

Do Electoral Quotas for Marginalized Ethnic Groups Improve Women’s Representation? Evidence from India*

Priyadarshi Amar[†]

October 31, 2025

[Click here for latest draft](#)

Abstract

How do electoral quotas designed for one marginalized group affect representation for those disadvantaged along multiple dimensions? I examine how caste-based electoral quotas influence women’s political representation in Indian village elections. I argue that caste quotas enhance women’s representation through two reinforcing mechanisms: differential gender norms across caste groups and reduced political competition in quota-restricted seats. Leveraging quasi-random variation in caste quota assignment across village council seats in Maharashtra, I find that caste quotas increase women’s candidacy by 40% and more than double their likelihood of winning office. Drawing on secondary survey data and novel administrative data, I find evidence for mechanisms consistent with my theory. These findings challenge theories predicting that people facing multiple disadvantages always fare worse in politics, demonstrating how electoral quotas can produce unexpected benefits when they interact with existing social and political conditions.

Keywords: Electoral Quotas, Local Government, Gram Panchayat, Caste, Gender, India

*I would like to extend my gratitude first and foremost to Rikhil Bhavnani, Laura Schechter, Yoshiko Herrera, Zhenhuan Lei, Priya Mukherjee and Simon Chauchard for their guidance and support for this project. I would also like to thank Maharashtra State Election Commission for kindly providing access to the publicly unavailable administrative data. Additionally, I would like to thank Anustubh Agnihotri, Md Moshi Ul Alam, Saloni Bhogale, Varun Karekurve-Ramachandra, participants of development economics workshop, CPC, MEAD, and MPSA for stimulating discussions that help me improve the paper. Thanks also to Yashashree Belkar for excellent research assistance.

[†]Postdoctoral researcher, University Carlos III of Madrid & Institute Carlos III-Juan March. Email: priyadarshi.amar@uc3m.es

1 Introduction

Electoral quotas have emerged as a primary tool for addressing political underrepresentation globally, with over 100 countries implementing gender quotas and numerous others adopting quotas for ethnic minorities, castes, or indigenous groups [Krook and O'Brien, 2010]. Research demonstrates these quotas affect public goods provision, policy influence, political engagement and social relations [Auerbach and Ziegfeld, 2020, Bhavnani, 2009, Brulé and Toth, 2022, Chattopadhyay and Duflo, 2004, Chauchard, 2017, Clayton, 2021, Clots-Figueras and Iyer, 2023, Goyal, 2024, Karekurve-Ramachandra, 2020, Weeks, 2022]. However, most quota systems are designed along single dimensions—targeting either gender or ethnicity or class, but rarely addressing their intersections. This single-axis approach overlooks mounting evidence that political exclusion operates through multiple, intersecting identities [Crenshaw, 2013, McCall, 2005]. This mismatch raises a critical question: What are the spillover effects of single-dimensional quotas on intersectionally disadvantaged groups?

This question has critical theoretical and policy implications. Theoretically, it challenges us to understand how institutional interventions interact with social hierarchies to shape political opportunities for intersectionally disadvantaged groups. Women's political underrepresentation varies dramatically by ethnicity and class worldwide—from Black women's exclusion in U.S. politics to indigenous women's marginalization in Latin American democracies [Bejarano, 2013, Darcy et al., 1993, Fraga et al., 2008, Strolovitch, 2006]. While existing work attributes these disparities to socioeconomic differences, it largely overlooks how electoral rules might ameliorate or exacerbate intersectional inequalities. From a policy perspective, as countries expand quota systems, understanding spillover effects becomes essential. Without evidence on cross-dimensional impacts, well-intentioned reforms targeting one form of exclusion may inadvertently deepen other inequalities.

I examine how electoral quotas for marginalized castes affect women's political

representation in India's village elections. India provides an ideal context for studying the intersectional effects of quotas for three reasons. First, it operates one of the world's most extensive electoral quota systems, with constitutional reservations for Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBC), alongside separate gender quotas, all implemented across multiple levels of government. Second, India's caste system generates sharp variation in gender norms across social groups, allowing me to test how social hierarchies interact with electoral institutions. Third, the quasi-random assignment of caste quotas allows us to estimate the causal effects.

I suggest that caste quotas paradoxically enhance women's representation through two reinforcing mechanisms. First, India's caste hierarchy generates stratified gender norms: upper caste women face strict mobility restrictions designed to maintain caste purity and family honor, while marginalized-caste women—whose labor has historically been essential for household survival—face fewer social barriers to public participation [Cassan and Vandewalle, 2021, Chakravarti, 1993, Jayachandran, 2020]. Second, by restricting candidacy to members of historically marginalized groups, caste quotas structurally reduce political competition, lowering the barriers to entry for new political actors [Auerbach and Ziegfeld, 2020]. When combined, these mechanisms, more favorable gender norms among marginalized castes and reduced electoral competition, create conditions that disproportionately benefit women of marginalized castes seeking political office.

To test this theory, I leverage quasi-random variation in caste quota assignment across village council seats in Maharashtra, India's second-largest state. Since my focus is on the impact of caste quotas on women's descriptive political representation, I restrict my sample to seats without gender quotas. My primary identification strategy exploits within-ward variation: in each electoral ward, some seats are reserved for marginalized castes while others remain open, yet all seats share the same electorate. This design allows me to causally identify the effect of caste quotas on women's rep-

resentation while holding constant voter preferences and ward-level characteristics. I complement this with an analysis of village chief (sarpanch) positions, where quota assignment depends on block-level demographics and rotation rules, using block fixed effects and controls for village-level caste composition. My analysis draws on comprehensive administrative data covering all candidates and winners in village elections from 2018-2022, providing rich detail on candidate characteristics and electoral outcomes.

I find that caste quotas substantially improve women's descriptive representation across two key outcomes. First, regarding candidacy: caste-quota seats are 40% more likely to have at least one woman candidate compared to open seats. This effect is robust to alternative measures—the total number of women candidates and the proportion of candidates who are women both increase significantly in quota seats. Second, regarding electoral success: women are more than twice as likely to win in caste-quota seats compared to open seats. The results hold for both council member positions, identified through within-ward variation, and village chief positions, where I account for the demographic factors determining caste quota assignment.

To investigate the underlying mechanisms, I draw on evidence from multiple sources. First, examining candidacy patterns in open seats reveals that marginalized caste candidates are significantly more likely to be women than upper caste candidates, suggesting differential gender constraints across caste groups. Second, household survey data confirm that marginalized caste women face fewer mobility restrictions: they are more likely to work outside the home, less likely to need permission to leave home, and less likely to practice purdah. Finally, the increased likelihood of women winning in quota seats operates partly mechanically through increased candidacy: More women candidates naturally increase the probability of women winners, but is amplified by reduced electoral competition, as caste-quota seats attract fewer total candidates than open seats.

This study makes three central contributions. First, I provide causal evidence

that quotas designed for one disadvantaged group can improve representation for other marginalized groups, challenging theories that assume individuals facing multiple disadvantages always experience worse outcomes than those facing single disadvantages. While existing work documents how gender quotas can hurt women from marginalized groups [Huang, 2012, Hughes, 2011, Karekurve-Ramachandra and Lee, 2020], I show that ethnic quotas can actually advantage them when social hierarchies create divergent gender norms. Second, I advance the understanding of women’s political underrepresentation beyond individual-level explanations. Where existing work emphasizes differential costs, voter discrimination, or self-efficacy gaps [Ashworth et al., 2024, Fox and Lawless, 2011, Lawless, 2015], I show how electoral institutions interact with social structure to shape political opportunities. Third, I contribute to the intersectionality literature by demonstrating how institutional design and social norms jointly determine political representation for those at the intersection of multiple identities [Browne and Misra, 2003].

