troiano, 2016). Studies in distributive politics show that incumbents rely on these resources to pay and target pork at grassroots party activists (Auerbach, 2020; Bohlken, 2018; Brierley and Nathan, 2021; Chhibber and Jensenius, 2018) and control local community radios to

reach out to new recruits (Boas and Hidalgo, 2011). Higher availability of resources enables male incumbents to develop a large party activist following and to fill party positions with their loyalists which can increase their intra-party influence.

Scarcer resources pose a challenge to female incumbents, and suggest that without optimizing, female incumbents are less likely than male incumbents to engage in party building, even if they want to. Yet, this doesn't mean that women will necessarily give up.[2] A key way in which women can optimize and make up for lower resources is by recruiting party members who are "cheaper" to recruit. Existing research shows that that it is easier for female politicians to recruit women, relative to male politicians, even in settings where highly regressive gender norms severely constraint the supply of female activists. Using the natural experiment of gender quotas in India, Goyal (2019*b*) shows that female candidates in local politics have a comparative advantage in recruiting female party activists because they can simultaneously lower household and party side barriers to women's entry inside parties. Local female politicians can use the prestige of holding party nominations to persuade male gatekeepers to allow women to join parties and the household can benefit from political access. On the party side, female politicians place women in formal positions and assign them meaningful responsibilities, lowering party barriers to women's recruitment. We expect that local incumbency can amplify these effects. Female incumbents can rely on their expanded social and political networks in schools, and women's organizations, to pursue these recruitment strategies in newer spaces, which are also less accessible to male politicians. Younger women, especially who are first time voters, might feel a greater psychological connection with female politicians and see them as role-models (Wolbrecht and Campbell, 2007), which can make it easier for women to recruit them. Secondary mobilization can bolster this pattern of female recruitment (Gerber and Green, 2017). This leads us to our first two inter-related hypothesis,

> **H1:** Despite lower access to state resources, women are equally or more likely to invest in party building than male incumbents.

> **H2:** To optimize for lower access to state resources, women are more likely to invest in recruiting female party members than male party members, shrinking the gender-gap in party membership.

[2]We assume that on an average, male and female winners have at least the same level of ambition to re-contest elections, otherwise, barring a few good samaritans, it is unlikely that, women will aim to overcome this resource disparity. Instead, if female incumbents have lower political ambition to re-contest, it should lead them to invest even lower effort in grassroots party building. Our empirical evidence does not favor this hypothesis, reckoning with others who find that structural and institutional barriers pose a greater challenge to female representation than psychological predispositions (Bernhard, Shames and Teele, 2020; Piscopo, 2019).

Recruiting female activists has additional benefits which bolster its appeal to female politicians. It is a clearer and easily attributable signal of women's effort. Party elites are more likely to assign credit for increasing female party membership to women. Female incumbents can more easily claim credit to do so, making female recruitment a savvy strategy which can increase women's odds of career progression. Research on party activists shows that local candidates rely on grassroots party activist following to rise up in the party hierarchy (Auerbach, 2020; Brierley and Nathan, 2020). Increasing female party membership is also lucrative to party elites who seek to mobilize the latent female vote. Evidence shows that female activists outperform male activists in reaching out to women in ground campaigns, shrinking the gender gap in partisan contact that is targeted at women (Goyal, 2019*b*).

The incentives and mechanisms through which incumbents engage in party recruitment have implications for the substantive quality of recruitment. For instance, while it maybe easier to use financial incentives to expand the party activist following, this may lead opportunistic members to join the party. Members who are lured in through clientelistic promises, may readily leave when such promises are not kept. Novaes (2018) uses data from Brazil to show that disloyal mayors who join for seek rents and patronage are more likely to switch parties, sowing the seeds for party fragility. However, members who join because they have social or political ambition to do so, or are infused with party ideology, are more likely to extend effort towards deepening party building activities and this sets in a virtuous cycle that binds members more closely to party network, sowing the seeds of organizational stability (Samuels and Zucco, 2016).

> **H3:** Due to lower access to patronage and rents, women are more likely to recruit higher-quality members who are motivated to join for non-clientelistic promises and are less likely to leave.

6.3 The Brazilian case

The Brazilian political system illustrates the potential that decentralized municipal governments hold as tool for grassroots party-building tool and the challenge party leaders face in ensuring that local agents invest in party building. Samuels and Zucco (2016) offer a comparative perspective on party-building in Brazil with an emphasis on the PT case. They underscore the importance of party membership in Brazil by showing that all of Brazil's main parties have a local-level organizational presence in an overwhelming majority of the

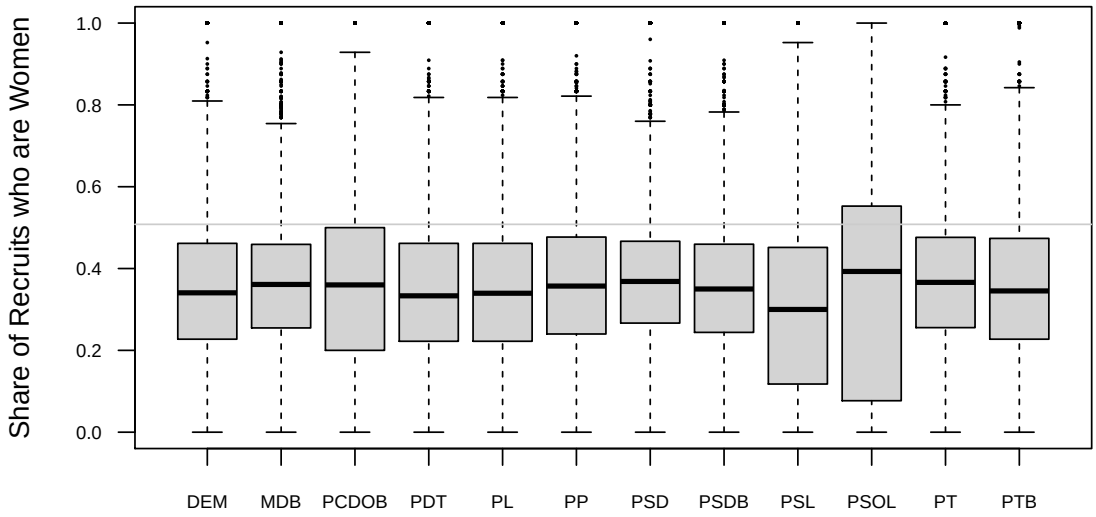
country's 5,500+ municipalities, and that all major parties gain votes only after establishing a local organizational presence.

Although Brazilian party leaders rely on subnational actors such as municipal politicians, grassroots activists, and local brokers to use the resources at their disposal for party building, the evidence on whether local agents act in party's interest is mixed. On one hand, evidence shows that these actors use local office for corruption which creates an electoral disadvantage for ruling parties (Klasjna and Titunik, 2017). Disloyal mayors also invest in building their own political machines and switch parties in electorally difficult times and this disloyalty causes party weakness (Novaes, 2018). On the other hand, local incumbents also monopolize access to local community radios which substantially increases party vote share and the candidate's probability of victory (Boas and Hidalgo, 2011). Evidence on party building in Brazil shows that while incumbency in municipal government enables grassroots party building, it is only the case in parties that have achieved some level of institutionalization prior to decentralization reforms and where party leaders have tighter control over local actors (Sells, 2020).

There is a strong consensus that Brazil's weak party institutionalization has also contributed to Brazil's exceptionally poor record on women's representation in elected office (Htun, 2002; Janusz, Barreiro and Cintron, 2021; Wylie, 2018). Wylie (2018) argues that Brazil's inchoate party system and candidate-centered context allows ambitious self-promoters to convert their personal resources into voters, while traditional gender norms render such resources out of reach for Brazilian women. Although Brazilian parties are required by law to reserve 30% of nominations for legislative seats for women, the weak institutionalization of Brazilian parties and the loose enforcement of Brazil's gender quota law allows male party leaders to bypass this formal requirement (Htun, 2002; Wylie and dos Santos, 2016; Wylie, 2018). Even when Brazilian party leaders do nominate women for elected office, they often deny their female candidates the same financial resources and media access that they provide to their male candidates (Janusz, Barreiro and Cintron, 2021; Wylie, dos Santos and Marcelino, 2019).

These problems are exacerbated by the fact that women continue to be recruited into partisan politics at much lower rates than men. Figure 6.1 shows the share of member recruits who were women in each municipality-term between 2000 and 2020, grouped by the members' party. Most parties recruited women at significantly lower rates than men, and this gender gap was largely consistent across parties; even institutionalized, leftist parties that are ideologically supportive of women's involvement in politics—such as the Workers' Party (PT) and the Communist Party of Brazil (PCdoB)—recruited more men than women in most

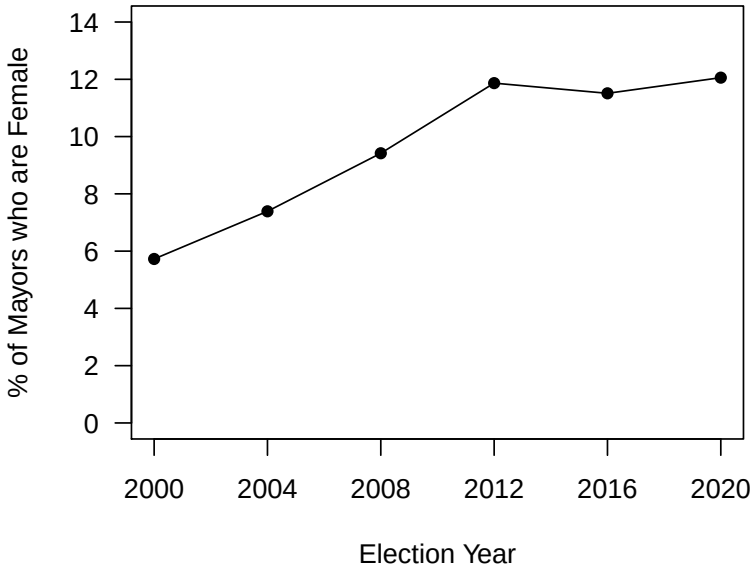
Fig. 6.1 Membership Recruitment of Women in Brazil, by Party



municipalities. By limiting the pool of women who have partisan political experience, this gender imbalance in recruitment perpetuates women's underrepresentation in both elected office and party leadership positions.

Despite these obstacles to women's representation in elected office, Brazil has seen some improvement in women's representation over time, especially in local governments. Figure 6.2 shows that the share of mayorships that were held by women roughly doubled between 2000 and 2012. We contend that women's greater presence in municipal governments and the scope that local incumbency offers for party building represent a crucial means through which women can transform parties from the grassroots in Brazil. Female mayors are particularly well-positioned to reduce the gender-gap in membership recruitment. First, mayors in Brazil have a variety of resources at their disposal that they can use to recruit and reward their grassroots activists (Brollo, Forquesato and Gozzi, 2017; Mainwaring, 1999). Although female mayors in Brazil have less access to patronage resources compared to male mayors (Brollo and Troiano, 2016), they are still likely to have greater organizational resources compared to female candidates who lost their election. Thus, even if she receives little

Fig. 6.2 Female Mayors in Brazil, by Election Year



financial backing from her party, a female mayor may have the means to continue expanding her local activist network upon taking office.

Second, the decentralized nature of mayoral nominations in Brazil makes mayoral office an important point of entry for ambitious female politicians, and it also encourages them to invest in building a personal political network as a signal of their electoral viability. Because many Brazilian parties rely on their mayors to mobilize electoral support for their co-partisan state and federal candidates (Novaes, 2018), local party organizations are more likely to select candidates who already have a large personal base of support. One common way that local politicians in Brazil demonstrate the size of their support base is by recruiting their supports into their party as formal members and mobilizing them at the party's municipal conventions (Mainwaring, 1999). These personal activist networks are also an indispensable campaign resource in Brazil, where media access is limited and municipal campaigns rely heavily on door-to-door canvassing and local rallies.

6.4 Data and Empirical Strategy

Our main dependent variables of interest are the rate of activist recruitment and the gender gap in recruitment. We measure both variables using data on party membership in Brazil provided by Brazil's electoral court, the *Tribunal Superior Eleitoral* (TSE). The data used in our analyses spans the four mayoral terms between 2005 and 2020, and it contains information on each member's date of affiliation and municipality of residence. We operationalize the total recruitment rate as the number of new party members that the party recruited per 1,000 voters in a given municipality over the course of the four year mayoral term. We operationalize the gender gap in recruitment as the difference between the recruitment rate of men and the recruitment rate of women in a given municipality:

$$GenderGap = \frac{MaleRecruits}{MaleVoters} - \frac{FemaleRecruits}{FemaleVoters}$$

A positive gender gap indicates that the party is recruiting men at a higher rate than women and that the gender imbalance in the party's membership base is increasing. A gender gap of zero indicates that the party's new members are perfectly balanced by gender. In the small number of municipalities where the party did not recruit any new members during that term, we define the gender gap to be zero on the grounds that the overall gender composition of the party's membership base is not changing.

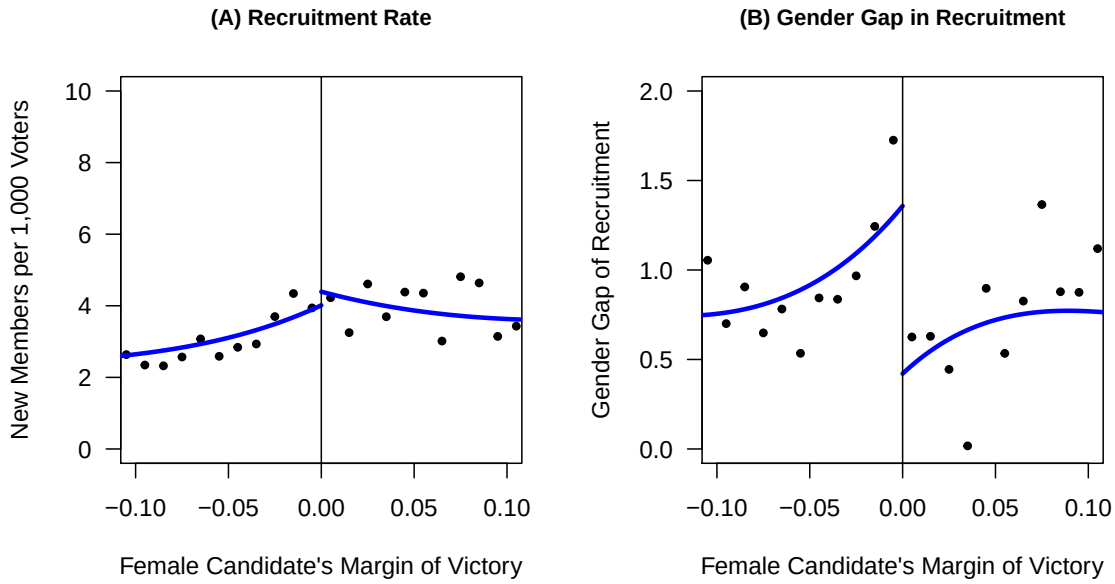
We estimate the effect of having a female mayor in office on these variables using a regression discontinuity design (RDD) in close municipal elections. We restrict our sample to mayoral elections in which one of the two main candidates was female while the other was male. We estimate the model

$$Y_i = \beta_0 + \beta_1 MV_i + \beta_2 MV_i FemaleMayor_i + \delta FemaleMayor_i + \varepsilon_i$$

within a bandwidth of $\pm h$, where h is selected using the data-driven bandwidth selection method developed by Calonico, Cattaneo and Titiunik (2014). Our running variable, MV_m, is the margin of victory of the female mayoral candidate, and positive values indicate that the female candidate won the mayorship. The main quantity of interest is δ, which represents the change in the outcome variable at the 0% margin of victory treatment threshold.