These findings have important implications for institutional design in diverse societies. As electoral quotas expand globally, policymakers must consider how these institutions interact with existing social hierarchies. In contexts where social norms vary across groups, ethnic or class quotas may inadvertently advance women’s representation—or conversely, gender quotas might differentially benefit women from privileged backgrounds. Understanding these dynamics is essential for designing institutions that effectively address multidimensional inequality.

2 Conceptual Framework

Why would electoral quotas designed for marginalized castes improve women’s descriptive political representation? Standard theories of intersectionality predict that women from marginalized castes—facing both gender and caste discrimination—should experience compounded disadvantages in political participation [Collins, 2000, Crenshaw, 2013, Hooks, 1989]. Yet I argue that caste quotas can paradoxically advantage these

women through the interaction of two mechanisms: differential gender norms across caste groups and altered political competition in quota-restricted seats.

2.1 Mixed Evidence on Intersectional Representation

Existing theory suggests that individuals facing compounded disadvantages—such as women from ethnic minorities—encounter amplified barriers to political participation as different dimensions of inequality intersect [Hughes, 2011]. However, empirical evidence reveals considerable variation in how electoral institutions affect intersectional representation, depending critically on institutional design. Darcy et al. [1993] demonstrate that in the United States, Black political underrepresentation stems primarily from Black women’s exclusion rather than systematic barriers facing Black men, who have achieved population parity in elected office. Crucially, they find that multi-member districts facilitate Black women’s representation far more effectively than single-member systems, suggesting that institutional design choices can either mitigate or exacerbate intersectional barriers.

This variation in institutional effects becomes particularly evident when comparing different quota designs. Huang [2012] examine a context with both gender quotas and indigenous group quotas, finding that indigenous women’s representation actually worsened over time even as other women’s representation improved. They attribute this outcome to political blind spots: neither indigenous advocacy groups nor women’s organizations prioritized indigenous women’s representation, leading each to focus on single-identity candidates. Conversely, other research suggests that intersectional positioning may sometimes confer electoral advantages. Women from marginalized groups may benefit from more favorable voter perceptions [Celis et al., 2014, Mügge, 2016], demographic advantages in communities affected by male incarceration [Philpot and Walton Jr, 2007, Scola, 2013], or enhanced coalition-building opportunities across advocacy networks [Bejarano, 2013, Fraga et al., 2008].

This mixed evidence suggests that the relationship between single-dimensional

quotas and intersectional representation is not predetermined but rather depends on how institutional rules interact with social context. I build on this insight to theorize why, in the Indian context, caste quotas can generate positive spillovers for women's representation.

2.2 Differential Gender Norms: Why Caste Shapes Women's Political Opportunity

India's caste hierarchy generates fundamentally different gender norms across social groups, creating differential constraints on women's public participation. Upper-caste women face strict mobility restrictions rooted in concepts of purity, family honor, and status maintenance. These restrictions serve multiple functions in maintaining caste hierarchy: they signal social status through women's seclusion, preserve caste purity through controlled interactions, and maintain patriarchal control over women's sexuality and marriage prospects [Chakravarti, 1993]. These theoretical differences manifest in measurable behavioral constraints. Nationally representative data from rural India reveals that 64% of upper-caste women practice purdah compared to only 29% of SC/ST women [Agte and Bernhardt, 2023]. Upper-caste women are significantly less likely to work outside the home, join self-help groups, or attend village meetings, despite showing similar decision-making power within households [Cassan and Vandewalle, 2021]. Most critically for political participation, upper-caste women are 40% less likely to attend gram sabha (village assembly) meetings and 50% less likely to speak when they do attend [Parthasarathy et al., 2019].

In contrast, marginalized-caste women historically faced fewer such restrictions, not due to greater gender equality within these communities, but because economic necessity required their labor participation and because purity-based status markers held less relevance for groups already deemed "impure" in the caste hierarchy [Jayachandran, 2020]. This differential freedom translates directly into political capability. Munshi and Singh [2024] document that female labor force withdrawal has become a status signal in rural India—a luxury only upper-caste households can afford. Mean-

while, marginalized-caste women's continued economic participation provides them with public visibility, diverse social networks, and experience navigating mixed-gender spaces—all crucial assets for political candidacy.

Running for office requires extensive public engagement: campaigning door-to-door, attending late-evening meetings, traveling to government offices, and interacting with diverse constituents including men from various castes. Women who can move freely in public spaces without violating social norms possess a fundamental advantage in meeting these demands.

This variation in gender norms across social hierarchies is not unique to India. Research from other contexts reveals similar patterns where stratified societies create differential gender constraints. In the United States, [Scola \[2013\]](#) finds that African American women face fewer cultural barriers to political ambition than white women, who encounter stronger norms about "appropriate" feminine behavior. In Latin America, indigenous women's traditional roles in community organizing provide political skills that mestiza women from more "modern" households may lack [[Rousseau, 2011](#)]. These cross-national patterns suggest that differential gender norms represent a broader phenomenon in hierarchical societies.

2.3 How Caste Quotas Reshape Political Competition

Caste quotas fundamentally alter the competitive landscape of elections by restricting who can contest rather than merely how many can contest. When eligibility is limited to marginalized castes—who comprise roughly 15-20% of the population in most villages—the candidate pool shrinks dramatically. This reduction operates through multiple channels. First, marginalized communities have fewer households with accumulated political resources, established networks, or surplus economic capital to invest in campaigns [[Auerbach and Ziegfeld, 2020](#)]. Second, historical exclusion means fewer families have political experience or name recognition. Third, the social distance between marginalized castes and village elites limits access to informal political networks

that typically recruit and support candidates.

This reduced competition differentially benefits women candidates through several pathways. Lower competition reduces the resource threshold for viable candidacy—campaigns require less money, smaller networks can be effective, and political inexperience becomes less disadvantageous. When ten candidates compete for a seat, marginal differences in resources or experience often determine outcomes. When only three compete, a motivated candidate with modest resources has reasonable prospects. Women, who typically have less access to economic resources and political networks than men, benefit disproportionately from these lowered barriers.

A critical distinction emerges when comparing caste quotas to gender quotas in how they structure political competition. While [Karekurve-Ramachandra and Lee \[2020\]](#) and [Cassan and Vandewalle \[2021\]](#) document similar social norm mechanisms operating under gender quotas, the competitive dynamics differ fundamentally. Under gender quotas, women compete only against other women for reserved seats. In contrast, under caste quotas, women must compete against both men and women from the eligible caste group, creating mixed-gender competition that involves complex social dynamics around candidate selection. This mixed-gender competition has differential effects across caste groups. Women from upper-caste groups, constrained by restrictive mobility norms, may be disadvantaged in this mixed-gender environment, particularly when competing against male candidates who have greater freedom of movement and established political networks. Conversely, women from marginalized castes, who face fewer mobility restrictions, are better positioned to navigate these social dynamics effectively, as their greater public engagement capabilities become competitive advantages in the broader pool of candidates.

This distinction matters because it tests women's electoral viability in direct competition with men, potentially creating demonstration effects and building women's political credibility in ways that gender-segregated competition cannot. The mixed-

gender nature of competition under caste quotas also means that women who succeed have defeated male opponents, which may confer greater legitimacy and respect than winning in women-only contests.

2.4 The Joint Operation of Mechanisms

These two mechanisms—differential gender norms and reduced competition—operate synergistically rather than independently. Neither alone sufficiently explains women’s improved representation under caste quotas. Favorable gender norms create the potential for women’s political participation by determining the supply of women able and willing to contest elections. Reduced competition creates the opportunity for electoral success by improving the probability that any given woman candidate wins. The interaction between supply and opportunity generates the observed outcome.

This interaction produces clear predictions across different conditions:

Table 2.1: Theoretical Predictions for Women’s Political Representation

	High Competition	Low Competition
Restrictive Gender Norms	Low women’s representation	Ambiguous
Permissive Gender Norms	Ambiguous	High women’s representation

In open seats with high competition and where upper-caste candidates predominate, restrictive gender norms limit women’s candidacy while intense competition disadvantages those women who do contest. In caste quota seats, permissive gender norms among marginalized castes increase women’s candidacy while reduced competition improves their chances of winning. The highest levels of women’s representation should emerge where both conditions align: among marginalized-caste women in quota-restricted seats.

2.5 Scope Conditions and Alternative Explanations

These mechanisms should operate most strongly where three conditions hold: (1) social hierarchies create meaningful variation in gender norms across groups, (2) political competition is primarily local rather than party-dominated, and (3) quotas sub-

stantially restrict the eligible candidate pool. The effects may attenuate in urban areas where caste-based norms have weakened, at higher levels of government where party organizations control candidate selection, or in regions where marginalized castes have already achieved political power. Alternative explanations merit consideration. Voter preferences might favor women from marginalized castes due to perceived authenticity or intersectional identity appeals. Marginalized-caste women might possess unique political skills from histories of collective organizing. Gender quotas might create demonstration effects that differentially benefit marginalized-caste women. While these alternatives may contribute to the observed patterns, they cannot fully explain why the effect operates specifically through caste quotas rather than generally across all seats. My empirical analysis addresses these alternatives by examining patterns in open seats, accounting for exposure to gender quotas, and testing for differential voter preferences across candidate types.

3 Context

I test these theoretical predictions in the context of Maharashtra's village elections, where the intersection of extensive quota implementation and persistent caste-based social hierarchies provides ideal conditions for examining how single-dimensional quotas affect intersectional representation.

With a population of around 112 million, Maharashtra has more than 25,000 gram panchayats (GPs). Elections are held every five years, with the timing varying according to a predetermined schedule. This variation is due to factors such as boundary changes, the establishment of new villages, the death or resignation of council members, and motions of no confidence. Each GP consists of 7 to 17 members and a village chief (sarpanch), with the number of seats depending on the population of the GP. Sarpanches were usually elected indirectly from among council members; however, between July 2017 and March 2020, and from August 2022 onward, they were directly elected by voters. GP office holders have several responsibilities, including organizing

regular public meetings, maintaining vital records such as birth registrations, ensuring the effective implementation of government schemes and proper utilization of funds, supervising and controlling the work of GP staff and officers, and exercising additional powers and duties as directed by the state government.

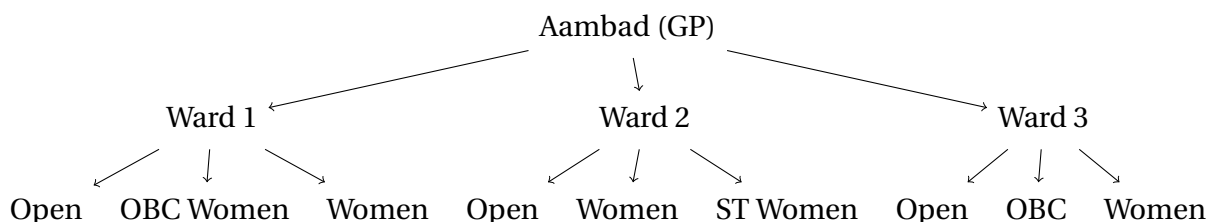
In 1992, the 73rd Constitutional Amendment to the Indian Constitution mandated state governments to establish, hold regular elections for, and empower gram panchayats. Along with mandating decentralization, the 73rd Amendment also directed states to introduce quotas to enhance the descriptive representation of historically underrepresented groups, such as women and marginalized castes, including Scheduled Castes (SC) and Scheduled Tribes (ST). Since then, a certain proportion of sarpanch seats are reserved at the block level and a specific proportion of member seats within each gram panchayat are reserved for these disadvantaged groups. Later, most states, including Maharashtra, adopted quotas of 27% for Other Backward Classes (OBCs).

In this paper, I primarily focus on village council member seats, because many sarpanch positions were indirectly elected from among council members in several GPs during the period of study. As discussed earlier, all council member seats are embedded in wards, which are sub-units of a GP. Within each ward, a seat elects one member. A ward typically consists of two or three seats. The number of seats in a ward depends on its relative population and is determined by bureaucrats at the block level. Generally, the number of seats per ward is consistent, but geographical factors may cause some wards to be larger than others. Each GP has a minimum of three wards and a maximum of six wards. In other words, there are a minimum of three and a maximum of six constituencies in a GP.

The number of seats reserved for SCs and STs in a GP is based on their population share within the GP. Each ward is allocated a certain number of seats for SCs and STs according to their population share within the ward. In fully scheduled areas, at least 50% of the seats in a GP must have ST quotas, with the possibility of extending this based

on their population percentage in the GP.¹ After reserving seats for SCs and STs, 27% of the remaining seats are reserved for OBCs. Once caste quotas are assigned, 50% of the seats within each category (SC, ST, OBC, No Quota) are reserved for women by lottery. Most wards have at least one seat without quotas (open seat), but if the SC/ST population is sufficiently large, it is possible for a ward to have no open seats. Figure 3.1 shows the number of wards, the distribution of seats within each ward, and the quota status of each seat in Aambad GP. There are nine council member seats in this GP, with three seats allocated per ward. Overall, there are three open seats and three seats reserved for women, two seats reserved for OBCs (including one seat reserved for OBC women), and one seat reserved for ST women. No seats were reserved for SCs due to their small population share.²

Figure 3.1: Council Seats in Aambad GP



Shifting focus to sarpanch seats, I analyze only those sarpanch seats in GPs where the sarpanch was directly elected. The quota assignment for sarpanch seats is temporary and rotates every term. The rules require reserving a certain proportion of seats for women and marginalized caste groups (i.e., SC, ST, OBC, and women from SC, ST, and OBC within a block). The process begins with the reservation of seats for SC, ST, and OBC groups. The assignment rules for caste quotas are somewhat complex and vary among SCs, STs, and OBCs. For SCs, gram panchayats (GPs) that had SC quotas in the last two terms are excluded from consideration. The remaining GPs are then listed in

¹Fully scheduled regions are identified by a high share of Scheduled Tribes (ST), an historically disadvantaged minority group, in the population.

²Figure B1 shows the number of wards, the distribution of seats within each ward, and the quota status of each seat in Aambegaon GP. Unlike Aambad, this GP has seats reserved for both SC and SC women.

descending order of their SC population proportions, and the top GPs on this list are assigned SC quotas based on the required number of seats. For STs, the assignment depends on whether a block is considered a scheduled area. In non-scheduled and partially scheduled areas, the ST quota assignment follows a procedure similar to that for SCs. However, in fully scheduled areas, a sarpanch seat is always reserved for STs. After assigning SC/ST quotas, a list is prepared excluding GPs that had OBC quotas in the last three terms. From the remaining GPs, 27% of the seats are randomly assigned OBC quotas. Once SC, ST, and OBC quotas are assigned, the remaining seats are designated as Open. Then, within each category (SC, ST, OBC, and Open), 50% of the seats are reserved for women. This means that, apart from open seats that are not reserved for women, all other seats are subject to either a caste quota, a gender quota, or both.