In contrast to previous studies that have used a similar identification strategy, such as Brollo and Troiano (2016), our main outcomes of interest are measured at the party level rather than at the municipal level, and we focus on the outcomes for the female candidate's party in particular. An important consequence of this is that our estimated treatment effects actually

Fig. 6.3 The Effect of Female Mayors on Membership Recruitment

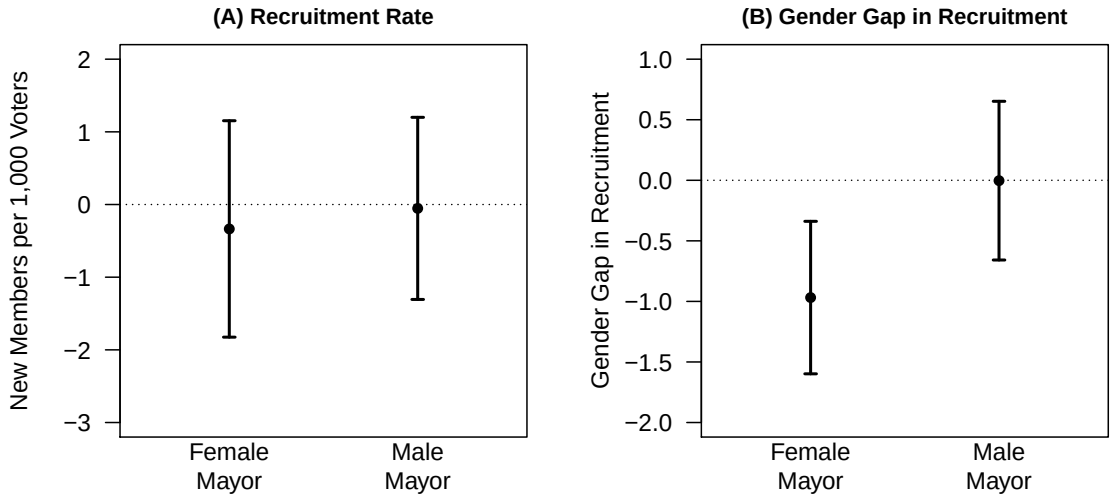


represent the bundled treatments of (1) having a female mayor in office in the municipality, and (2) the female candidate's party being in power rather than in the opposition. Although the RD design provides a useful way to isolate exogenous variation in the gender of the mayor, the partisan affiliation of the mayor necessarily changes at the treatment threshold as well. In order to assess whether our results are capturing the effect of a female mayor in particular rather than the effect of her party's local incumbency status in general, we compare the effect of a female mayor on her party with the effect of a male mayor on his party. These comparisons must be made with caution because the two parties may differ in their baseline propensity to attract new members in that municipality. Nevertheless, they can still provide valuable insight into whether the effect of winning a mayoral election depends on the gender of the new mayor.

6.5 Results

The central prediction of our argument is that although female and male politicians are likely to have similar effects on party membership recruitment in the aggregate, female mayors are more likely that male mayors to invest in the recruitment of women. Figure 6.3 illustrates the

Fig. 6.4 The Effect of Female Mayors and Male Mayors on Membership Recruitment

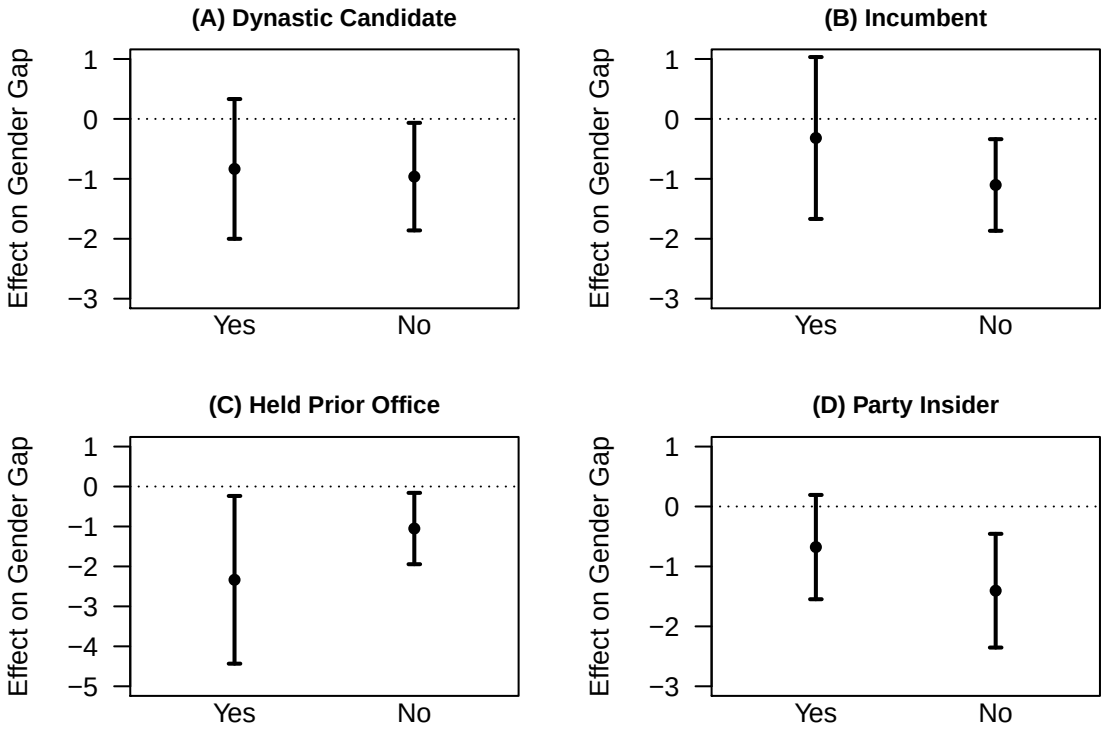


effects of a female mayoral candidate's electoral victory on membership recruitment into her party over the course of the next term. Panel A shows the effect on her party's overall recruitment rate in that municipality, and there is no evidence that having a female mayor in office either boosted or depressed membership recruitment in the aggregate. However, Panel B suggests that a female mayor can significantly affect the gender composition of her party's recruits. The sharp drop in the gender gap at the 0% margin of victory threshold indicates that the party's recruits were more evenly balanced between men and women in the municipalities where the female candidate won the mayoral election. This is consistent with the hypothesis that having a female politician in executive office can lead her party to cultivate a more gender-balanced activist base.

Figure 6.4 compares the effects of female and male mayors on recruitment into their respective parties. Panel A shows that regardless of the gender of the party's mayoral candidate, winning the mayoral election had no significant effect on the party's total membership recruitment during the next term. This implies that although female mayors may have less access to patronage resources compared to male mayors (Brollo and Troiano 2016), this does not lead female mayors to recruit new members at a significantly lower rate.

By contrast, Panel B of Figure 6.4 shows that there is a significant difference in how the two types of mayors affect the gender composition of their parties' recruits. Having a female mayor in office significantly decreased the recruitment bias towards men relative to when her party was in the opposition, while male mayors had no effect on the gender gap of their

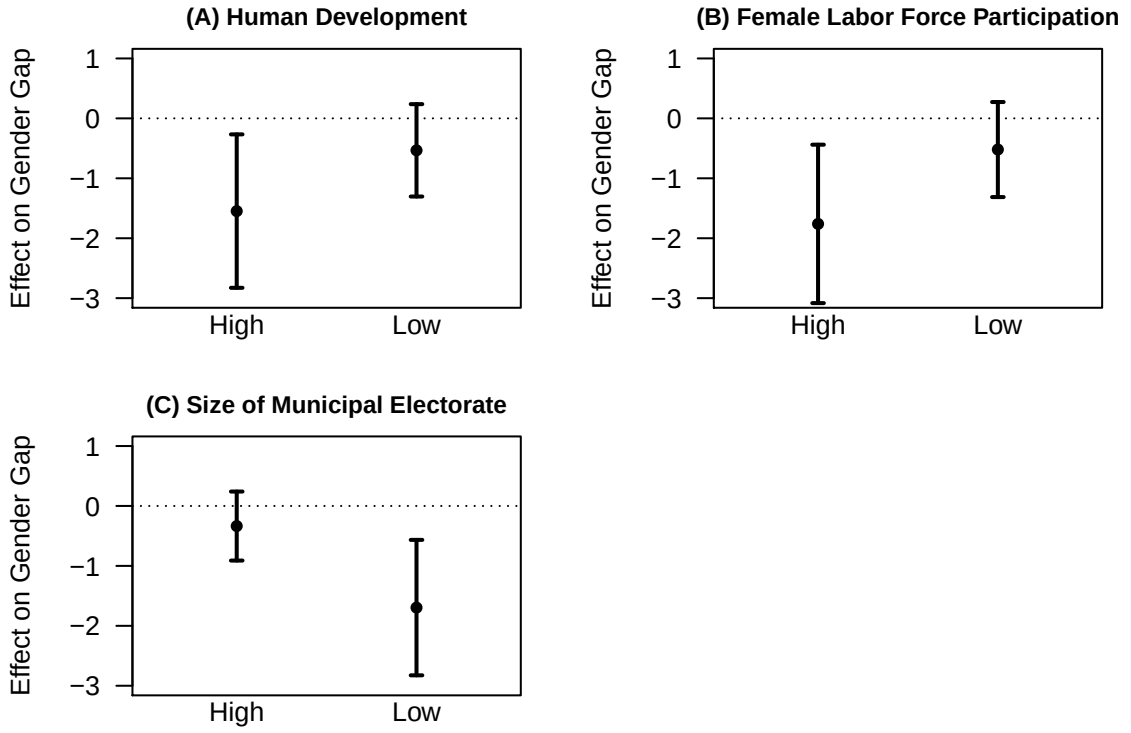
Fig. 6.5 The Effect of Female Mayors on the Gender Gap in Recruitment, by Candidate Background



parties' recruits. This suggests that the gender gap results shown in Figure 6.3 do not simply reflect an incumbency effect in general, but rather the effect of a *female* mayor in particular. It also provides further evidence for this paper's main claim that female politicians are more likely than male politicians to build inclusive party organizations.

It is also reasonable to expect that some types of female politicians would be more likely than others to invest in the recruitment of women. In particular, this strategy would be more viable for female mayors who are less beholden to their party, and who already have some experience in grassroots or local politics. Figure 6.5 shows how the effect of a female mayor on the gender gap in recruitment varies with the personal characteristics of the female mayoral candidate. Although none of the subgroup effects are significantly different from each other at the $\alpha = 0.05$ level, these results provide suggestive evidence that a mayor's effect on the gender gap depends on her personal background as a politician. The reductions were substantively larger for two types of female politicians that are particularly likely to have a personal base of support that is independent from their party: mayors who

Fig. 6.6 The Effect of Female Mayors on the Gender Gap in Recruitment, by Local Context

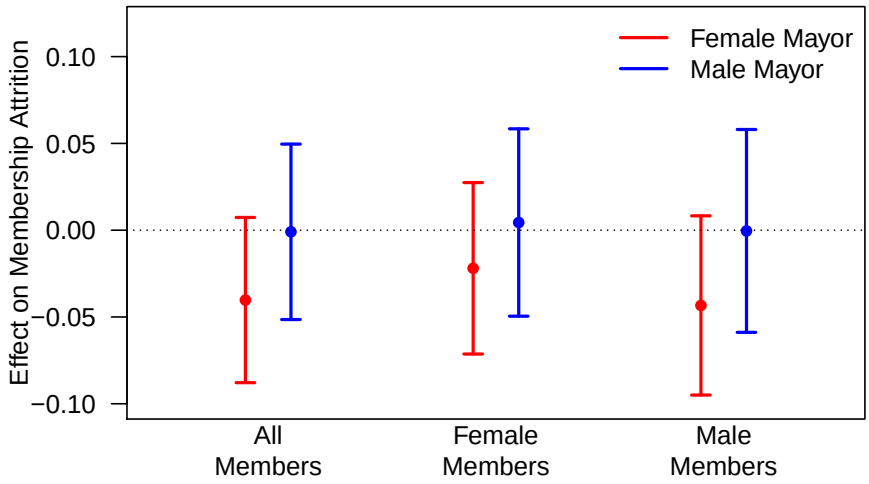


held local office such as a city council seat or vice-mayorship prior to becoming mayor, and "outsider candidates" who joined their party less than two years prior to their election.[3] The reduction in the gender gap was also larger for female mayors who were not in office during the previous term. However, there was no relationship between whether the candidate belonged to a local political dynasty and the reduction in the gender gap.

Similarly, it is plausible that female mayors would be more likely to recruit women into their party in municipalities where the cost of women's recruitment is lower. Figure 6.6 examines how the effect of female mayors on the gender gap also varies with the local context in the municipality. The effect size was considerably larger in municipalities that had a high level of development and a high female labor force participation rate. This may suggest that the prevalence of gender regressive norms in a municipality may hinder a female politician's efforts to build an inclusive party organization. The effect was also larger in municipalities that had a relatively small municipal electorate, where the marginal member is likely to be more consequential.

[3]Outsider status and prior service in government are only weakly correlated ($r = -0.19$).

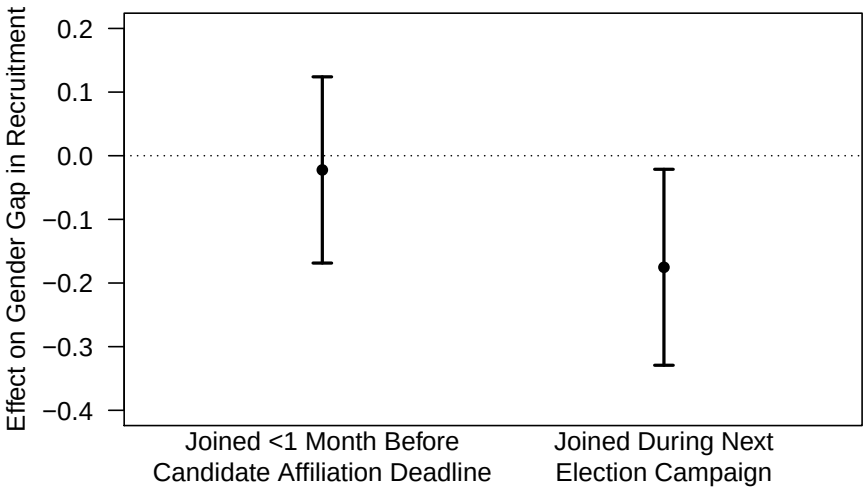
Fig. 6.7 The Effect of Mayors on Membership Attrition



Our theory also predicted that female and male politicians' contrasting party building strategies could affect the quality of the members that they bring into their parties. One way to assess the quality of membership recruitment is by examining whether the new members remain affiliated with the party over the long term. If the member joined the party primarily for clientelistic reasons, then we might expect them to disaffiliate or switch to a different party during a future term, when their original party is no longer in office. By contrast, members who join for ideological or programmatic reasons may be more likely to remain in the party over the long term. Figure 6.7 shows the effect of female and male mayors on the probability that the members who were recruited into their party during their mayoral term chose to disaffiliate or switch to a different party during any subsequent term. Although the differences are not statistically significant, this figure provides suggestive evidence that the members who are recruited by a female mayor are slightly more likely to remain affiliated with their party over the long term compared to members who are recruited by a male member.

Another indication of recruitment quality is whether the new members seek to participate in the life of the local party organization. Although Brazilian parties do not report data on the participation of their activists, we may be able to infer something about a recruit's motives for joining her party based on the date of her affiliation. The rate at which new members join Brazilian parties tends to vary widely over the course of the four-year election cycle, and

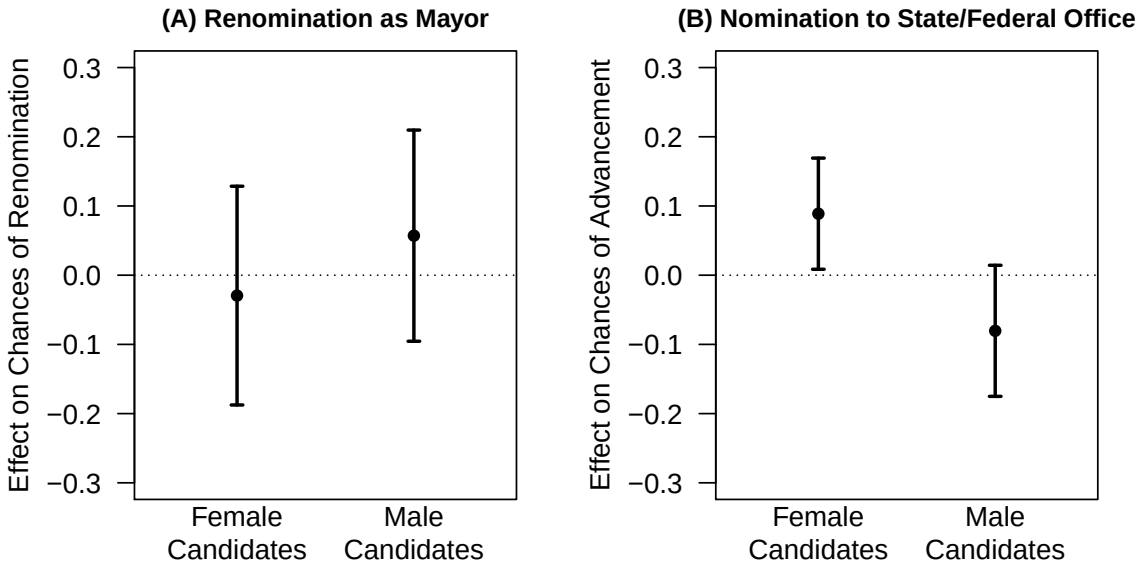
Fig. 6.8 The Effect on the Gender Gap Before the Candidate Affiliation Deadline and During the Campaign



parties experience regular surges of new affiliations during specific periods in the electoral calendar. One period of interest is the month leading up to the deadline by which a municipal candidate must be affiliated with their party in order to run for office in the next election; this is the period when most Brazilian parties recruit new members at the fastest rate, and the vast majority of members who joined during this period likely did so at least in part out of an interest in running as a candidate in the following year's mayoral election. A second period of interest is the municipal election campaign itself, which is a often a period of intense grassroots mobilization and an important point of entry into partisan politics for many Brazilian voters.