4 Data and Empirical Strategy

The main aim is to examine the impact of caste quotas for marginalized groups on women's representation. To systematically study this, I leverage quasi-random spatial variation in the assignment of quotas and rely on a novel administrative micro-dataset on GP elections in Maharashtra. This data, collected and compiled by the Maharashtra State Election Commission, the statutory body responsible for conducting local elections in the state, includes seat-wise election statistics, as well as candidates' and winners' characteristics, for council seats across 22,499 GPs between 2018 and 2022. A key advantage of this novel dataset is that it documents the caste category of candidates. This information is especially useful for identifying the caste of candidates in seats with caste quotas, as those seats are open for people from any caste to contest. Such information is typically not available in other electoral datasets in India and provides an essential data point for analyzing inter-group differences in candidacy and winner characteristics in open seats, as it is not feasible to impute caste accurately from the name of the candidate. However, one limitation of this dataset is that it only records seats where elections were held—that is, where at least two candidates contested. Council seats with

a single candidate, in which the candidate was declared elected unopposed, as well as seats with no candidates, are absent from the electoral results documented by the state election commission.

Because my main outcome is the gender of the politician, I restrict my sample to seats without gender quotas and compare those reserved for marginalized caste groups (the treated group) with those without any quotas (open seats). This restriction removes all gender quota seats and gender-specific caste quota seats, i.e., seats with quotas for women, OBC women, SC women, and ST women. Figure 4.1 illustrates how this restriction affects the sample, using the example of Aambad GP. Seats in gray indicate those excluded from the sample due to the restriction, while seats in black are the ones included in the sample.

Figure 4.1: Council Seats in Aambad GP (Sample)

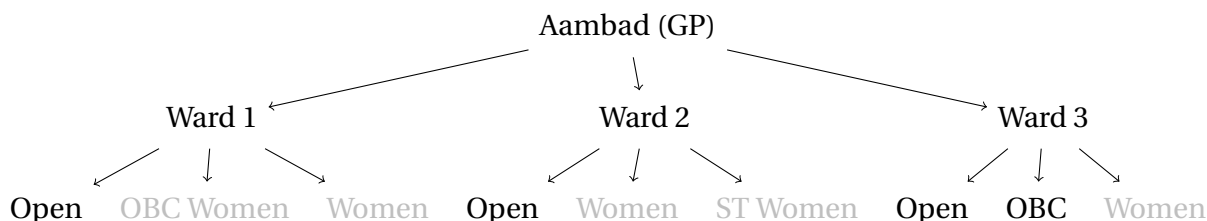
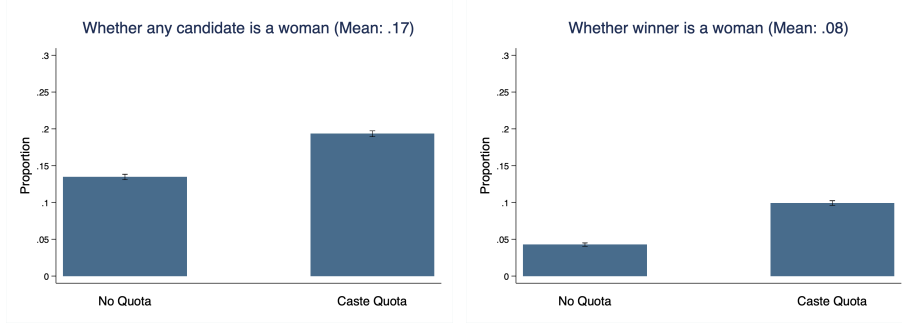


Figure 4.2 presents the distribution of outcomes by the quota status of the seats. Overall, approximately 17% of the seats have at least one woman candidate, and 8% have a woman winner. The data also show a statistically significant difference in the proportion of women candidates and winners by quota status, with a significantly higher representation of women in seats with caste quotas. Therefore, these descriptive results provide suggestive evidence supporting the hypothesis that caste quotas improve women's representation.

For the main analysis, I focus on council member seats and use the following empirical specification:

$$Y_{swg} = \alpha + \beta \text{Caste Quota}_{swg} + \gamma_w + \epsilon_{swg} \quad (1)$$

Figure 4.2: Distribution of Main Outcomes



Notes: This figure shows the distribution of the main measures of women's candidacy and representation in seats with no quotas compared to those with caste quotas.

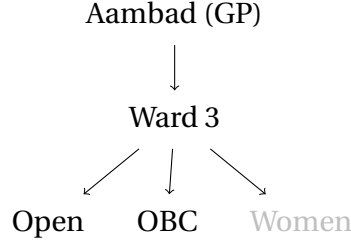
where Y_{swg} is an outcome of interest in a seat s , ward (sub-GP level unit) w , and GP g . The main outcomes include: 1) whether there is any woman candidate, 2) the number of women candidates, and 3) whether the winner is a woman. Caste Quota_{swg} takes a value of 1 if the seat has a quota for SC, ST, or OBC, and 0 otherwise (i.e., seats without quotas or open seats). This specification controls for time-invariant, ward-specific characteristics using ward fixed effects γ_w .³ The inclusion of ward fixed effects restricts the sample to wards with variation in quota assignment. Specifically, it limits the sample to wards with at least one seat with caste quotas and one open seat without quotas. In a ward, all seats share the same electorate (constituency). Hence, this identification strategy ensures that we compare seats with different quota status but the same electorate, thereby satisfying the assumption that baseline constituency characteristics are balanced by design. Alternatively, I use a specification with GP fixed effects instead of ward fixed effects to study the effects for the sample with all council member seats.⁴ Table ?? highlights the differences in the samples for the specifications with ward fixed effects and GP fixed effects using the example of Aambad GP. The black and dark gray seats are part of the sample with GP fixed effects, while only the black seats are included in the sample with

³Because the analysis is done on cross-sectional data, the specification cannot control ward-year fixed effects.

⁴Note that this analysis uses cross-sectional data, leveraging spatial variation. While there are differences in the timing of GP elections across the state, this timing doesn't vary within ward, so the ward fixed effects account for these differences, as all seats within a GP or ward have elections at the same time.

ward fixed effects, because variation in treatment assignment within a ward occurs only in Ward No. 3. Figure 4.3 compares key census characteristics between analysis sample GPs and the entire state sample. Additionally, Table A2 compares election statistics across samples.

Figure 4.3: Council Seats in Aambad GP (Ward Fixed Effects Sample)



To examine heterogeneity in the effects of caste quotas by marginalized group type (OBC, SC, and ST), I use the following specification:

$$Y_{swg} = \alpha + \beta_1 \text{SC Quota}_{swg} + \beta_2 \text{ST Quota}_{swg} + \beta_3 \text{OBC Quota}_{swg} + \gamma_w + \epsilon_{swg} \quad (2)$$

where SC Quota_{swg} takes a value of 1 if the seat has a quota for SC and 0 otherwise (i.e., seats without SC quota). I define the variables ST Quota_{swg} and OBC Quota_{swg} in the same manner. The coefficient for the SC quota is the effect of the SC quota compared to seats without quotas, as the specification controls for seats with OBC and ST quotas. The same logic applies to the coefficients for the ST and OBC quotas. The identification assumption for this specification is the same as that of the above specification.

Lastly, I examine the effect of caste quotas for sarpanch seats in GPs where the sarpanch is directly elected. To do this, I use the following specification:

$$Y_{pbt} = \alpha + \beta \text{Caste Quota}_{pbt} + X'_{pbt} \theta + \gamma_b + \delta_t + \epsilon_{vbt} \quad (3)$$

where Y_{pbt} is an outcome of interest for a sarpanch seat in a GP p , block b , and election

year t . Since the assignment rule for SC/ST quotas is based on the population shares of the GP in the block, I control for time-invariant block-specific characteristics as well as the shares of SC and ST populations in a GP according to the 2011 census. Additionally, I control for election year-specific characteristics.⁵ The 27% OBC quotas are randomly assigned to the seats remaining after the assignment of SC/ST quotas and those reserved in the recent past. Furthermore, I exclude sarpanch seats in fully scheduled areas because there is no variation in treatment assignment within a block; this is because all seats are reserved for STs. The identifying assumption is that the assignment of quotas is quasi-random in the restricted sample, controlling for block-level characteristics, election year-specific factors, and the share of SC and ST populations in the GP.

5 Results

I begin by examining the effect of caste quotas on women's representation in council member seats, both on the ballot and in political office. Table 5.1 presents the results for two measures of representation: whether any candidate is a woman (Panel A) and whether the winner is a woman (Panel B). In the baseline specification, I use GP fixed effects to account for time-invariant GP-level characteristics in Column (1). In Column (2), I include ward-specific fixed effects (instead of GP fixed effects) and present results for a restricted sample with variation in treatment assignment within a ward. Recall that the constituency is the same for all seats in a ward, and hence this is the preferred specification, as baseline characteristics are balanced by design.

In Panel A, I find that the likelihood of a woman contestant is approximately 5 percentage points higher in seats with caste quotas compared to seats without quotas in Column (1). In Column (2), the results indicate that caste quotas increase the likelihood of a woman contestant by 7 percentage points. All estimates are significant at the 1% level. Furthermore, the results in Panel B, for the likelihood of a woman winner, follow

⁵Note that this analysis uses cross-sectional data, leveraging spatial variation. Since GP elections within a block occur over multiple years, election year fixed effects are meaningful alongside block fixed effects, as they are not collinear.

a similar pattern. The likelihood of a woman winning is approximately 6 percentage points higher in seats with caste quotas compared to open seats in Columns (1) and (2), respectively. All estimates are significant at the 1% level.⁶

Table 5.1: Effect of Caste Quotas on Women's Representation

	(1)	(2)
Panel A: Outcome–Dummy for whether any woman candidate		
Caste Quota	0.054*** (0.0030)	0.076*** (0.0060)
Control Mean	.132	.129
No. of Observations	65822	20970
Panel B: Outcome– Dummy for whether winner is woman		
Caste Quota	0.064*** (0.0025)	0.064*** (0.0047)
Control Mean	.041	.051
No. of Observations	58454	19699
GP FE	Yes	-
GP Ward FE	No	Yes

Notes: This table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to seats without any gender quotas. Each observation is a council member seat. Caste Quota takes the value 1 if the seat has caste quota and 0 otherwise. Column (1) provides results for all GP member seats, while Column (2) presents results for member seats with variation in treatment assignment within a ward. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

Additionally, I examine whether the effects of caste quotas are robust to other common measures of women's candidacy in Table A4. The results for the proportion of women candidates (Panel A) and women winners (Panel B) are consistent across these measures.

To assess heterogeneity across quota types, Table A5 compares the effects of OBC, SC, and ST quotas on women's representation. The results indicate that SC, ST, and OBC

⁶Note that the sample is smaller for analysis on likelihood of women winners. This is because I am unable to identify the winners for some seats in the candidate sample for the following reasons: (1) when two candidates received the same vote count, the winner was decided through a lottery and the dataset does not provide information on lottery outcomes; (2) in some cases, the vote information was missing or incorrect, as all candidates are shown to have polled the same number of votes (having the same rank), making the winner unclear. In Table A3, panel A presents the results on candidacy of members for the same sample as likelihood of winners, and the results look similar.

quotas increase the likelihood of any woman entering a contest, as well as the likelihood of a woman winning. In other words, the effects of caste quotas are not limited to or driven solely by a particular marginalized caste group.

Lastly, I examine the effect of caste quotas for sarpanch seats in GPs where the sarpanch is directly elected (Table 5.2). In the baseline specification for sarpanch seats, I control for block fixed effects and election year fixed effects in Column (1). In Column (2), I additionally control for the shares of SC and ST populations in the GP. Consistent with the results for council member seats, I find that the likelihood of a woman contestant is approximately 13 percentage points higher in seats with caste quotas compared to seats without quotas (see Columns (1) and (2) in Panel A). These results are robust for alternate measures of candidacy (see Table A6). Similarly, in Panel B, the likelihood of a woman winning is approximately 8 percentage points higher in seats with caste quotas compared to open seats, as shown in Columns (1) and (2).⁷

Overall, the results provide strong evidence that caste quotas increase women's representation. Effect sizes range from 5 to 13 percentage points for the likelihood of any woman running and from 6 to 8 percentage points for the likelihood of a woman winning. These effects are substantial, given that the control mean is less than 0.14 for the likelihood of a woman candidate and less than 0.6 for the likelihood of a woman winning. This implies at least a 40% increase relative to the control mean in women's candidacy and more than a 100% increase in women's representation in office. In comparison, Cassan and Vandewalle [2021] and Karekurve-Ramachandra and Lee [2020] find effects ranging from 50% to 70% for the impact of gender quotas on the representation of marginalized groups. Furthermore, the similar results for sarpanch and council member seats suggest that the impact of caste quotas does not depend on political stakes, electorate size, or demographic heterogeneity. In particular, the sarpanch is elected by a larger and more heterogeneous electorate and holds greater powers, while council

⁷In Table A3, panel B presents the results on candidacy of sarpanch for the same sample as likelihood of winners, and the results look similar.

Table 5.2: Effect of Caste Quotas on Women's Representation for Sarpanch Seats

	(1)	(2)
Panel A: Outcome–Dummy for whether any woman candidate		
Caste Quota	0.13*** (0.014)	0.13*** (0.015)
Control Mean	.17	.172
No. of Observations	4336	3947
Panel B: Outcome– Dummy for whether winner is woman		
Caste Quota	0.075*** (0.011)	0.076*** (0.012)
Control Mean	.057	.057
No. of Observations	4279	3903
Block FE	Yes	Yes
Share SC pop.	No	Yes
Share ST pop.	No	Yes
Election Year FE	Yes	Yes

Notes: This table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to seats without any gender quotas. Each observation is a sarpanch seat. Caste Quota takes the value 1 if the seat has caste quota and 0 otherwise. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

members are elected from much smaller and more homogeneous electorates.

6 Discussion

In this section, I examine the mechanisms underlying the main results and conclude by discussing how the ward structure may influence these findings.

6.1 Mechanisms

My theory predicts that the effects on women's candidacy and likelihood of winning operate through two channels: (1) inter-group differences in social norms and (2) variation in political dynamics between open seats and seats with caste quotas. Below, I explore evidence for each mechanism.