Figure 6.8 shows the effects of a female mayor on the gender gap in the recruitment of members during these two periods. The effect on the gender gap during the month prior to the candidate affiliation deadline was statistically insignificant and substantively small, and this may indicate that having a female mayor in office did not make other women in the municipality more interested in running for office. On the other hand, having a female mayor did significantly reduce the gender gap in membership recruitment during the campaign period.

Fig. 6.9 The Effect of the Election Outcome on the Candidate's Career Trajectory



A final implication of our argument concerns the mayors' subsequent career trajectories. According to our theory, holding local office would be more consequential for the career advancement of female politicians compared to male politicians because the former are unlikely to advance far within a male-dominated party organization without the experience, visibility, and network-building capacity that local office provides. By contrast, male politicians may have other pathways to state and federal office, and their future career prospects are therefore less likely to hinge on their success at winning local office.

Figure 6.9 shows the effect of winning the mayoral election on the candidate's chances of renomination in the next mayoral election (conditional upon being eligible for a second term), and the candidate's chances of being nominated to state or federal office in some future term. Mayoral election outcomes had no significant effect on renomination for either gender. However, female candidates who won their mayoral election were 8 percentage points more likely to be nominated for state or federal office in a future term, while winning the election had a negative and insignificant on the career advancement of male candidates. This asymmetry between female and male candidates is consistent with the prediction that mayoral office serves as a vital launching pad for female politicians' political careers, but is less important for male politicians, who may have other means of attaining higher office.

6.6 Conclusion

Female incumbency can promote inclusive party building at the grassroots, despite disparities that women face in accessing public organizational resources that disproportionately favor male incumbents to recruit new members. The political economy of gender inequality incentivizes women to engage in party building and female incumbents optimize for this disparity in access to state resources by recruiting female party members. Women have an upper hand in recruiting women and female recruitment is compelling strategy to signal grassroots recruitment intensity to party elites. Consequently, we find that female incumbents experience higher career progression, and the odds of upward mobility are higher in constituencies which are have lower party membership at baseline. Our findings speak closely with Goyal (2020*a*) who shows that women's greater numeric presence in local party hierarchy increases women's odds of career progression and political survival in higher level elections in India on account of female-led party building which increases women's presence across the party hierarchy. We contribute by investigating and theorizing the underlying logic motivating female-led party building and showing that female incumbency increases inclusive grassroots party building as the main outcome.

These findings have important implications for the study of descriptive representation and party building in Latin America and other low- and middle-income countries that have seen an unprecedented entry of female politicians in local politics. The results point to a new relationship: women build political parties. Scholars of female representation often point to bias and inequalities inside party organization as the key barrier to women's political progress (Barnes and Holman, 2020; Goyal, 2019*b*; Piscopo, 2016; Schwindt-Bayer, 2010). Our results suggest that women can lower political inequalities inside party organization by mobilizing and recruiting female members inside parties and transforming political organizations from the bottoms-up. This is not entirely new. The struggle for women's suffrage shows us that grassroots mobilization increased women's likelihood to secure political rights as parties could benefit from infrastructure to mobilize the latent female vote (Teele, 2018*b*). Our findings suggest that in modern democracies with universal suffrage, marginalized groups can continue to push for greater political equality by mobilizing inside party politics.

A pertinent question is whether the theoretical insights formulated in this article may be applied to other cases outside Brazil. The gender inequalities that underpin our theoretical framework and link descriptive representation to party building are present in most low- and middle-income democracies. Social roles and domestic responsibilities constraint female politicians in Argentina and Mexico (Piscopo, 2019), and in India (Goyal, 2020*a*). Women's reliance on local politics as a pathway to power is observed in countries as diverse as India

(Goyal, 2020*a*), in Africa (Clayton and Zetterberg, 2021), and in Pakistan (Mufti, Shafqat and Siddiqui, 2020). Similarly in most low- and middle-income countries, party elites rely on local politicians to build parties, as evident in the burgeoning research on party activist recruitment in India (Auerbach and Thachil, 2018), Ghana (Brierley and Nathan, 2020) and Argentina (Daby, 2020). Future comparative research can vastly improve our understanding of the conditions that moderate the link between descriptive representation and party building.

Chapter 7

Conclusion

> We have a fairly developed idea of why female political representation varies, but we understand less well the consequences of female representation and by what mechanisms.
>
> Iversen and Rosenbluth (2010, p. 166)

Whether and how descriptive representation can reduce gender inequality in political participation is a fundamental question in political science. This dissertation improves our understanding of this question. It introduces "female-led party building," a unified theory that explains how descriptive representation reduces political gender equality at multiple levels in politics, using India and Brazil as empirical sites to provide evidence.

This theory links descriptive representation with party building and outlines its consequences for democracy and development. Women carve a pathway to power by mobilizing at the grassroots level of party hierarchy and by mounting bottom-up pressure on party elites for greater parity. Female politicians at the lowest levels of the electoral hierarchy enable this grassroots mobilization by lowering family and party organization barriers to recruit women as party activists, channeling women's activism and collective action inside parties, shrinking the gender gap at the party activist level to build inclusive parties. Paradoxically, women's social roles restricts their strategic options and their greater reliance on local politics as a career launchpad incentivizes them to invest more in party building. Women optimize the fewer resources they do have by recruiting female activists; party leaders can observe this easily attributable party building signal.

The recruitment of women at the lower levels of party organizations, what I call *"Representation from Below,"* makes grassroots female politicians competitive in top-level politics

and enables their career progression and political survival. By directing party resources towards women, female politicians shrink the gender-gap in ground campaigns and mobilize women into electoral and non-electoral politics. By providing party elites, the infrastructure to mobilize the latent female vote, female politicians carve female voters as a salient electorate bloc. This quiet revolution inside parties puts women's issues on the party manifestos and creates a partisan space where women can develop gender consciousness. In settings where party activists mediate political and state access for the poor, female politicians gain better quality information about women's preferences from their female activist networks, who can pressurize bureaucrats to deliver on women's issues. The political economy of gender inequality incentivizes female politicians to engage in recruiting female party activists and sets in a virtuous cycle that enhances gender parity across the entire political spectrum.

Surprisingly, one of the most potent challenges to the most persistent gender inequality comes from the grassroots. Ordinary yet enterprising women from the poorest of the world's democracies are the protagonist in this fight to greater equality. Yet, most of the literature on descriptive representation pays little attention to how this female-led grassroots mobilization is transforming democracy and political parties.

I outline three ongoing projects that aim to highlight the relevance of women's grassroots mobilization on political engagement, female mass partisanship and substantive representation. In her luminous essay titled "Women in Power," Mary Beard contends that *"our mental, cultural template for a powerful person remains absolutely male. If we close our eyes and try to conjure up the image of a president...what most of us see isn't a woman."* Yet, not only does our cultural template of power remain male, it also remains elite. What I witnessed initially on the streets of Delhi and Bihar irreversibly revised my cultural template of power. One of the future research project examines to what extent has this grassroots template of political power seeped into citizen minds? Do men and women from different caste and class backgrounds feel inspired or let down to participate in politics? Does contact increase women's feelings of political autonomy? Does it create gender consciousness? While close to 60-90% of citizens in developing countries are routinely exposed to grassroots party activists, there is little research investigating the consequences of this partisan contact on citizen's political engagement. The answer to these questions will shine light on the ways in which citizens make sense of the *"grassroots politics of presence."*

Since majority of female politicians are often not explicitly pursuing these strategies to increase gender equality, there is a tendency in both scholarship and public discussion to blackbox party organization and to attribute gains on gender political equality to "parties" or to a mechanical effect of "quotas". Yet, disaggregating party organization and using

specific vocabulory unearths causal processes that showcase women's agency and strategic behavior that advances these goals. Doing so also improves our understanding of the crucial yet very precise role gender quotas play in increasing political gender equality beyond the level to which they are applied. For instance, gender quotas in India ensure that all major parties, should they wish to win local office, will have to nominate women. Reserved seats guarantee that a woman will win. But that is it. Once women get into parties, they are the drivers of change - a claim reaffirmed by the evidence from the Brazilian case, where such stringent gender quota laws are not observed. Furthermore, interviews after interviews demonstrate the rich ways in which female politicians have actively invested in recruiting female party activists, building women's intra-party networks, introducing women into key roles in women's wings and to some extent introducing women into *mainstream* party organization.

An ongoing qualitative and historical political economy project aims to shine light on women's active contribution by investigating the *remaking* of women's party wings in India. Prior to India's decentralization and gender quota reforms in 1990s, while most parties had a women's party wing, these were largely defunct organizations. Interviews with party leaders and review of existing party documents, suggest that female political entry in local politics was instrumental to the re-making and re-building of these organizations as the vibrant spaces they have become for women's grassroots activism inside parties. Female candidates could use the prestige and access that came with holing a valuable party nomination to rebuild these organizations to safeguard their posts. Through these organizations, women have mobilized female citizens, ushering in a new era of female mass partisanship. This mobilization has enabled women to put women's issues on party manifestos and to use women's collective action to pressurize bureaucrats to deliver substantive representation. I explore the latter mechanisms in an ongoing experimental project.

This dissertations explains some key questions, but opens many others for future inquiry. I speculate about two specific puzzles and outline broader questions. First concerns the role of intersectionality in the argument. Are doubly marginalized female leaders like Dalit or Muslim women in India or Afro-descendant women in Brazil more or equally likely to be effective in female activist recruitment, relative to higher status or dominant caste or white women? Doubly marginalized leaders are very likely to have higher capacity such as networks, information, and credibility to recruit from their own caste groups. However, segregation and the wide heterogeneity in the electoral geography of these groups may make this strategy less compelling for electoral or political survival, at least universally. They may also face additional barriers in recruiting prejudiced out-group members, relative to women from higher status groups. Caste wise party membership data will certainly be costlier

to collect, but the findings of this dissertation reassure us that using the lens of caste and intersectionality to investigate party membership and recruitment will be a promising area of research. More broadly, research that investigates descriptive representation in intermediary politics will vastly improve our understanding of politics in developing countries, where brokers, chiefs, party activists, slum leaders, resident association leaders actors mediate political and state access (Auerbach, 2020; Auerbach and Thachil, 2018; Baldwin, 2016; Brierley and Nathan, 2020; Liaqat, 2020), and marginalized citizens rely on collective threats to demand justice (Roychowdhury, 2020).

Second concerns the issue of male capture and its consequences for female leadership. In India, men's greater bargaining power over women has led to men capturing women's electoral position. Colloquially referred to as "proxy politics," which is a problematic term because it hides a crucial side of the story: party leaders and male politicians are complicit in creating a demand for "proxies", and not only that men are actively choosing to field their wives as rubber stamps. Based on fieldwork and elite survey data from Delhi and Bihar, I find that depending on women's intra-household bargaining power, there exist three female leadership scenarios: complete capture, co-ordination (gendered division of leadership role), and independent women. In settings where women's positions are completely captured by men, it is unlikely that we will see female-led party building. While this is certainly a cause for concern, this also means we are far from achieving the full potential of female leadership for democracy and development. Future research can illuminate the extent to which this capture exists and investigate its causes and consequences for the quality of female political leadership.

Women's strategic behavior and agency inside political parties invites a broader discussion about how institutional practices persist and change, about agency and power (Hall and Taylor, 1996; Thelen, 1999). As political outsiders who lose by replicating the status quo, women have clear incentives to be change-makers. On the one hand, adopting the lens of rational choice institutionalism, one can female leaders behave as political actors who are entirely instrumental, highly strategic choosing their actions as to maximize their electoral and political success. In furthering their goals, women change institutions. On the other hand, adopting the lens of sociological institutionalism, one can see female leaders behave as actors who have been socialized into particular institutional roles inside parties and have internalized the norms associated with these roles. The relationship between the women and parties, then, is built on a kind of "practical reasoning" whereby female leaders rework the available institutional templates to devise a course of action. In furthering their goals, women replicate institutions. The findings of this dissertation point to an interchange: women's behavior is influenced by strategic calculation and is circumscribed by the social roles that women can

adopt. This duality opens many questions about change, *How do women and marginalized groups pursue change? What type of change agents are women?* Borrowing the rich classification of change-agents from Mahoney and Thelen (2009) - *"Are women subversives, insurrectionaries, symbionts, or opportunists?"* Furthermore, grassroots mobilization as a strategy suggests gradual and incremental endogenous change to institutions, but can also culminate in moments of rupture (Gerschewski, 2021). Future research can vastly improve our understanding of institutional change and change-agents by using descriptive representation as a lens.

Finally, this dissertation opens other broader puzzles - how does the relationship between female politicians and party building transform in societies with relatively gender equal norms such as, Sweden or Norway, or societies with highly unequal gender norms, such as Afghanistan or Saudi Arabia? How does it transform in parties where female leaders present both at the grassroots level and at the top, such as, in the All India Trinamool Congress headed by Mamta Banarjee in West Bengal, India? What role does the presence or absence of women in the origins of the party organization play in shaping party's organizational evolution? Parties that emerge from social movements are more likely to have women and marginalized groups in their rank-and-file, does that shape the extent to which these groups are represented in leadership roles?

"Representation from below" challenges entrenched political inequalities, upending dominant systems of patronage and power that work to keep women out of politics by mobilizing women. Far from just changing perceptions, women have taken a step forward by fundamentally transforming parties.

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Appendix A

Natural experiment of gender quotas in Delhi

A.1 Federal system in Delhi

India is a federal parliamentary democracy in which elections are held every five years for both the central government in New Delhi, and for the 29 states and 2 union territories that constitute the Indian Union. Delhi is a union territory which has both central and state-level governments. For the purpose of national level representation, Delhi is divided into 7 electoral units called the *parliamentary constituencies* (PCs) or *lok sabha shetras*, each of which selects a *Member of Parliament* (MP) to the National parliament. Unlike other Indian states, New Delhi does not have full statehood, which means some functions such as law and order and the police are under the control of the Central government.

For the purpose of state-level governance, Delhi has a state assembly, which is headed by a Chief Minister and political representatives called the *Members of Legislative Assembly* (MLAs) that are elected from 70 electoral units called *Assembly constituencies*. The chief minister is usually the leader of the party that wins a majority of seats in the state legislature (similar to the prime minister at the national level), and is supported by a deputy Chief Minister and a Council of Ministers. The state-level government has several responsibilities for service provision, such as overseeing state finance, secondary and higher education, hospitals, water supply, land, housing, tourism, roads and public transport.

All electoral units in India across levels are single member districts and all elections use the first past the post system. ACs fit neatly into PCs, and each PC in Delhi is comprised

of 10 ACs. Elections are held every 5 years and state calendars differ from the National elections calendar. The last state-level elections in Delhi were in 2020, where the incumbent ruling party, that emerged from the anti-corruption movement, the *Aam Aadmi Party* (AAP, translated as the Common Man's Party) won again with an overwhelming majority, winning 62 out of 70 seats. The rest of the 8 seats went to the *Bhartiya Janta Party* (BJP), while the Indian National Congress (INC) failed to secure any seat yet again.