6.1.1 Explanations for Candidacy Results

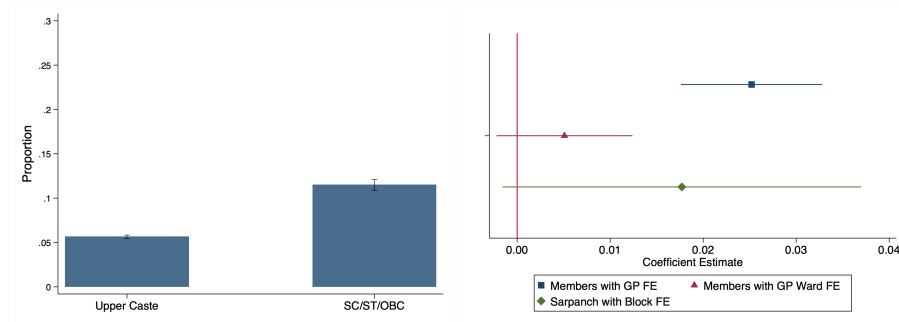
I first examine the mechanisms behind the 40% increase in women's candidacy in caste quota seats.

My theory suggests that women from marginalized castes face lower barriers to entry due to fewer mobility restrictions. If this mechanism drives the results, we should observe that even in open seats—where quotas play no role—marginalized-caste candidates are more likely to be women than upper-caste candidates. This would confirm that when seats are restricted to marginalized castes (who have more women willing to run), women's overall candidacy mechanically increases.

Figure 6.1 examines this relationship in open seats, which are typically dominated by upper-caste men. The left panel shows raw gender distributions by caste, revealing a larger gender gap among upper-caste candidates. The right panel presents regression results confirming that among candidates in open seats, those from marginalized castes are significantly more likely to be women (detailed results in Table A7). This pattern supports the hypothesis that marginalized-caste women face fewer barriers to political entry.

To verify that differential mobility restrictions drive this pattern, I examine survey

Figure 6.1: Caste, Gender and Candidacy in Open Seats



Notes: The left panel shows the raw distribution of women candidates by caste group (upper caste vs. SC/ST/OBC). The right panel presents regression estimates from candidate-level analysis, where symbols indicate point estimates and solid lines show 95% confidence intervals. The dependent variable is an indicator for female candidates, and the main independent variable indicates marginalized caste status. The regression includes ward and GP specific characteristics.

evidence on gender norms. To do so, I use questions on gender norms from the women-only module of IHDS and regress the variables described above on an indicator that takes value 1 when the woman is from a marginalized caste and 0 if upper caste.⁸

Following [Cassan and Vandewalle \[2021\]](#), I analyze Maharashtra-specific data from the 2011-12 Indian Human Development Survey on women's mobility restrictions, public participation, and work patterns. Table 6.1 reveals striking differences between caste groups. Marginalized-caste women are significantly more likely to travel alone for daily activities, less likely to need permission for mobility, and more present in public spaces including gram panchayat meetings. Crucially, they are less likely to practice purdah and more likely to have worked for wages. The lower prevalence of inter-caste marriage among marginalized castes further supports the role of purity norms, as preventing such marriages is a primary function of mobility restrictions.

One alternative explanation merits consideration: upper-caste women might have better labor market opportunities that draw them away from politics. However, this seems unlikely for two reasons. First, female labor force participation in rural India

⁸I use the following specification:

$$Outcome_i = \alpha_0 + \alpha_1 \text{Women from marginalized Caste}_i + \alpha_2 X_i + \epsilon_i \quad (4)$$

where $Outcome_i$ is the outcome of woman i , $\text{Women from marginalized caste}_i$ is a dummy variable, and X_i controls for age, marital status, and education of the respondent.

is declining primarily among upper castes, as non-working has become a status signal [Munshi and Singh, 2024]. Second, Table 6.1 Panel E shows that marginalized-caste women are more willing and allowed to work, suggesting that economic opportunities are not constraining their political participation.

Table 6.1: Inter-group differences in Gender Norms

Panel A: Doing outside home activities alone			
	(1) Visit grocery store	(2) Visit health center	(3) Visit friend
Women from marginalized caste	0.073*** (0.015)	0.097*** (0.015)	0.071*** (0.015)
Control Mean	.758	.707	.738
No. of Observations	3362	3595	3468
Panel B: Permission for outside home activities			
	(1) Visit health centre	(2) Visit friend	(3) Bus trip
Women from marginalized caste	-0.054*** (0.014)	-0.058*** (0.015)	-0.019 (0.016)
Control Mean	.784	.736	.864
No. of Observations	3813	3766	2108
Panel C: Presence in Public			
	(1) Member Political Party	(2) Member SHG	(3) Attend GP Meeting
Women from marginalized caste	0.00096 (0.0047)	0.048*** (0.011)	0.045*** (0.011)
Control Mean	.01	.049	
No. of Observations	2142	2143	2139
Panel C: Other norms			
	(1) Practice purdah	(2) Discuss Politics	(3) Inter-caste marriage
Women from marginalized caste	0.0095 (0.017)	0.16*** (0.025)	0.12*** (0.021)
Control Mean	.555	.885	.232
No. of Observations	3813	3666	1967
Panel E: Work			
	(1) Willing	(2) Allowed	(3) Have worked
Women from marginalized caste	0.12*** (0.027)	0.12*** (0.028)	0.25*** (0.021)
Control Mean	.446	.418	.312
No. of Observations	1289	1275	2136

Notes: This table uses data on from 2011-12 Indian Human Development Survey. Each observation is a respondent from the women module. Women from marginalized caste takes value 1 if the women belong to SC, ST or OBC group and 0 if belong to a upper caste group. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Lastly, could political parties be driving these patterns by strategically nominating women in caste quota seats? While [Jensenius \[2016\]](#) documents this strategy in state elections, village elections differ crucially: candidates run without party tickets, and existing gender quotas mean parties need not use caste quotas to increase women's representation. Therefore, party strategies are unlikely to explain the candidacy patterns.

6.1.2 Explanations for results on winning likelihood

Women are twice as likely to win in caste quota seats compared to open seats. I examine three potential explanations: differential voter discrimination, increased candidacy, and reduced competition.

If voters discriminate less against marginalized-caste women than upper-caste women, this could explain their electoral success. To test this, I examine win rates conditional on candidacy in open seats (Figure [6.2](#)). Contrary to this hypothesis, marginalized-caste women actually face lower win probabilities than upper-caste women when both compete in open seats (Table [A8](#)). This rules out favorable voter bias as an explanation.

Table [6.2](#) examines the political competition mechanism: caste quota seats attract significantly fewer total candidates than open seats, indicating reduced political competition. This likely reflects the smaller pool of eligible households with political aspirations among marginalized castes. Despite this lower overall competition, women's candidacy rates are higher in these seats.