A.2 Reservation process and policy

Table A.1 Reservation process and policy

Municipal elections	2007	2012	2017
Total wards	272	272	272
%reservation	33%	50%	50%
Women wards	92	138	138
SC wards	46	46	46
Changes that affect the reservation process	Border re-districting.	MCD trifurcated into North, South and East corporation. No re-districting.	Border re-districting.
Census data used	Census 2001	Census 2001	Census 2011
Reservation process		**Reservation policy**	
1. Determine top SC wards (highest pop.) to be reserved	Reserve top SC wards but skip ward if the parent AC already has 2 wards reserved for SCs.	Select top ACs: 20- North, 16-South, 10-East. Reserve the top SC ward within each AC.	Reserve top 46 SC wards (20-North, 16-South, 10-East) in each corporation.
2. Arrange SC wards in ascending serial order	Reserve every 3rd ward and the last ward for women.	Reserve 1st, 3rd, 5th.. ward for women in each corporation.	Reserve 1st, 3rd, 5th.. ward for women in each corporation.
3. Arrange non-SC wards in ascending serial order	Reserve every 3rd ward and the last ward for women.	Reserve 1st, 3rd, 5th.. ward for women in each corporation.	Reserve 1st, 3rd, 5th.. ward for women in each corporation.

Qualitative evidence

The process of reservation that I describe in this table is derived from reservation orders that are publicly available online on the website of the State Election Commission. I re-verified the details of the actual process through interviews with the bureaucrats at the Delhi State Election Commission. Furthermore, qualitative evidence for the probity of the randomisation

process comes from the fact that the each of these elections saw the reservation of the seats of several male and female senior councillors, which made headlines each electoral cycle. See *"Reservation in MCD makes councillors uneasy"*, Deccan Herald Jan 28 2012 and *"Delhi MCD polls: Many senior municipal councillors lose seats post delimitation of wards, rejig of seats reserved for SC, women"*, The Hindustan Times Mar 06 2017.

Sitting councillors and party-activists who lost their wards to reservation in 2012 took the process to Delhi High court and this process was verified in court to be free and fair from any tampering, irregularities or political bias. See *"HC upholds reservation of municipal seats by EC"*, The Hindustan Times Mar 01 2012.

A.3 Balance tests

Table A.2 Balance test

	Dependent variable: Reserved for women in 2012								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
BJP wins (L)	-0.080								
	(0.062)								
INC wins (L)		0.079							
		(0.070)							
Margin of victory (L)			0.001						
			(0.003)						
N candidates (L)				-0.008					
				(0.007)					
% female candidates (L)					0.018				
					(0.068)				
% female voters (L)						-0.002			
						(0.011)			
% female turnout (L)							0.002		
							(0.004)		
% winner vote-share (L)								0.002	
								(0.003)	
Reserved 2007 (L)									0.022
									(0.064)
N	272	272	272	272	272	272	255	272	272
Ajd. R-sqr	0.002	0.001	-0.004	0.001	-0.003	-0.004	-0.003	-0.002	-0.003

Notes: The table displays robust OLS estimates of reservation status in 2012 (1 if reserved for women, 0 otherwise) regressed on lagged independent variables measured in 2007. *** p<0.01, ** p<0.05, * <0.10

A.4 Sampling wards and survey sites

I explain the sampling procedure for selecting municipal constituencies / wards, for selecting survey sites within them and for sampling respondents within these sites. Budget limitations and the constraints imposed by the field experimental project limited the number of municipal wards to 17. Municipal wards form the primary site where the survey was conducted. To arrive at the list of wards to include in the survey, I first purposely selected three parliamentary constituencies in Delhi. These are North West, North East and South Delhi. These are amongst the largest constituencies (by population) and have been selected to get a broad geographic and neighborhood representation of Delhi. In this selected sample of 3 PCs there are 30 AC's from which I excluded 9 relatively wealthy ACs. This was done to avoid having an over-representation of wealthy population and neighborhood, as only 1-3% citizens of Delhi live in such neighborhoods.

Municipal wards form the primary site where the survey was conducted. Municipal wards were selected via a three step process, which is as follows: (1) three national level constituencies of North West, North East and South Delhi were purposively selected to maximize geographic variation. (2) Each of these 3 three national constituencies contains, 30 state level constituencies. To avoid oversampling wealthy and high-income areas, the sample was restricted to 21 state-level constituencies. (3) municipal wards were randomly selected such that each ward is from a different state-level constituency, blocked on reservation status, such that 9 of the municipal constituency that were selected were reserved for women and the rest 8 wards were non-reserved wards as per 2017 reservation status. Within each ward, three neighborhoods (survey sites), which are a cluster of serially ordered polling stations, were randomly sampled from the most recent voter list of the 2017 municipal elections. I describe the details below.

To arrive at the list of wards to include in the survey, I first purposely selected three parliamentary constituencies in Delhi. These are North West, North East and South Delhi. These are amongst the largest constituencies (by population) and have been selected to get a broad geographic and neighborhood representation of Delhi. In this selected sample of 3 PCs there are 30 AC's from which I excluded 9 relatively wealthy ACs. This was done to avoid having an over-representation of wealthy population and neighborhood, as only 1-3% citizens of Delhi live in such neighborhoods.

The only public, consistent and good quality indicator of wealth in Delhi comes from the Municipal tax category classification of neighborhoods called localities within Municipal wards. In this classification, each locality is classified, as A, B, C, D, E, F, G and H. Using

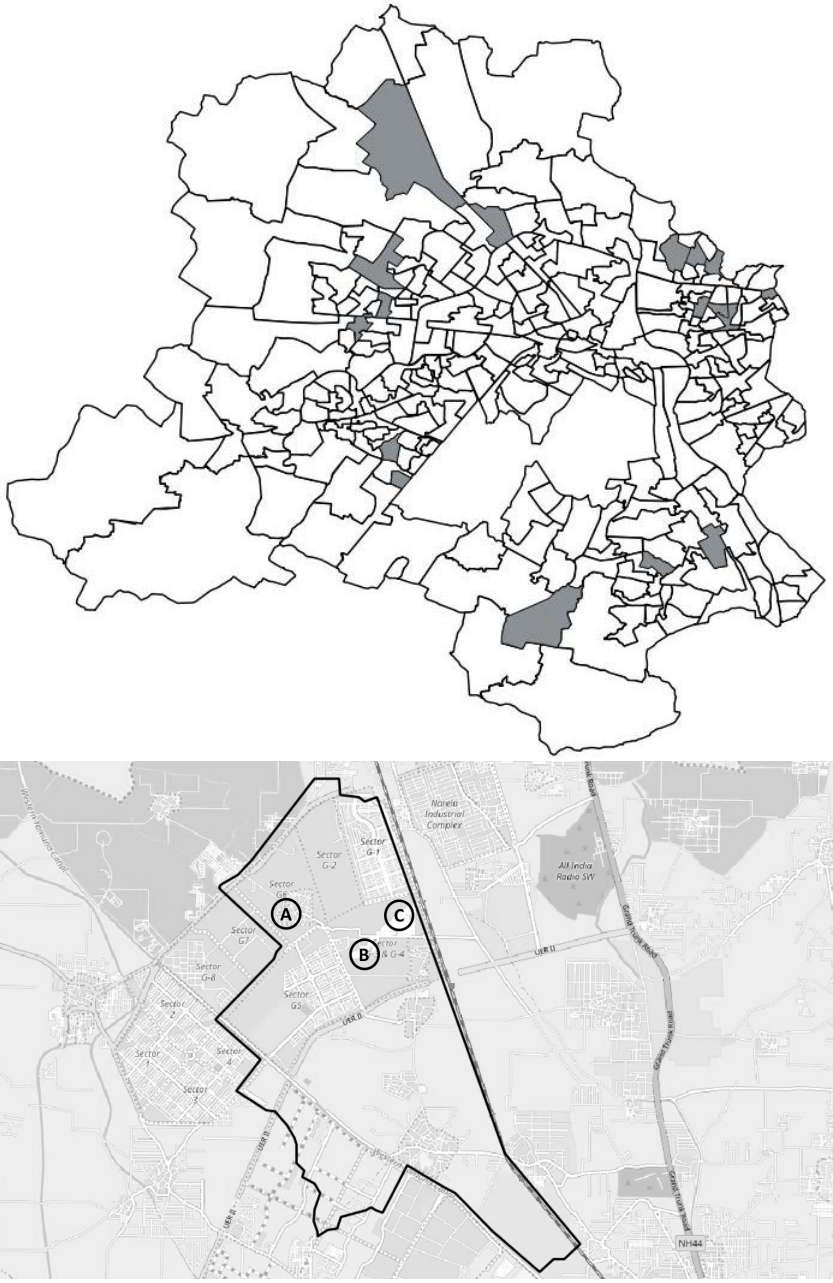
this classification, I excluded ACs that contain less than 80% of E,F,G and H localities. Majority of ACs in Delhi are comprised of at least 80% of E,F,G,H localities and wealthy population is segregated in select ACs. Given that finer data on income or wealth does not exist, excluding these AC's helps in avoiding oversampling wealthy populations or neighborhoods in our survey. Qualitatively, this ensures I restrict the survey to poor to middle income neighborhoods, which contain over 98% of Delhi's electorate. My survey is therefore representative for these poor-middle income populations that resides in such ACs, which is the predominant case in the context of Delhi as well as other Indian cities.

Each AC in Delhi is further subdivided into an average of 4.5 municipal wards. My sample of 21 ACs yields me with 95 municipal wards. Out of these 95 wards, 45 wards are general and 50 wards are reserved for women. From this sample of AC-Wards, I randomly select 17 AC-ward combination such that I first select 9 wards reserved for women and 8 for general. Selecting only one ward from each AC ensures considerable variation, and that the survey is representative also at the AC level. The next step was to select three survey sites or neighborhoods per ward to conduct the interview. Because neighborhood level identifiers are unavailable, I made use of the voter list and polling station numbers to divide each municipal ward into enumeration blocks. Within each ward, three enumeration blocks or neighborhoods (survey sites), which are a cluster of serially ordered polling stations, were randomly sampled from the most recent voter list of the 2017 municipal elections.

To ensure that the enumeration blocks or neighborhoods selected were geographically dispersed, each ward was divided into blocks of 1500 households, and one block of 1500 HHs was randomly selected such that each household within the ward had an equal chance of being selected into the survey. That is, probability proportional to the size of the block as measured by the number of households in the block. On average, each ward was divided into 11 blocks and had approx. 18050 individual households as identified by unique house numbers. The next two blocks for two other teams were selected such that there was a gap of 3000 HHs between blocks to ensure geographical dispersion. For example, if a ward had ten blocks, and the first block was randomly selected. Then the fourth and seventh blocks were selected. Figure A.1 shows the three neighborhoods visited in one of the sampled wards, called *Holambi Khurd*.

Each day one ward was visited by the survey team in three sub-teams to conduct interviews in the three respective neighborhoods within the ward. The respective field supervisor of the sub-team assigned each enumerator one polling station and the entire list of polling stations was attempted serial wise by the team until the end of the working day. Polling

Fig. A.1 Sampling wards and localities



stations that were far off from the dominant cluster were de-prioritized or not attempted for practical concerns.

Enumerators were instructed to knock at every 3rd household on the street in the polling stations allotted by their field supervisors. Every person who agreed to be interviewed was eligible to be interviewed, if they were at least 18 years of age, had a mobile phone, were in Delhi over next 3 weeks and had lived in Delhi for at least 3 years. The team of 15

enumerators attempted a total of 4910 door knocks and interviewed 1664 respondents which gives a response rate of 34%. 18% door knocks were un-answered, and of the remaining 82% knocks that were answered - 60% were answered by females and 40% by male and 8.5% were answered by children. 48% of adults that answered the door agreed to be interviewed. The most common reason for refusal was that the respondent was busy (71%) followed by not interested in answering surveys (21%). In the second (post-treatment) wave, 1304 respondents, 617 (72%) men and 687 (85%) women, that is, 78% were successfully re-interviewed post-treatment.

Ahead of the actual survey, I conducted an intensive training for the team about the importance of random sampling, an in-depth deep dive into how to pose questions and code responses in ways to limit bias and put in checks and balances to ensure enumerator's physical safety and emotional well-being. I was present at each of the survey sites once each day during the entire first week of the survey and followed this up with a daily audio audit of randomized instances in the survey interview for the entire duration of the survey. Based on this audit I provided daily feedback via phone and WhatsApp to the survey team.

A.5 History of reservations in Delhi

Natural experiments in 2007 and 2012

Figure A.2 and A.3 visually plots the reservation status of all of Delhi's municipal constituencies in 2007 and 2012 respectively, where gray represents constituencies reserved for women and white represents non-reserved constituencies.

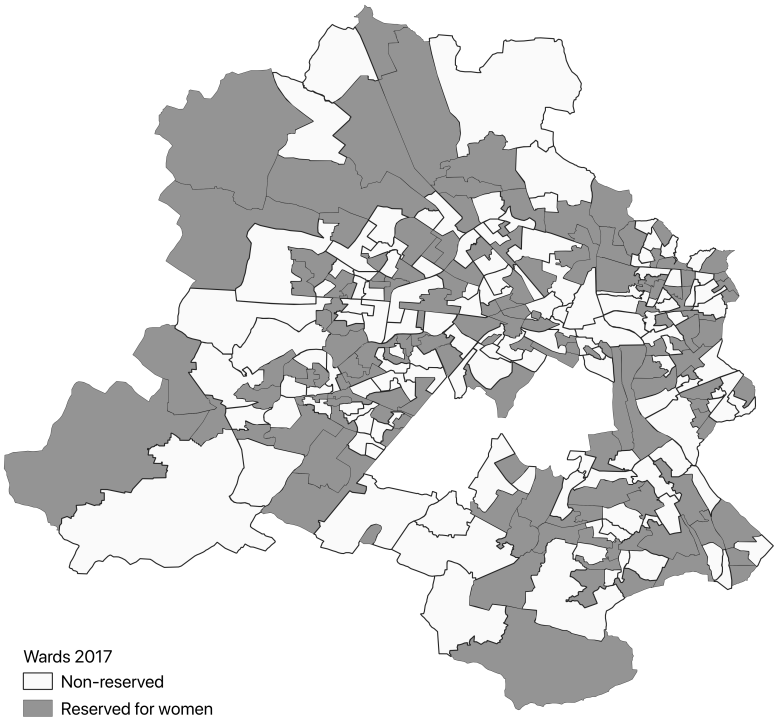
Crucially, because this natural experiment is repeated each electoral year, it is possible to study short-term, medium-term as well as long-term effects of gender reservations. Because there are three electoral years and a constituency is either reserved or not reserved for females (two levels), this yields a 2^3 factorial design with the long-term treatment status having 8 levels as seen in Table A.3. Constituencies which were never treated, that is, never reserved for women in 2007, 2012 and 2017 comprise the control group and I refer to them as "never-reserved". On the other hand, constituencies that received the highest dosage of treatment in all three natural experiments, that is, constituencies that were always reserved in 2007, 2012 and 2017 comprise the "always-reserved" treatment arm. To test whether the effects of female reservation persist after the policy is withdrawn, I construct a "persistence" treatment arm, which comprises of constituencies that were either treated in 2007, or 2012 or both 2007 and 2012, but were never-reserved in 2017. To test whether the effects of female reservation

Fig. A.2 Gender reservation in 2007

Fig. A.3 Gender reservation in 2012

can accrue in a short period of time within a system that has always had female reservation, I

Fig. A.4 Gender reservation in 2017



construct a "short-term" treatment arm, which comprises of constituencies that were treated for the first time in 2017.

Table A.4 Factorial experimental design with 8 levels

		Reserved 2007	Reserved 2012	Reserved 2017	N
Never-reserved		0	0	0	88 (16.73%)
Ever-reserved N =438 (83.27%)	Persist N = 171 (32.51%)	1	0	0	47 (8.94%)
		0	1	0	81 (15.40%)
		1	1	0	43 (8.17%)
	Short-term	0	0	1	93 (17.68%)
		1	0	1	39 (7.41%)
		0	1	1	88 (16.73%)
	Always-reserved	1	1	1	47 (8.94%)
Total					526

Ordinarily, the long-term treatment status would vary at the municipal constituency level. However, in 2017 municipal constituencies were re-districted. While the number of constituencies remains unchanged across the pre and post-redistricting period, merging

polling stations shows that the 2007/ 2012 constituencies split into an average of 2 sub-units in 2017 and to a total of 526 distinct sub-units. Due to this border redistricting, the long-term treatment status no longer varies at the constituency level, but instead at this municipal sub-constituency level, which is the unit at which treatment is "administered" going forth. Table A.3 shows the treatment levels and the distribution of these sub-constituency units across the 8 levels. Note that the probability of being always reserved is the probability of being reserved in 2007 $\times$ probability of being reserved in 2012 $\times$ probability of being reserved in 2017 which is $0.33 \times 0.5 \times 0.5 = 8.25\%$. This is close to the actual % of observations that are always reserved which is 8.94%, and this is also the case for other levels of treatment. In India, unlike in the U.S, border redistricting is largely fair and free from political bias, these estimates provide further re-assurance that border-redistricting has not systematically interfered with the natural experiment of gender quotas.

Examining the long-run effects of female-led party building

In January 2019, after the survey was finished, polling station data for the municipal election 2012 was made available by the State Election Commission in pdfs and this was digitized. Because polling stations were largely unchanged, which was evident by the name and service area of the polling station, the 2012 polling station data was merged with 2017 polling station data. This made it possible to identify the 2007 and 2012 ward numbers and treatment status for each 2017 polling station in the survey sample and arrive at the sub-unit for the long-term treatment status. The unavailability of this data at the time of surveying made it impossible to block on long-term treatment status and ensure an equal number of sub-unit observations across long-term treatment levels. However, it does makes the survey data collection double blind and therefore less prone to enumerator or researcher bias.

The back-tracking yields 27 municipal constituencies as per 2007 and 2012 boundaries that underlie the 17 municipal constituencies as per 2017 boundaries, and therefore yields N $= 27$ municipal sub-constituencies of analysis in which the 1664 respondents are clustered. The number of observations in the control arm "never-reserved" is 248 respondents clustered in 4 sub-units, ever-reserved comparative numbers are 1416 respondents in 23 sub-units. Persistence treatment arm has 538 respondents in 8 sub-units. Contemporary treatment arm has 276 respondents in 5 sub-units. Always-reserved has 129 respondents in 2 sub-units.

The table A.7 provides balance tests using this survey data. Because of small number of clusters (N $= 27$), I report randomization inference tests for all the estimates in the paper, which is conducted as discussed in the subsection below. Most of the point estimates are

small, and none but one of the 20 variables is significant at 90% level confirming that the survey data is largely balanced on key observables.

The randomization inference program operates as follows: for each electoral year and within the strata (block) employed in the policy for that year, I reshuffle the municipal constituencies and assign all the observations clustered within each of the 2nd (3rd in 2007) municipal constituency to treatment. In each electoral year, all constituencies are stratified into scheduled caste (SC) and non-SC reserved wards and treatment is assigned to every 2nd or 3rd constituency on a serially ordered list within each of the strata. In 2012 and 2017 (and not 2007), the trifurcation of the MCD leads to an additional strata: North, South and East, and each of these three units further have an SC and non-SC strata. The long-term treatment status is then arrived at by combining these placebo assignments for each electoral year as in Table A.3. I then proceed to re-estimate β using this placebo assignment procedure multiple (3,000) times. Under the null hypothesis of zero treatment effects, the proportion of re-estimated βs that are larger (in absolute value) than the actual β provides a p-value for such null hypothesis.

Table A.5 Balance tests using survey data

	(1) Ever-reserved			(2) Persist			(3) Short-term			(4) Always-reserved		
	β	SE	p	β	SE	p	β	SE	p	β	SE	p
Panel A												
Demographics												
Age	0.335	0.968	0.787	-0.939	1.385	0.470	2.063	1.256	0.252	-1.382	1.472	0.518
Gender	0.042	0.034	0.329	0.057	0.047	0.216	-0.013	0.044	0.849	0.041	0.054	0.585
Married	0.034	0.032	0.321	-0.073	0.046	0.262	0.071	0.040	0.146	0.005	0.051	0.920
Delhi born	0.019	0.035	0.734	-0.001	0.048	0.991	-0.030	0.044	0.708	0.062	0.054	0.509
Caste and religion												
SC/ST	-0.017	0.035	0.853	0.040	0.048	0.704	-0.073	0.044	0.563	-0.006	0.055	0.971
OBC	-0.006	0.033	0.920	-0.011	0.045	0.865	0.054	0.043	0.505	0.061	0.053	0.567
Muslim	-0.098	0.027	0.082*	-0.109	0.029	0.127	-0.068	0.033	0.446	-0.125	0.035	0.248
Other minorities	0.011	0.009	0.441	0.003	0.013	0.832	0.002	0.011	0.936	-0.001	0.014	0.980
Education and employment												
Illiterate	0.019	0.021	0.552	-0.017	0.028	0.657	0.044	0.029	0.328	0.066	0.039	0.268
Some education	-0.019	0.021	0.552	0.017	0.028	0.657	-0.044	0.029	0.328	-0.066	0.039	0.268
Higher education	-0.079	0.034	0.153	-0.013	0.047	0.817	-0.095	0.043	0.251	-0.091	0.053	0.365
Housewife	0.052	0.032	0.199	0.021	0.044	0.636	0.026	0.041	0.670	-0.005	0.050	0.941
Employed	0.057	0.034	0.189	0.002	0.046	0.970	0.080	0.043	0.259	0.108	0.054	0.215
Income and lifestyle												
House owner	0.010	0.028	0.786	0.023	0.038	0.591	0.025	0.035	0.624	0.051	0.042	0.468
Income	-0.040	0.154	0.892	-0.268	0.201	0.421	0.242	0.217	0.579	-0.233	0.234	0.675
Household items	-0.132	0.065	0.326	-0.130	0.087	0.374	-0.145	0.092	0.465	-0.180	0.114	0.443
Uses Bus	0.013	0.023	0.592	-0.023	0.033	0.377	0.024	0.028	0.517	0.037	0.033	0.451
Panel B												
Population data												
ln pop 2001	-0.077	0.052	0.332	-0.040	0.077	0.690	-0.075	0.070	0.364	-0.037	0.059	0.698
ln sc pop 2001	-0.074	0.366	0.847	0.199	0.925	0.900	-0.149	0.450	0.721	-0.136	0.522	0.801
sc % pop 2001	0.043	6.270	0.990	9.951	20.063	0.594	-3.097	7.234	0.664	-3.478	8.796	0.894

Notes: The data in panel A contains $N = 1664$ respondents clustered in 27 sub-constituency units. The data in panel B is taken from the state election commission website which in turns took this data from Indian Census 2001 and contains $N = 27$. *** p<0.01, ** p<0.05, * <0.10

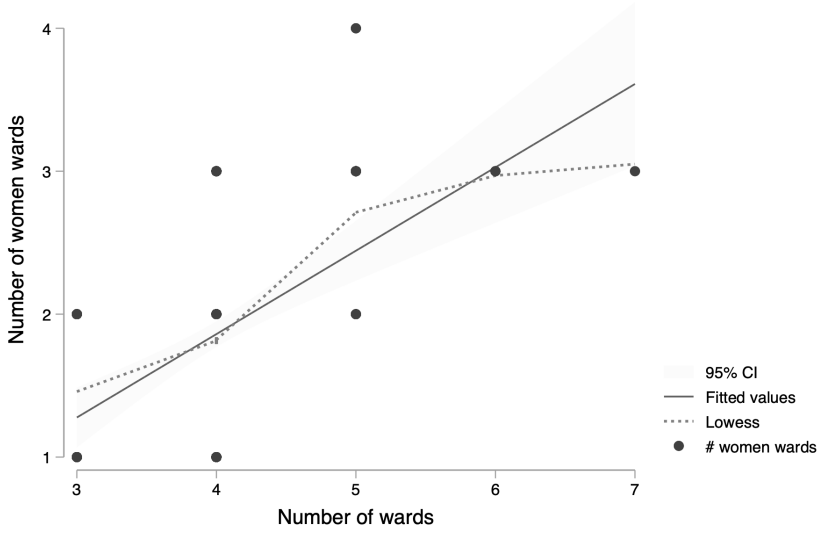
A.6 Natural experiment of gender quotas within higher-level state constituencies

Number of wards within state constituencies

Table A.6 Distribution of state constituencies by number of (reserved) wards

State election year	2008	2013 & 2015	2020
Municipal election year	2007	2012	2017
Number of wards			
3	1	1	21
4	66	66	31
5	1	1	12
6			3
7			1
Number of reserved wards			
1	45	22	15
2	22	23	36
3	1	22	17
4		1	
Main sample			
Number of reserved wards			
1	44	22	3
2	22	22	23
3		22	5
Total	66	66	31

Fig. A.5 Probability of treatment is proportional to the number of wards within AC



Balance tests at the state constituency level

Table A.7 Balance tests using publicly released survey data

State-level outcomes regressed on the number of reserved municipal seats

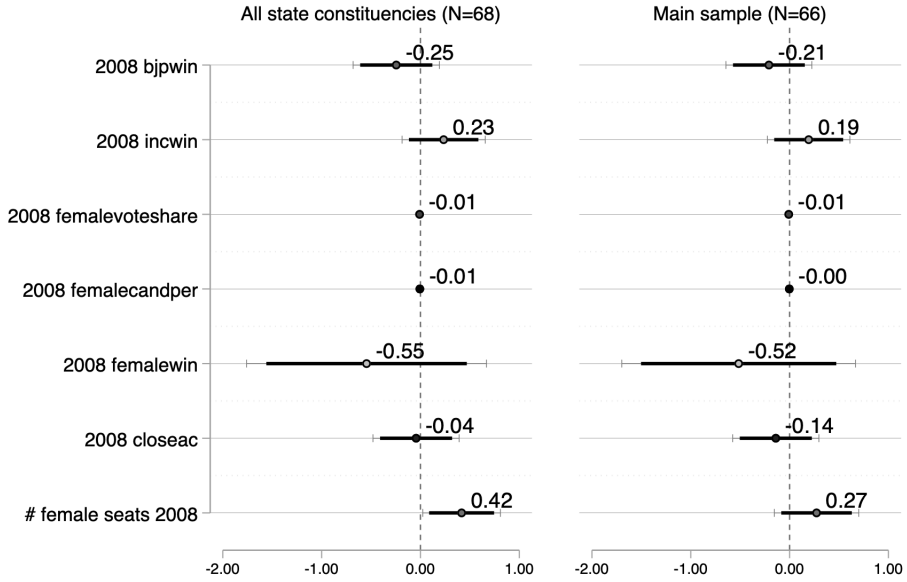
	Mean	β	SE	RI p-values
Panel A				
Demographics				
Gender	0.474	0.001	0.004	0.767
Household size	3.964	0.067	0.045	0.126
Delhi born	0.281	-0.006	0.017	0.735
Age	39.493	0.252	0.235	0.302
New migrants	0.1965	-0.003	0.010	0.769
BIMAROU migrant	0.495	0.003	0.015	0.872
Caste and Religion				
Muslim	0.114	0.020	0.017	0.292
OBC	0.381	0.008	0.012	0.449
SC	0.176	-0.010	0.012	0.396
ST	0.004	0.001	0.001	0.727
Education and income				
Below high school	.480	-0.011	0.016	0.503
Income quartile 1	.209	0.009	0.019	0.625
Income quartile 2	.209	0.013	0.011	0.215
Income quartile 3	.275	0.008	0.016	0.624
Income quartile 4	0.123	-0.003	0.007	0.598
Income quartile 5	0.185	-0.027	0.017	0.094*
Employment				
Unemployed seeking employment	0.008	0.000	0.001	0.750
Housewife	0.331	-0.001	0.007	0.862
Student	0.106	-0.002	0.006	0.785

Notes: The number of observations is 66. The table displays robust OLS estimates of variables in the first column regressed on the number of female municipal seats reserved within the state constituency. Robust standard errors are reported. P-values are calculated using randomization inference. The source of this data is CICERO wave III (see below) and this data was summarized from the individual level to the state constituency level.*** p<0.01, ** p<0.05, * <0.10

The source for this data is the CICERO wave III survey conducted by the independent survey agency Cicero Associates on behalf of the Aam Aadmi Party in September 2013 in advance of the Delhi elections in December 2013. The survey was overseen by an eminent Indian political scientist prof. Yogendera Yadav and was designed to be representative at the assembly constituency level with N= 31,000 citizens interviewed in all 70 of Delhi's state-level constituencies. There is no citizen survey data that is publicly available at the state constituency level and to the best of my knowledge this is the largest citizen survey ever conducted in Delhi. While this data was collected on behalf of a political party, I see no reason to suspect any partisan influence on socio-economic and demographic variables. The data was available publicly on the website of the AAP until July 2016 but lacked state constituency identifiers. I procured a copy of the data with state constituency identifiers directly from the Head of Cicero Associates in December 2017.

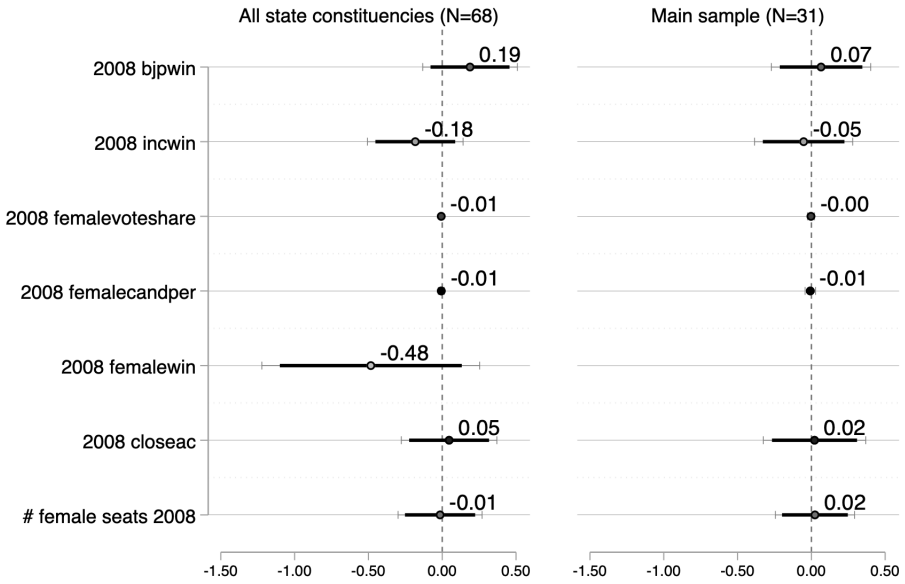
Balance tests using lagged electoral variables and treatment status

Fig. A.6 # wards in 2013(2015) regressed on lagged electoral variables and treatment status measured in 2008



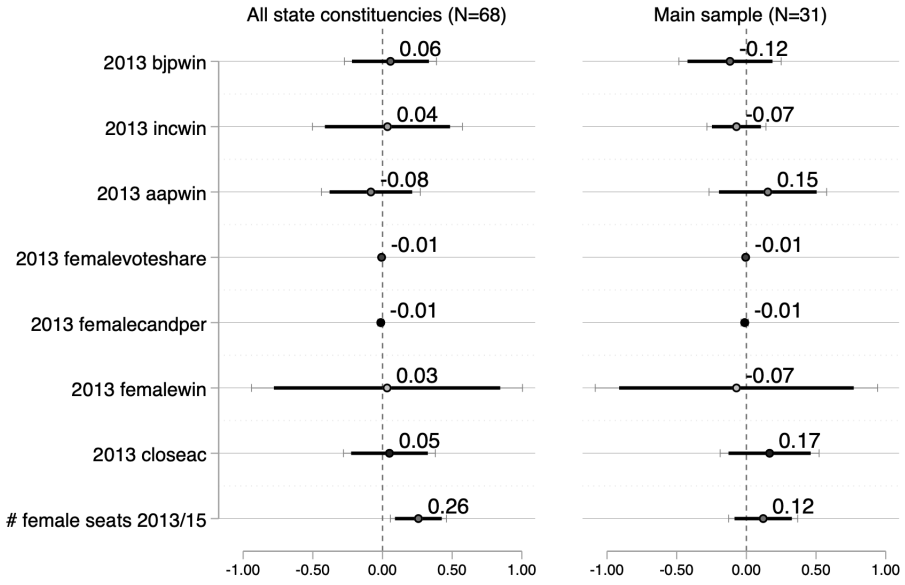
Notes: This figure visually plots point estimates from several robust OLS regressions of # wards in 2013 (2015) regressed on the dependent variables on the y-axis. Bars represent 95% (black) and 90% (light gray) confidence intervals.