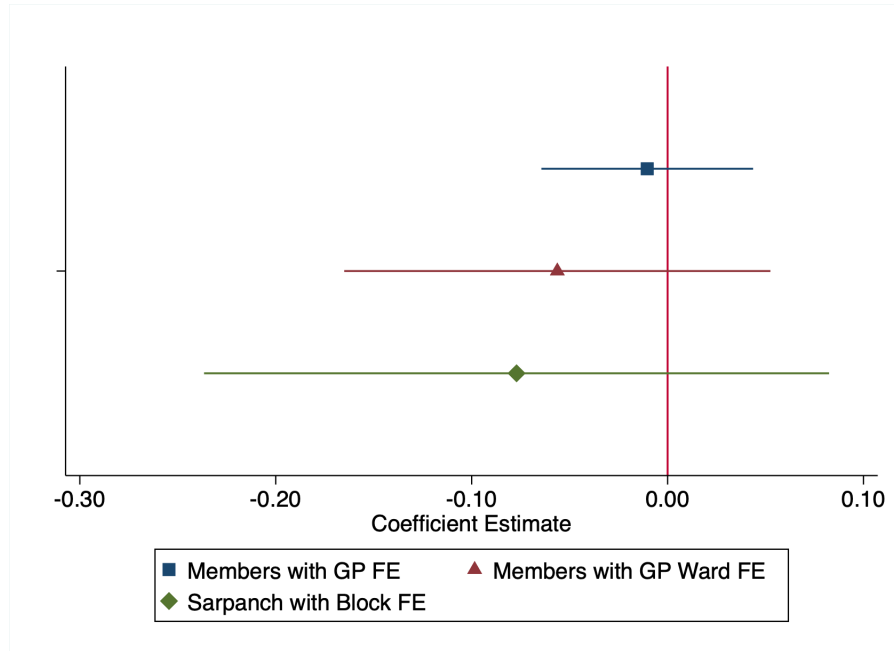
Hence, consistent with the theory, there is suggestive evidence that women's electoral success in caste quota seats operates through two reinforcing channels. First, increased women's candidacy mechanically improves their chances—when more women run, the probability of a woman winning necessarily increases. Second, reduced competition amplifies this effect: with fewer total candidates, each woman candidate faces better odds than in crowded open-seat contests. Together, these mechanisms explain why caste quotas double women's likelihood of holding office.

Table 6.2: Effect of Caste Quotas on Political Competition

	(1)	(2)
Panel A: Ward members		
Caste Quota	-0.16*** (0.0066)	-0.18*** (0.011)
Control Mean	2.273	2.333
No. of Observations	64707	20970
GP FE	Yes	-
GP Ward FE	No	Yes
Panel B: Sarpanch		
Caste Quota	-0.22*** (0.048)	-0.25*** (0.048)
Control Mean	3.209	3.205
No. of Observations	4336	3947
Block FE	Yes	Yes
Share SC pop.	No	Yes
Share ST pop.	No	Yes
Election Year FE	Yes	Yes

Notes: This table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to seats without any gender quotas. Each observation is a council member seat. Caste Quota takes the value 1 if the seat has caste quota and 0 otherwise. Column (1) provides results for all GP member seats, while Column (2) presents results for member seats with variation in treatment assignment within a ward. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

Figure 6.2: Caste, Gender and Winning in Open Seats



Notes: This figure shows coefficient estimates from female candidate-level regressions. The outcome variable is whether the winner is female or not, and the main independent variable is an indicator if the candidate is from a marginalized caste. The analysis uses the same set of controls as the main specification. The symbols indicate point estimates and solid lines show 95% confidence intervals.

6.2 Spillovers of ward structure

While the analysis concentrates on non-quota seats, women's candidacy choices are shaped by the configuration of the ward as a whole. Most wards include at least one reserved seat for women, which I exclude from the main sample. These excluded seats may nevertheless affect women's strategic decisions in neighboring contests, creating important spillover dynamics.

To account for within ward candidate selection dynamics, I examine how my main results vary based on the type of excluded gender quota seat. For instance, Table 6.3 shows the seats in Aambad and Deothan GPs for the sample of wards with varying quota seats. Similar to Ward No. 3 in Aambad GP, Ward No. 6 in Deothan GP is included in the sample with ward fixed effects because there is variation in treatment assignment within the ward. However, the excluded gender quota types differ: one seat is reserved for women in Aambad, while one seat is reserved for OBC women in Deothan.

Table 6.3: Seats in Aambad GP and Deothan GP

Ward name	Seat type
Ward no. 3 in Aambad GP	Open, OBC, Women
Ward no. 6 in Deothan GP	Open, ST, OBC Women

Notes: Quota status of each seat for two GPs in Akole, Ahmadnagar.

In seats with both caste and gender quotas, only women from SC, ST, or OBC groups can run for office, while any woman can run in seats with only gender quotas. If mostly upper-caste women contest for women’s quotas and, therefore, contest for fewer open seats in Aambad, then the effect of the caste quota may be overestimated. On the other hand, if seats with both women’s and caste quotas are excluded, the effect of the caste quota may be underestimated. To study the heterogeneity by the type of gender quota seats, I use the following empirical specification:

$$Y_{swg} = \alpha + \beta_1 \text{Caste Quota}_{swg} + \beta_2 (\text{Caste Quota}_{swg} \times \text{Women Excluded}_{wg}) + \beta_3 (\text{Caste Quota}_{swg} \times \text{Caste Women Excluded}_{wg}) + \gamma_w + \epsilon_{swg} \quad (5)$$

where $\text{Caste Quota}_{swg} \times \text{Women Excluded}_{wg}$ takes a value of 1 if the seat has a quota for SC, ST, or OBC and there is a women’s quota seat in the excluded sample, and 0 otherwise. Meanwhile, $\text{Caste Quota}_{swg} \times \text{Caste Women Excluded}_{wg}$ takes a value of 1 if the seat has a quota for SC, ST, or OBC and there is an OBC/ST/SC women’s quota seat in the excluded sample.

Table 6.4 presents these results, comparing effects in wards that exclude general women’s quota seats versus those that exclude seats with both caste and gender quotas. This analysis helps distinguish between seat-specific effects of caste quotas and broader ward-level strategic considerations that might influence women’s descriptive representation patterns.

The analysis reveals two key patterns. First, caste quotas primarily increase women’s candidacy in wards where general women’s quota seats (seats reserved for women without caste restrictions) are excluded. However, both women from marginalized castes

and upper-caste women contest these gender quota seats in similar proportions, suggesting that gender quota seats are not dominated by women from any particular caste (see Figure B3). In other words, spillover effects or selection into the gender quota seats by women from a particular caste are not driving the main results. Second, the impact of caste quotas on women winning elections is lower in wards where the excluded gender quota seats are doubly reserved (those with both caste and gender quotas). This suggests that women from marginalized caste groups prefer to contest in seats that combine both caste and gender quotas rather than compete against men from their own caste groups in seats with only caste quotas. Despite women's descriptive representation being higher in caste quota seats compared to open seats, this pattern makes sense as women may perceive that contesting against men reduces their chances of winning even if they are all men from their own caste group. Hence, whenever a marginalized caste has the option of contesting a seat with both gender and caste quotas, they prefer it as in such seats they do not have to face competition from men and only face women from their own caste group.

7 Conclusion

This paper examines how quotas focused on a single dimension of identity affect political representation along another dimension. Using novel administrative data on village elections in rural Maharashtra, I find that caste quotas significantly increase women's representation—a 40% increase in women's candidacy and more than doubling their likelihood of winning office. Consistent with my theory, evidence suggests this effect is driven by fewer mobility restrictions on marginalized-caste women and reduced political competition in quota seats.