Fig. A.7 # wards in 2020 regressed on lagged electoral variables and treatment status measured in 2008



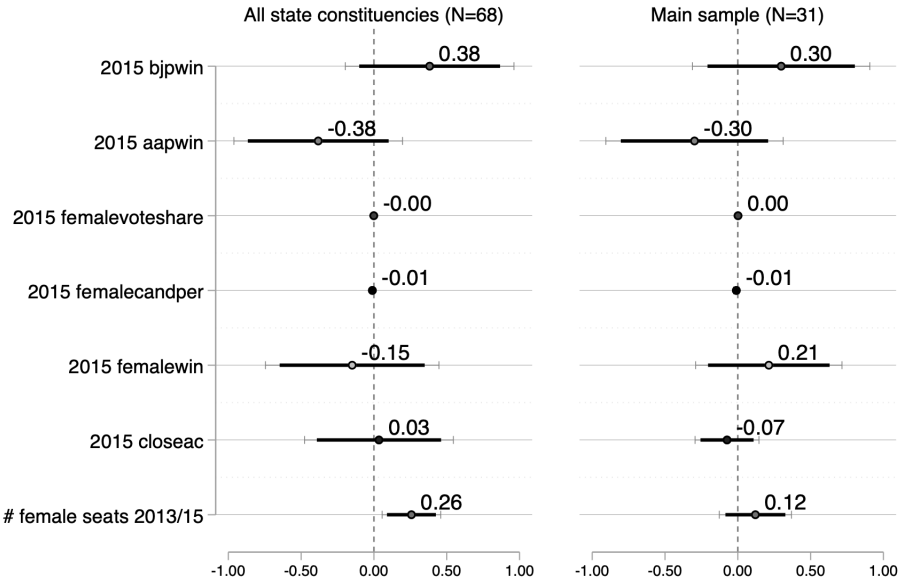
Notes: This figure visually plots point estimates from several robust OLS regressions of # wards in 2020 regressed on the dependent variables on the y-axis. Bars represent 95% (black) and 90% (light gray) confidence intervals.

Fig. A.8 # wards in 2020 regressed on lagged electoral variables and treatment status measured in 2013



Notes: This figure visually plots point estimates from several robust OLS regressions of # wards in 2020 regressed on the dependent variables on the y-axis. Bars represent 95% (black) and 90% (light gray) confidence intervals.

Fig. A.9 # wards in 2020 regressed on lagged electoral variables and treatment status measured in 2015



Notes: This figure visually plots point estimates from several robust OLS regressions of # wards in 2020 regressed on the dependent variables on the y-axis. Bars represent 95% (black) and 90% (light gray) confidence intervals.

Appendix B

Additional Evidence and Robustness Checks

Qualitative observations from party-activist recruitment

Source: Getty collection of campaigns of municipal candidates in Delhi (2017)

Take, for example, how a male candidate's nephews that were on-boarded by the candidate himself and further expand the recruitment of male party-activists:

> "Two of his nephews also help in the campaign in terms of handling simultaneous pad yatras where the candidate cannot go himself because the area is so big. These young men get some of their [male] friends and acquaintances to help

> them out and along with other people who work in the candidate's office, they organize door-to-door campaigns."[1]

In contrast, female party-activists note that they were asked by other female party-activists in the female candidate's office to help with the campaign:

> "Eventually, these people who were close to her in the office, who were higher up in the hierarchy [other female party-activists] asked us to compile the problems of the constituency so that a record could be maintained. That is how for most of us how our journey began with [candidate]. Today, we accompany her to all her campaigns, she consults us before finalizing any route for the pad yatra and door to doors, and relies on us for community outreach."[2]

[1] Campaign observations and interviews conducted on 3rd Feb 2020 in the run-up to Delhi state elections.
[2] Campaign observations and interviews conducted on 31st Jan 2020 in the run-up to Delhi state elections.

Qualitative observations from ground campaigns

The images and quotes below refer to another series of campaigns that were followed in the run up to state elections in Delhi in February 2020. The quotes refer to the pictures.

Intermediaries take the stage

Candidate takes the stage

Mainly men have collected to listen

Candidate arrives with her intermediaries

Shout out to women standing in balconies

Talk to both men and women in the household

"[Female candidate] was constantly surrounded by four to five women from the middle class strata, who were all volunteers for the party. She visited around 80-100 homes. [Candidate] would arrive at a house, and a woman would wrap a red shawl around her, along with handing her a marigold garland. The shawl and garland was distributed by one or two [female volunteers] would walk ahead of the contingent, hand over a garland or a shawl to the closest woman, who would wrap it around [candidate]. [Candidate] interacted mostly with women, asking them about the most recent electricity bill and telling them to vote for her. Men hardly ever interacted with the [candidate], and if ever, they seemed vary of it. Roughly 85% of the people [the female candidate] met were women." - Campaign observation conducted on 30th Jan 2020.

"According to [male campaign manager], who is the campaign manager of [male candidate], the candidate had 12 back to back open meetings scheduled for the whole day, in various areas of the constituency. In each of these open meetings, a

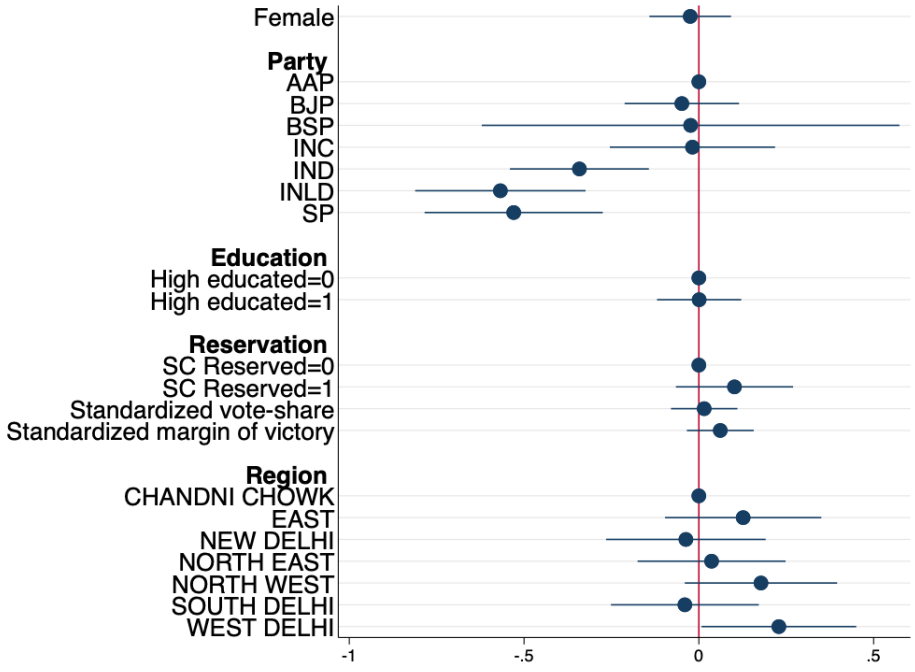
low stage was set up where dancers would perform on folk songs from Bihar and UP. Followed by the performance, the party workers would address the crowd for about thirty minutes before the candidate's arrival. There were eight men, who took turns to talk to the crowd. They talked about the party's manifesto and raised some common points. One major thing that was being talked about was water. While some women were present with their children, the crowd that gathered to listen was dominantly men who had been either contacted by the male campaign workers or had assembled at the venue after hearing the noise from the songs." - Campaign observation conducted on 4th Feb 2020.

B.1 Representative elite survey of incumbent municipal politicians in Delhi

Structured interviews were conducted with incumbent municipal politicians in Delhi. This structured survey instrument builds on fieldwork and open-ended interviews with party workers and party leaders in Delhi during 2014 to 2020, and in other Indian states of Rajasthan, Maharashtra, and Karnataka during 2016-2018.

To contact politicians, a list of phone numbers of all politicians was obtained via party offices and all incumbents were contacted to participate in the survey. Each person received at least 6-7 attempts to interview and this yielded a response rate of 33%: 92 out of 272 incumbents were interviewed. The coefficient plot below shows that the survey is representative of the overall population of incumbents from major parties. However, independents and those affiliated with small parties were less likely to respond. Note: only a mere 2.9% of incumbents are from small parties or are independent candidates.

Fig. B.1 Response dummy regressed on incumbent, constituency and election characteristics

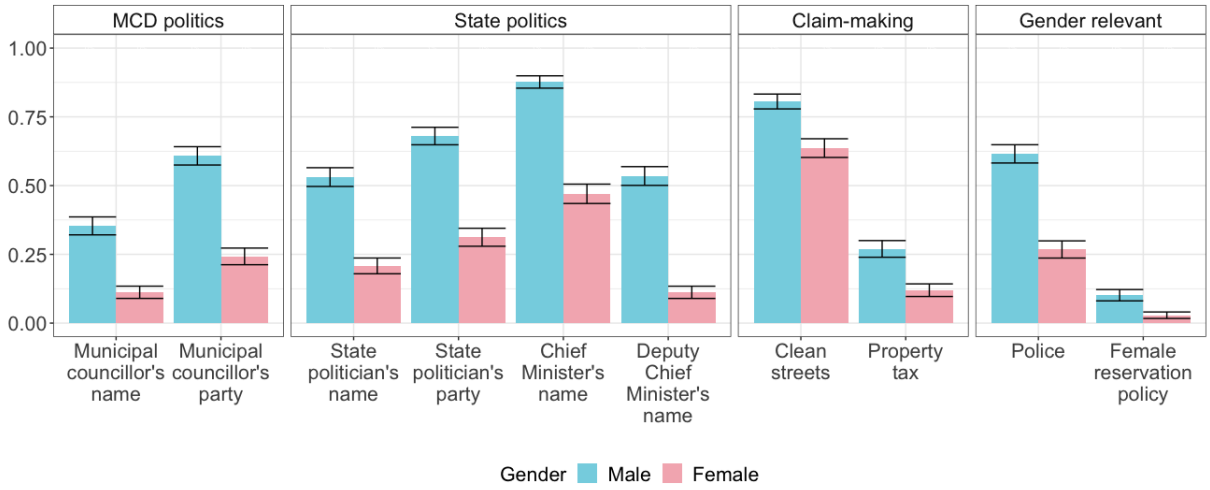


B.2 Descriptives from representative citizen survey in Delhi

Measures of political knowledge

Figure B.2 reports stark gender gaps on various distinct measures of political knowledge. The survey included questions on three distinct areas of knowledge: (a) local politics at the state and municipal level (b) claim-making activities (c) gender-relevant knowledge.

Fig. B.2 Gender gaps in political knowledge



Notes: The graphs plot the mean of the variable indicated on the x-axis with 2 standard error bars grouped by gender. All questions are coded as 1 if respondent correctly answers the question, and 0 otherwise.

The characteristics of the survey instrument can cause women and men to answer questions differently Mondak and Anderson (2004). With this in mind, the survey questions were posed in ways to minimize gendered measurement error, such as, by piloting and paraphrasing the question text in the open-ended format "*who is..*" wherever possible, encouraging respondents to answer and not offering do-not-know as an explicit choice but only available to enumerators to code.

Local politics includes questions about state level and municipal level politics. MLA refers to state politician, while the MCD councillor refers to the municipal elections. The questions were, *"Who is the (Deputy) Chief Minister of Delhi?"*, *"What is the name of your (MLA) MCD councillor?"*, *"Which party is your (MLA) MCD councillor from?"*. These questions were asked in an open ended format, without any options (which were only available to enumerators to code). In the case of name of local politicians and party labels,

the enumerators were supplied the entire list of names of all wards, and not only the correct options to reduce the possibility of enumerator error.

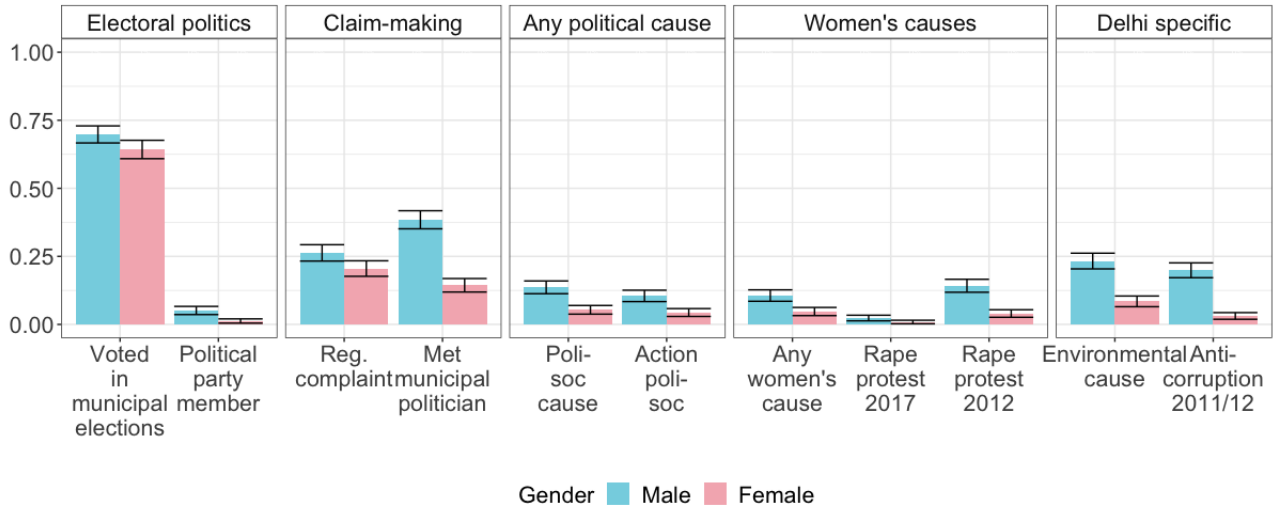
For the questions on claim-making activities that ask about a particular service provided by the MCD, such as, *"Who is responsible for ensuring cleanliness of streets and lanes in Delhi?"*, or *"Who is responsible for collecting property tax in Delhi?"*, respondents were asked to choose from one the three levels of governance in Delhi, do not know or other. While this form of questioning is prone to guessing, it was necessary to provide the choices as the respondents found the question on its own difficult to understand during the pilot. Gender gaps on claim-making activities, although still strong, are less pronounced relative to gaps on the knowledge of local politics.

Finally, two questions in the baseline elicited gender relevant knowledge in the Delhi context. Respondents were asked about who is responsible for police services, which are crucial for women in Delhi, given that Delhi women are widely known to face safety and harassment issues regularly. Second, respondents were asked about the reservation policy in Delhi. They were first asked, "*Is there reservation in Delhi MCD?*", if they responded yes, they were asked to list the reservation type in an open-ended question. Those who mentioned *women* as one of the reservation type were coded as 1, and the rest as 0. Surprisingly, gender gaps remain very prominent on these gender relevant aspect of knowledge. The knowledge of quota for women is also extremely low in Delhi, only 6.6% citizens are aware that seats are reserved for women in Delhi MCD.

Measures of political participation

I identify three context specific political and social causes that have mobilized huger numbers of Delhi (and Indian) citizens and citizen participation in these causes has lead to durable change in India's national politics. These three specific causes are: (a) the 2012 bus rape protests that reduced social stigma and victim-shaming, changed how women's crime is reported in India and ultimately led to legal changes with the passing of the Criminal Law (Amendment) Act, 2013, also called *Nirbhaya Act* named after the victim, (b) environmental protests that are frequently observed in Delhi since their beginning in the 1970s, and have been instrumental in ensuring legal and criminal action for deforestation, cutting neighborhood trees, banning black plastic bags, not using plastic etc in the city. and (c) the anti-corruption protests in 2011 and 2012 that led to the formation of a new political party in Delhi. The respondents were asked to note their participation in a specific cause or since the municipal elections in 2017 till the date of interview.

Fig. B.3 Gender gaps in political participation



Notes: The graphs plot the mean of the variable indicated on the x-axis with 2 standard error bars grouped by gender.

B.3 The effects of female led party building over time

The effects of female led party building persist

Table B.1 Panel A shows that female respondents are 18.2% more likely to be contacted by mix-gender group of party-activist and male respondents are 9.5% more likely to be contacted by mainly female workers.

Table B.1 Female workers remain active in previously reserved constituencies

	Female respondents			**Male respondents**		
	Female visit	Male visit	Mix-group visit	Female visit	Male visit	Mix-group visit
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Previously reserved in either 2007 or 2012 or both 2007 and 2012						
Previously reserved	0.048	-0.161	0.182	0.095	-0.093	-0.032
(ref. never-reserved)	(0.024)	(0.047)	(0.046)	(0.018)	(0.049)	(0.050)
RI p-values	0.316	0.009***	0.008***	0.052**	0.152	0.535
N	361	361	361	394	394	394
Panel B: Previously reserved in either 2007 or 2012						
Previously reserved once	0.035	-0.116	0.163	0.079	-0.065	-0.079
(ref. never-reserved)	(0.026)	(0.052)	(0.052)	(0.021)	(0.054)	(0.054)
RI p-values	0.501	0.065*	0.028**	0.126	0.362	0.157
N	260	260	260	296	296	296
Control mean	0.029	0.262	0.155	0.000	0.333	0.341

Notes: The number of female respondents is 263 and male respondents is 275 in 8 municipal sub-units. All regression have a constant that is not reported. *** p<0.01, ** p<0.05, * <0.10

The effects of female led party building strengthen with time

Table B.2 shows that the effects of female political presence is strongest in constituencies that have always been reserved for female politicians. The likelihood that female respondents are contacted by female party-activist is more than 8 times higher (25.7% points) in always-reserved constituencies relative to 2.9% in never-reserved constituencies. While male counterparts report a highly substantive increase of 10.9% points relative to 0%, it is not statistically significant.

The effects of female led party building materialize in the short-term

Table B.3 Panel A compares means of reported visit by female, male and mix-gender groups of party-activist in constituencies that were never-reserved with constituencies that were reserved for the first time in 2017 by female and male respondents. Panel A column 1 shows

Table B.2 Female canvassing in constituencies always reserved for female politicians

	Female respondents			**Male respondents**		
	Female visit (1)	Male visit (2)	Mix-group visit (3)	Female visit (4)	Male visit (5)	Mix-group visit (6)
Always reserved	0.257	-0.209	0.130	0.109	-0.240	-0.044
(ref. never-reserved)	(0.063)	(0.053)	(0.071)	(0.039)	(0.055)	(0.071)
RI p-values	0.010***	0.052**	0.328	0.238	0.021***	0.575
N	159	159	159	196	196	196
Control mean	0.029	0.262	0.155	0.000	0.333	0.341

Notes: The number of female respondents is 63 and male respondents is 66 in 5 municipal sub-units. All regression have a constant that is not reported. *** p<0.01, ** p<0.05, * <0.10

that female respondents have a 12.2% points higher likelihood of being contacted by a female party-activist, while the comparative figure for male respondents is a 16.8% points.

Table B.3 Female canvassing in constituencies reserved in short-term

	Female respondents			**Male respondents**		
	Female visit (1)	Male visit (2)	Mix-group visit (3)	Female visit (4)	Male visit (5)	Mix-group visit (6)
Panel A: reserved for first time in 2017						
First reserved in 2017	0.122	-0.229	0.139	0.168	-0.239	0.028
(ref. never-reserved)	(0.037)	(0.047)	(0.055)	(0.031)	(0.048)	(0.057)
RI p-values	0.047**	0.009***	0.133	0.024**	0.004***	0.637
N	222	222	222	281	281	281
Control mean	0.029	0.262	0.155	0.000	0.333	0.341

Notes: The number of female respondents is 120 and male respondents is 156 in 7 municipal sub-units. All regression have a constant that is not reported. *** p<0.01, ** p<0.05, * <0.10

The effect of female representation on citizen's political knowledge and participation

Table B.4 The effect of female representation on citizen's political knowledge

	MCD Politics		State Politics				Claim-making			Gender-relevant	
	Councillor name (1)	Councillor party (2)	MLA name (3)	MLA party (4)	CM name (5)	Deputy CM name (6)	Clean streets (7)	Property tax (8)	DNK rep role (9)	Police (10)	women quota (11)
Panel A: Female respondents											
Reserved in 2017	0.006	0.092	0.075	0.101	0.080	0.044	0.010	-0.050	-0.032	-0.004	0.043
	(0.023)	(0.030)	(0.027)	(0.032)	(0.033)	(0.022)	(0.033)	(0.024)	(0.025)	(0.031)	(0.012)
	0.862	0.110	0.186	0.109	0.000***	0.083*	0.726	0.024**	0.237	0.869	0.000***

Notes: *** p<0.01, ** p<0.05 * <0.10

Table B.5 The effect of female representation on citizens' political participation

	Electoral		Claim-making		Any cause		Gender-relevant			Delhi specific	
	Voted MCD (1)	Party member (2)	Reg. complaint (3)	Met councillor (4)	Any poli-sci cause (5)	Any poli-sci action (6)	Any women's cause (7)	Rape protest 2017 (8)	Rape protest 2012 (9)	Any environ. cause (10)	Anti corruption 2012 (11)
Panel A: Female respondents											
Reserved in 2017	0.004	-0.007	-0.061	0.033	-0.007	-0.014	-0.002	-0.010	-0.007	0.016	-0.008
	(0.031)	(0.008)	(0.029)	(0.025)	(0.017)	(0.015)	(0.016)	(0.007)	(0.015)	(0.020)	(0.012)
	0.919	0.354	0.242	0.120	0.624	0.252	0.893	0.089*	0.547	0.280	0.585

Notes: *** p<0.01, ** p<0.05 * <0.10

B.4 Descriptive and summary statistics: State-level elections

Table B.6 Descriptive statistics

	Mean	Sd.	Min	Max	N
N candidates	11.642	3.815	3.000	24.000	229
N female candidate	1.052	1.079	0.000	5.000	229
N male candidates	9.873	3.768	2.000	22.000	229
Female runs	0.629	0.484	0.000	1.000	229
N Male incumbent candidates	0.760	0.428	0.000	1.000	229
N Female incumbent candidates	0.039	0.195	0.000	1.000	229
N Male re-contesting candidates	1.974	1.184	0.000	5.000	229
N Female re-contesting candidates	0.135	0.355	0.000	2.000	229
N Male on major party ticket	2.437	0.650	1.000	3.000	229
N Female on major party ticket	0.245	0.479	0.000	2.000	229
Total vote-share	47.359	9.598	27.245	70.613	229
State election year	2013.083	3.879	2008.000	2020.000	229
Close elections (5%)	0.258	0.438	0.000	1.000	229
State constituency total pop.	202071.328	20697.628	155250.000	311501.000	229
ln State constituency total pop.	12.211	0.099	11.953	12.649	229
State constituency SC pop.	34121.367	18668.402	11408.000	108783.000	229
ln State constituency SC pop.	10.307	0.504	9.342	11.597	229
State constituency % SC pop.	16.712	8.467	4.981	44.367	229

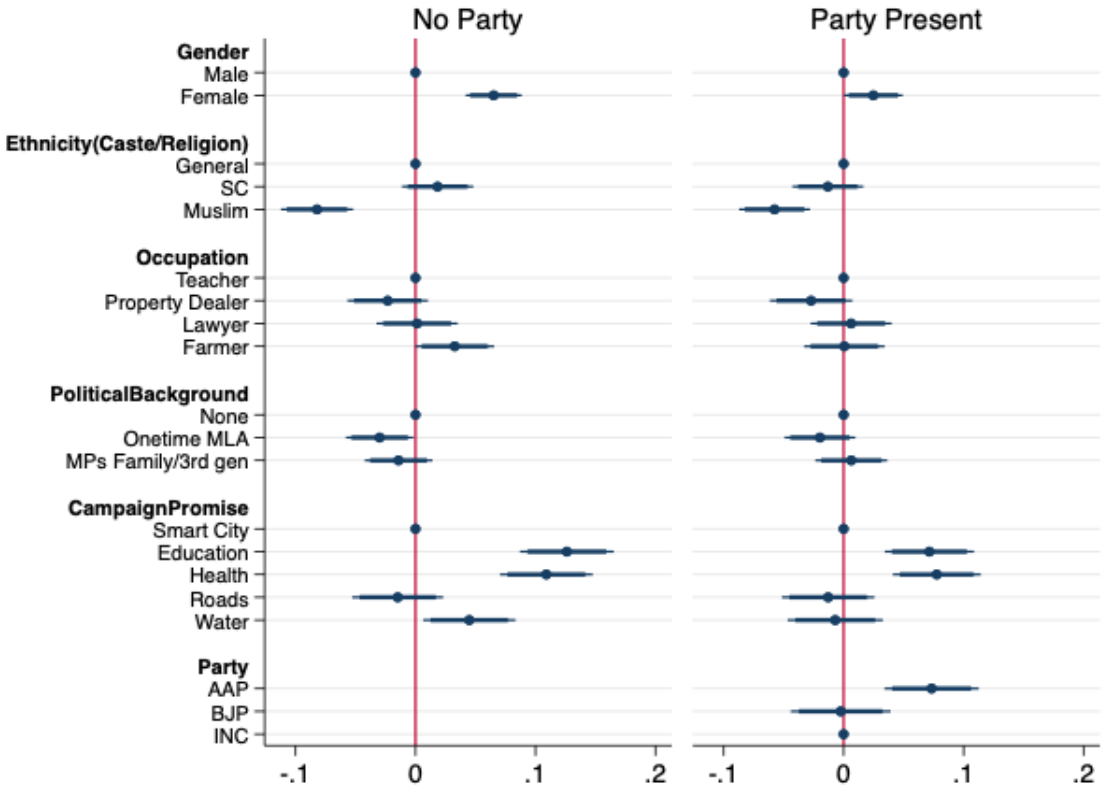
Table B.7 Summary statistics

	Mean	Sd.	Min	Max	N
Independent variable					
# local female seats	1.817	0.762	1.000	3.000	229
Female runs on major party ticket	0.223	0.417	0.000	1.000	229
% female runs on major party ticket	2.376	5.126	0.000	40.000	229
Female runs on small party ticket	0.389	0.489	0.000	1.000	229
% female runs on small party ticket	4.274	6.256	0.000	33.333	229
Female runs independently	0.253	0.436	0.000	1.000	229
% female runs independently	2.582	5.040	0.000	27.273	229
New female candidate runs	0.541	0.499	0.000	1.000	229
% new female candidate	0.795	0.887	0.000	4.000	229
New female runs on major party ticket	0.114	0.318	0.000	1.000	229
Local female candidate runs	0.140	0.347	0.000	1.000	229
% local female candidate	0.153	0.395	0.000	2.000	229
Local female runs on major party ticket	0.066	0.248	0.000	1.000	229
New state female candidate runs	0.096	0.310	0.000	2.000	229
State female runs on major party ticket	0.074	0.263	0.000	1.000	229
Incumbent female runs on major party ticket	0.039	0.195	0.000	1.000	229
Local + state female runs on major party ticket	0.017	0.131	0.000	1.000	229
Voter turnout at the state level	63.916	5.431	45.896	74.191	198
Female vote-share at the state level	8.317	18.144	0.000	96.160	229
Female candidate wins	0.070	0.255	0.000	1.000	229
Female incumbent wins	0.031	0.173	0.000	1.000	229
Female candidate in top 3	0.210	0.408	0.000	1.000	229
Female candidate in top 5	0.314	0.465	0.000	1.000	229

B.5 Conjoint experiment

The conjoint experiment was conducted as part of an original representative citizen survey in Delhi. The survey comprised of two-waves: the first wave was the baseline survey and the second wave was the end-line survey for a field experiment. In the first survey wave, 1664 citizens - 860 men and 804 women - were interviewed in person in randomly selected constituencies in Delhi (details below). The interview took an average of 36 minutes. Each respondent completed three pairs of conjoint candidate profiles. In the second survey wave 1304 citizens were re-interviewed after three weeks of the first survey.

Fig. B.4 Conjoint experiment with all attributes



Notes: This figure plots the point estimates from an OLS model which regresses the respondent's binary choice of candidate on all the attributes in the candidate profile for two subgroups: respondents who are randomly assigned to see party label or not. Standard errors are clustered by respondent. Bars represent 95% (black) and 90% (light gray) confidence intervals.

The conjoint experiment was included in both waves of the Delhi survey. In the first wave each respondent completed three choice sets, and in the second wave each respondent completed five choice sets. First, the first wave conjoint responses of all respondents (N =

1664 respondents yielding 9984 observations). Second, the second wave conjoint responses of respondents who were randomly assigned to the control group for the field experiment. This is $N = 553$ out of 1664 respondents, out of whom 79% (N = 441) were successfully re-interviewed and completed five choice sets, yielding 4410 observations. Together this means 14,394 comparisons were made by 1664 respondents.

Table B.8 Conjoint OLS estimates

	No party	Party present
	(1)	(2)
Female (ref. male)	0.065***	0.025**
	(0.012)	(0.012)
SC (ref. upper caste)	0.018	-0.013
	(0.015)	(0.015)
Muslim	-0.082***	-0.058***
	(0.015)	(0.015)
Property Dealer (ref. Teacher)	-0.023	-0.027
	(0.017)	(0.017)
Lawyer	0.001	0.006
	(0.017)	(0.017)
Farmer	0.033*	0.001
	(0.017)	(0.017)
One time MLA (ref. no background)	-0.030**	-0.020
	(0.014)	(0.015)
MPs Family/3rd generation	-0.014	0.006
	(0.014)	(0.015)
Education (ref. Smart city)	0.126***	0.071***
	(0.020)	(0.019)
Health	0.109***	0.078***
	(0.020)	(0.019)
Roads	-0.015	-0.013
	(0.019)	(0.020)
Water	0.045**	-0.007
	(0.020)	(0.020)
AAP (ref. INC)		0.073***
		(0.020)
BJP		-0.002
		(0.021)
Constant	0.446***	0.472***
	(0.022)	(0.025)
N	7130	6854

Notes: The conjoint pairs had the following attributes: gender (male/ female), caste/religion (upper caste/ SC/ Muslim), occupation (Teacher/ Property dealer/ Lawyer/ Farmer), political background (no background/ one-time MLA/ 3rd generation politician), policy promises (smart city/ education/ health/ roads/ water). Half of the respondents were randomly assigned to see the party label (AAP/ BJP/ INC). In case a respondent saw a party label in the first profile, they saw the party label in all profiles in the particular survey wave.

B.6 Robustness checks: Excluding 2020 state elections

The tables replicate the empirical strategy used in the corresponding main tables but exclude all constituencies from the 2020 elections and those that do not have four wards. In other words, here N = 198 out of total of 204 constituency-year observations each of which have 4 wards and are from 2008 to 2015 state elections.

Table B.9 More female candidates get major party nominations

	Major party		**Small party**		**Independent**	
	Any	% candidate	Any	% candidate	Any	% candidate
	(1)	(2)	(3)	(4)	(5)	(6)
# female wards	0.125	1.529	-0.013	-0.678	-0.082	-0.701
	(0.056)	(0.688)	(0.085)	(0.969)	(0.075)	(0.820)
RI p-value	0.024	0.006	0.866	0.416	0.208	0.312

Notes: The table displays OLS estimates of the dependent variables in top row regressed on the number of reserved wards. Female major party % refers to female candidates who run on AAP, BJP or INC tickets as % of total candidates. Female small party candidate % refers to female candidates who run on party tickets from non-major parties as % of total candidates. Female ind. cand % refers to female candidates who run as independents as % of total candidates. Reference mean is estimated in constituencies that have only 1 local seat reserved for women. N observations = 198 and all regressions have constituency fixed effects. Robust standard errors are reported. RI p-value row reports the p-values from a two-sided randomization inference test of zero treatment effects. The p-values were computed based on 1,000 random draws.

Table B.10 Municipal female politicians run and secure party nominations in state elections

	Municipal female candidate runs	% municipal female candidate runs	Has major party nomination	% has major party nomination
	(1)	(2)	(3)	(4)
# female wards	0.096	0.984	0.059	0.752
	(0.043)	(0.496)	(0.027)	(0.375)
RI p-value	0.021	0.018	0.030	0.021

Notes: Outcomes in even columns are measured as 1 in case a municipal female candidate runs in state elections and 1 in case she runs on a major party nomination respectively and 0 otherwise. Outcomes in odd columns are measured as % municipal female candidate runs in state elections and % doing so on major party nomination respectively. N observations = 198 and all regressions have constituency fixed effects. RI p-value row reports the p-values from a two-sided randomization inference test of zero treatment effects. The p-values were computed based on 1,000 random draws.

Table B.11 Female state candidates (re)claim major party nominations

	New state candidate (1)	Re-contesting state candidate (2)	State incumbent (3)	Both local state experience (4)
# female wards	0.013	0.092	0.046	0.026
	(0.059)	(0.040)	(0.030)	(0.022)
RI p-value.	0.779	0.000	0.030	0.014

Notes: The outcome is a dummy which is 1 if a (new/ re-contesting/ incumbent) state female candidate secures a major party nomination in a given state constituency. N observations = 198 and all regressions have constituency fixed effects. Robust standard errors are reported. RI p-value row reports the p-values from a two-sided randomization inference test of zero treatment effects. The p-values were computed based on 1,000 random draws.

Table B.12 Women's vote-share in higher elections increases

	Overall turnout (1)	Female vote-share % (2)	Female wins (3)	Female incumbent wins (4)	Female Top 3 (5)	Female Top 5 (6)
# female wards	0.192	3.954	0.026	0.033	0.118	0.099
	(0.358)	(1.988)	(0.035)	(0.029)	(0.064)	(0.072)
RI p-value	0.570	0.025	0.354	0.125	0.034	0.143

Notes: The table displays OLS estimates of the dependent variables in the top row regressed on the number of reserved wards. Turnout data is unavailable by gender and for the 2020 state elections and therefore N=204. Female vote share is measured as the % of votes cast for female candidates. Female wins is a dummy which is 1 if a woman is the winner. Female top 3(5) is a dummy which is 1 if a woman is in the top 3(5) position. N observations = 198 and all regressions have constituency fixed effects. Robust standard errors are reported. RI p-value row reports the p-values from a two-sided randomization inference test of zero treatment effects. The p-values were computed based on 1,000 random draws.

B.7 Robustness checks: All constituencies but controlling for the number of wards

The tables replicates the main results and contains all 272 state-year observations but adds a control for the number of local wards.

Table B.13 More female candidates get major party nominations

	Major party		**Small party**		**Independent**	
	Any	% candidate	Any	% candidate	Any	% candidate
	(1)	(2)	(3)	(4)	(5)	(6)
# female wards	0.053	0.609	0.039	0.240	-0.032	-0.175
	(0.042)	(0.643)	(0.062)	(0.815)	(0.058)	(0.682)
RI p-value	0.175	0.235	0.522	0.759	0.519	0.739

Notes: The table displays OLS estimates of the dependent variables in top row regressed on the number of reserved wards. Female major party % refers to female candidates who run on AAP, BJP or INC tickets as % of total candidates. Female small party candidate % refers to female candidates who run on party tickets from non-major parties as % of total candidates. Female ind. cand % refers to female candidates who run as independents as % of total candidates. Reference mean is estimated in constituencies that have only 1 local seat reserved for women. N observations = 272 and all regressions have a control for number of wards and constituency fixed effects. Robust standard errors are reported. RI p-value row reports the p-values from a two-sided randomization inference test of zero treatment effects. The p-values were computed based on 1,000 random draws.

Table B.14 Municipal female politicians run and secure party nominations in state elections

	Municipal female candidate runs	% municipal female candidate runs	Has major party nomination	% has major party nomination
	(1)	(2)	(3)	(4)
# female wards	0.096	0.984	0.059	0.752
	(0.043)	(0.496)	(0.027)	(0.375)
RI p-value	0.021	0.018	0.030	0.021

Notes: Outcomes in even columns are measured as 1 in case a municipal female candidate runs in state elections and 1 in case she runs on a major party nomination respectively and 0 otherwise. Outcomes in odd columns are measured as % municipal female candidate runs in state elections and % doing so on major party nomination respectively. N observations = 272 and all regressions have a control for number of wards and constituency fixed effects. RI p-value row reports the p-values from a two-sided randomization inference test of zero treatment effects. The p-values were computed based on 1,000 random draws.

Table B.15 Female state candidates (re)claim major party nominations

	New state candidate (1)	Re-contesting state candidate (2)	State incumbent (3)	Both local state experience (4)
# female wards	-0.013	0.050	0.029	0.027
	(0.043)	(0.032)	(0.020)	(0.017)
RI p-value.	0.706	0.067	0.200	0.017

Notes: The outcome is a dummy which is 1 if a (new/ re-contesting/ incumbent) state female candidate secures a major party nomination in a given state constituency. N observations = 272 and all regressions have a control for number of wards and constituency fixed effects. Robust standard errors are reported. RI p-value row reports the p-values from a two-sided randomization inference test of zero treatment effects. The p-values were computed based on 1,000 random draws.

Table B.16 Women's vote-share in higher elections increases

	Overall turnout (1)	Female vote-share % (2)	Female wins (3)	Female incumbent wins (4)	Female Top 3 (5)	Female Top 5 (6)
# female wards	0.204	2.822	0.012	0.021	0.052	0.038
	(0.356)	(1.926)	(0.030)	(0.016)	(0.044)	(0.054)
RI p-value	0.542	0.097	0.650	0.330	0.205	0.436

Notes: The table displays OLS estimates of the dependent variables in the top row regressed on the number of reserved wards. Turnout data is unavailable by gender and for the 2020 state elections and therefore N=204. Female vote share is measured as the % of votes cast for female candidates. Female wins is a dummy which is 1 if a woman is the winner. Female top 3(5) is a dummy which is 1 if a woman is in the top 3(5) position. N observations = 272 and all regressions have a control for number of wards and constituency fixed effects. Robust standard errors are reported. RI p-value row reports the p-values from a two-sided randomization inference test of zero treatment effects. The p-values were computed based on 1,000 random draws.

B.8 Measurement of political efficacy and bargaining power

Measuring political efficacy

The survey includes five questions each of which directly link with distinct aspects outlined in the political theory descriptive representation (Mansbridge, 1999). The theory suggests that demonstration effects increase perceptions of approachability of and engage in *"enhanced communication"* with the representative (approach the councillor), creates an *"ability to rule"* (contest elections and voting is important) and have influence (influence in municipal politics and performance evaluations matter). In the first wave and in the second wave (after listening to the survey experimental vignettes), respondents are asked the following questions (in the same order) that tap into these different aspect of political efficacy.

1. On a scale of 0-10 - How important do you think it is that people like you go and vote in MCD elections? 10 means very important and 0 meaning not important at all.

2. On a scale of 0-10 -To what extent do you think it is possible for people like you to contest MCD elections? 10 means completely possible, 0 means completely impossible.

3. On a scale of 0-10 - How much would you say that the way MCD is organized allows people like you to have influence or say in politics? 10 means a lot of influence, 0 means - no influence at all.

4. On a scale of 0-10 - How easy it is for people like you to contact or reach out to your MCD councillor? 10 means - very easy, 0 - means- not easy at all.

5. On a scale of 0-10 - To what extent do you think the quality of work or performance of your MCD councillor determines whether your councillor will get re-elected or not in the next elections? 10 means performance determines re-election fully, 0 means performance does not matter for re-election at all.

Measuring bargaining power: Caste and social ties

I use membership in high-status and low-status caste as a measure of bargaining power. The inverse relationship between high status caste and gender in Indian society is long standing and well-documented (see Joshi, Kochhar and Rao (2018) for a review and recent analysis). Stringent patriarchal codes designed to subordinate women have been observed to

be restricted to high-status caste groups and increased caste status is associated with a greater subordination of women (Agarwal, 1997). A series of ethnographies have confirmed that in most parts of rural India upper-caste women are more likely to practice purdah (female seclusion), are more likely to use the veil, and face significant restrictions on their mobility and labour force participation opportunities(Boserup, 1970). In contrast, women from low-status castes display higher labour force participation rates, fewer patriarchal restrictions on mobility and greater decision making autonomy (Eswaran, Ramaswami and Wadhwa, 2013).

Another key measure of women's bargaining power is the extent to which women have social ties outside the household. In India, women have remarkably few social connections outside their homes which pose a significant barrier to a woman's mobility and ability to engage in all aspects from life, from health to politics (Anukriti et al., 2019; Prillaman, Forthcoming). Moreover, while at home, women rarely engage in political conversations with their husbands or other family members, which further limits their political engagement. Evidence suggests that women who have social ties outside the household, particularly with other women, have higher level of political participation (Prillaman, Forthcoming), and that women are more likely to co-operate in women's groups (Fearon and Humphreys, 2017).

B.9 Randomization inference program

The randomization inference program operates as follows: within the strata (block) employed in the policy for the particular election year, I reshuffle the municipal constituencies and assign all the observations clustered within each of the 2nd municipal constituency to treatment. As per the reservation policy in 2017, all constituencies are stratified into scheduled caste (SC) and non-SC reserved wards within each of the MCD corporation in the North, South and East and treatment is assigned to every 2nd constituency on a serially ordered list within each of the strata. I then proceed to re-estimate β using this placebo assignment procedure multiple (3,000) times. Under the null hypothesis of zero treatment effects, the proportion of re-estimated βs that are larger (in absolute value) than the actual β provides a p-value for such null hypothesis. Main results do not include any controls. Note that because the outcome variable is a difference variable, by design I control for all variables that vary at the individual level.

B.10 Aggregate effects: Female representation and citizen's political efficacy

Table B.17 Aggregate effects: Female representation and citizen's political efficacy

	Approach councillor (1)	Contest elections (2)	Influence politics (3)	Voting matters (4)	Councillors held accountable (5)	Quality of councillor (6)
			Panel A: Female respondents			
Female constituency (2017)	0.865**	0.031	-0.117	0.262*	0.487**	0.171
	(0.303)	(0.212)	(0.244)	(0.149)	(0.194)	(0.251)
RI p-values	0.013	0.917	0.558	0.100	0.049	0.603
Control mean	4.230	5.710	6.684	8.651	8.272	5.602
			Panel B: Male respondents			
Female constituency (2017)	-0.012	0.151	-0.270	-0.037	-0.286*	0.154
	(0.326)	(0.330)	(0.210)	(0.163)	(0.140)	(0.399)
RI p-values	0.977	0.696	0.204	0.905	0.005	0.687
Control mean	6.278	4.581	6.652	8.861	8.407	5.613

Notes: N = 725 female respondents and N = 829 male respondents in 17 municipal constituencies: 9 reserved wards and 8 non-reserved constituencies. Standard errors are clustered at the treatment (constituency) level. Data for the dependent variables is taken from first survey. *** p<0.01, ** p<0.05, * <0.10

B.11 Women's reactions to female politicians

Fig. B.5 Female sub-sample not exposed to gender-quota

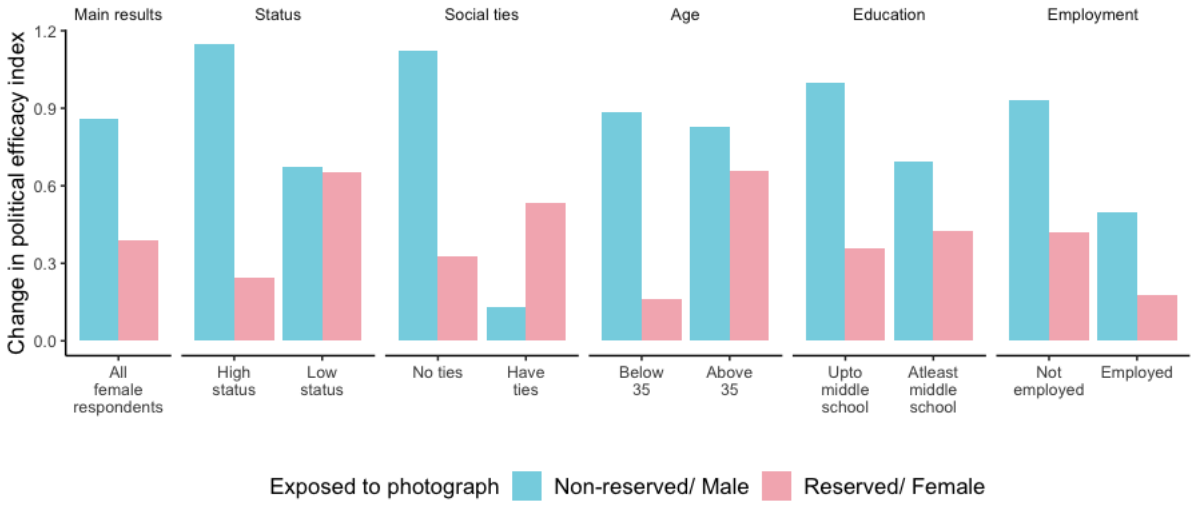
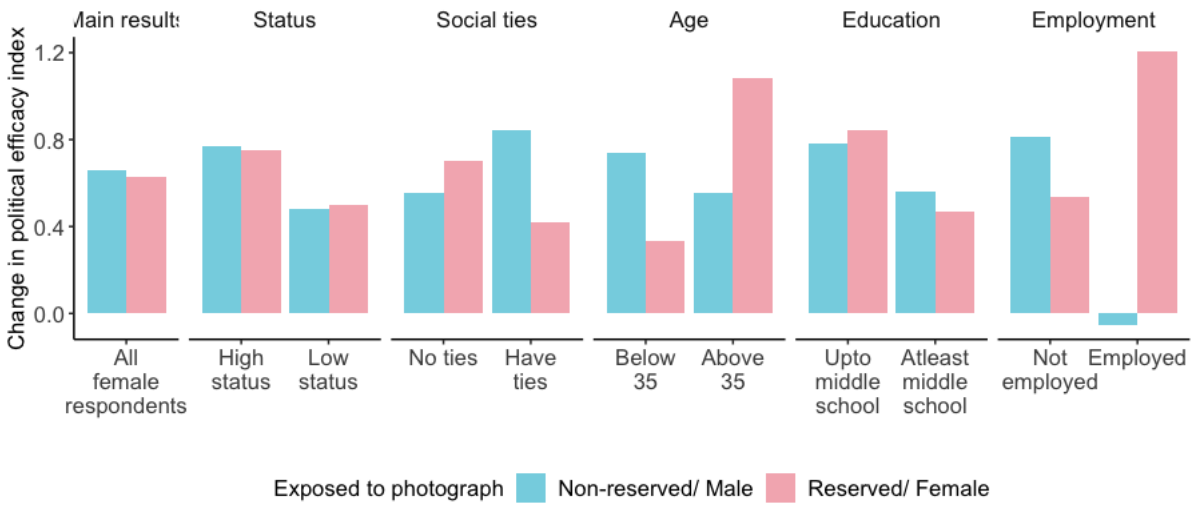


Fig. B.6 Female sub-sample exposed to gender-quota



B.12 Men's reactions to female politicians

Fig. B.7 Male sub-sample not exposed to gender-quota

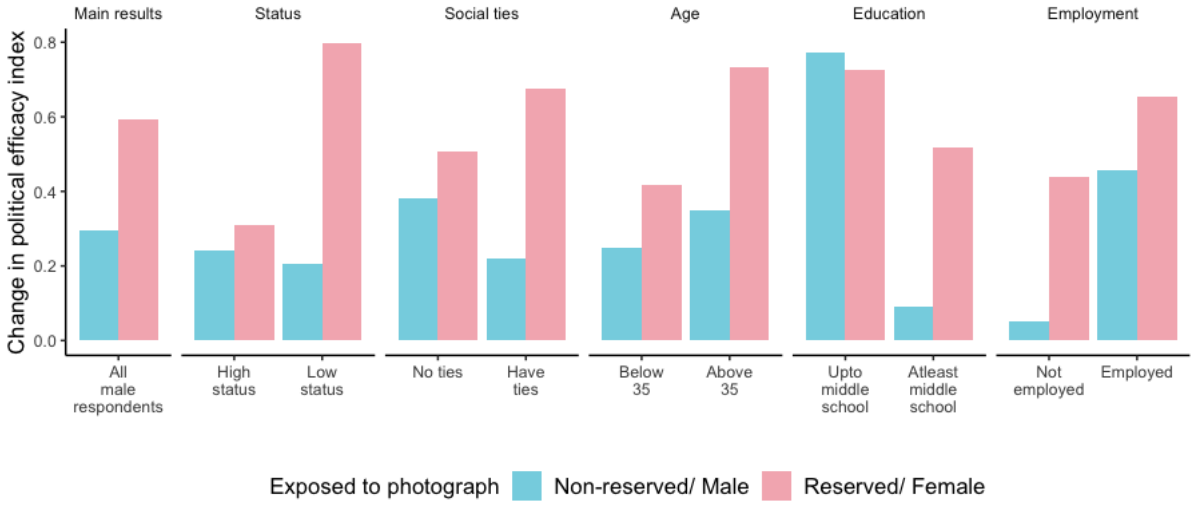


Fig. B.8 Male sub-sample exposed to gender-quota