These findings extend to contexts with similar institutional arrangements and stratified social hierarchies, particularly other Indian states where caste-based gender norms operate similarly. However, important limitations bound these conclusions. First, the mechanisms identified depend on India's specific intersection of caste and gender,

Table 6.4: Heterogenous Effect of Caste Quotas by Excluded Seat Type

	(1)	(2)
Panel A: Outcome– Dummy for whether any woman candidate		
Caste Quota	0.038*** (0.0080)	0.033 (0.024)
Caste Quota x Women Excluded	0.057*** (0.0077)	0.066*** (0.025)
Caste Quota x Caste Women Excluded	-0.021*** (0.0071)	-0.016 (0.027)
Control Mean	.129	.129
No. of Observations	64705	20967
Panel B: Outcome– Dummy for whether winner is woman		
Caste Quota	0.052*** (0.0057)	0.060*** (0.016)
Caste Quota x Women Excluded	0.033*** (0.0056)	0.021 (0.017)
Caste Quota x Caste Women Excluded	-0.025*** (0.0052)	-0.044** (0.019)
Control Mean	.041	.051
No. of Observations	58454	19699
GP FE	Yes	-
GP Ward FE	No	Yes

Notes: This table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to seats without any gender quotas. Each observation is a council member seat. Caste Quota takes the value 1 if the seat has caste quota and 0 otherwise. Caste Quota x takes the value 1 if the seat is has caste quota and 0 otherwise Column (1) provides results for all GP member seats, while Column (2) presents results for member seats with variation in treatment assignment within a ward. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

where upper-caste women face greater restrictions than marginalized-caste women. In contexts with different intersectional dynamics—such as Bolivia or South Africa, where indigenous or Black women face compounded disadvantages—quotas may produce opposite effects. Second, these dynamics may differ substantially in contexts where party gatekeeping dominates candidate selection, potentially nullifying the community-based mechanisms observed in village politics [Jensenius, 2016].

This study also faces data limitations that future research should address. While I demonstrate that caste quotas increase women's representation, I cannot definitively

establish whether these women exercise independent political agency or serve as proxies for male family members—a critical distinction for policy effectiveness. The administrative data, while comprehensive on electoral outcomes, lacks information on post-election legislative behavior, policy choices, and constituency service. Future work should examine whether women elected in caste-quota seats pursue different policies than those in gender-quota seats, and whether they show greater independence in decision-making.

Several avenues merit further investigation. First, examining the general equilibrium effects of simultaneous caste and gender quotas would illuminate how multiple quota systems interact. Second, tracking women's political careers from local to state politics would reveal whether caste quotas create better advancement trajectories than gender quotas. Third, comparative analysis across Indian states with varying gender norms and caste hierarchies could identify scope conditions for positive spillover effects. Finally, experimental or quasi-experimental evidence on voter preferences for women candidates across caste groups would help systematically examine demand-side mechanisms.

These findings challenge conventional views that single-dimensional affirmative action inevitably creates new inequalities, as argued in recent cases like *Students for Fair Admissions v. Harvard* (2023). Instead, quota effects depend critically on how institutional rules interact with social hierarchies. This insight is particularly relevant given India's recent constitutional amendment reserving one-third of legislative seats for women—understanding how this interacts with existing caste quotas becomes crucial for anticipating outcomes. More broadly, success in affirmative action hinges not merely on formal rules but on their interaction with prevailing social conditions. Future policy design should anticipate these interactions to better harness the unintended—but potentially beneficial—spillover effects of electoral quotas.

References

- Patrick Agte and Arielle Bernhardt. The economics of caste norms: Purity, status, and women's work in India. *Working Paper*, 2023.
- Scott Ashworth, Christopher R Berry, and Ethan Bueno de Mesquita. Modeling theories of women's underrepresentation in elections. *American Journal of Political Science*, 68(1):289–303, 2024.
- Adam Michael Auerbach and Adam Ziegfeld. How do electoral quotas influence political competition? Evidence from municipal, state, and national elections in India. *The Journal of Politics*, 82(1):397–401, 2020.
- Christina E Bejarano. *The Latina advantage: Gender, race, and political success*. University of Texas Press, 2013.
- Rikhil R Bhavnani. Do electoral quotas work after they are withdrawn? Evidence from a natural experiment in India. *American Political Science Review*, 103(1):23–35, 2009.
- Irene Browne and Joya Misra. The intersection of gender and race in the labor market. *Annual Review of Sociology*, 29(1):487–513, 2003.
- Rachel Brulé and Aliz Toth. Do quotas in two dimensions improve social equality? Intersectional representation & group relations. *Intersectional Representation & Group Relations (May 23, 2022)*, 2022.
- Guilhem Cassan and Lore Vandewalle. Identities and public policies: Unexpected effects of political reservations for women in India. *World Development*, 143:105408, 2021.
- Karen Celis, Silvia Erzeel, Liza Mügge, and Alyt Damstra. Quotas and intersectionality: Ethnicity and gender in candidate selection. *International Political Science Review*, 35(1):41–54, 2014.

- Uma Chakravarti. Conceptualising Brahmanical patriarchy in early India: Gender, caste, class and state. *Economic and Political Weekly*, pages 579–585, 1993.
- Raghavendra Chattopadhyay and Esther Duflo. Impact of reservation in Panchayati Raj: Evidence from a nationwide randomised experiment. *Economic and Political Weekly*, pages 979–986, 2004.
- Simon Chauchard. *Why representation matters: The meaning of ethnic quotas in rural India*. Cambridge University Press, 2017.
- Amanda Clayton. How do electoral gender quotas affect policy? *Annual Review of Political Science*, 24:235–252, 2021.
- Irma Clots-Figueras and Lakshmi Iyer. Gender and natural experiments in developing countries. In *Handbook of Experimental Development Economics*. Edward Elgar, 2023.
- Patricia Hill Collins. Gender, black feminism, and black political economy. *The annals of the American academy of political and social science*, 568(1):41–53, 2000.
- Kimberlé Crenshaw. Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. In *Feminist Legal Theories*, pages 23–51. Routledge, 2013.
- Robert Darcy, Charles D Hadley, and Jason F Kirksey. Election systems and the representation of black women in American state legislatures. *Women & Politics*, 13(2):73–89, 1993.
- Richard L Fox and Jennifer L Lawless. Gendered perceptions and political candidacies: A central barrier to women’s equality in electoral politics. *American Journal of Political Science*, 55(1):59–73, 2011.

- Luis Ricardo Fraga, Valerie Martinez-Ebers, Linda Lopez, and Ricardo Ramírez. Representing gender and ethnicity: Strategic intersectionality. *Legislative Women: Getting Elected, Getting Ahead*, pages 157–174, 2008.
- Tanushree Goyal. Local political representation as a pathway to power: A natural experiment in India. *American Journal of Political Science*, 2024.
- Bell Hooks. Feminism and black women’s studies. *Sage*, 6(1):54, 1989.
- Chang-Ling Huang. Falling through the cracks? Indigenous women’s political participation in Taiwan. *Asian Journal of Women’s Studies*, 2012.
- Melanie M Hughes. Intersectionality, quotas, and minority women’s political representation worldwide. *American Political Science Review*, 105(3):604–620, 2011.
- Seema Jayachandran. Social norms as a barrier to women’s employment in developing countries. Technical report, National Bureau of Economic Research, 2020.
- Francesca R Jensenius. Competing inequalities? On the intersection of gender and ethnicity in candidate nominations in Indian elections. *Government and Opposition*, 51(3):440–463, 2016.
- Varun Karekurve-Ramachandra. Gender quotas and upward political mobility in India. *Working Paper*, 2020.
- Varun Karekurve-Ramachandra and Alexander Lee. Do gender quotas hurt less privileged groups? Evidence from India. *American Journal of Political Science*, 64(4):757–772, 2020.
- Mona Lena Krook and Diana Z O’Brien. The politics of group representation: Quotas for women and minorities worldwide. *Comparative Politics*, 42(3):253–272, 2010.
- Jennifer L Lawless. Female candidates and legislators. *Annual Review of Political Science*, 18(1):349–366, 2015.

- Leslie McCall. The complexity of intersectionality. *Signs: Journal of Women in Culture and Society*, 30(3):1771–1800, 2005.
- Liza M Mügge. Intersectionality, recruitment and selection: Ethnic minority candidates in Dutch parties. *Parliamentary Affairs*, 69(3):512–530, 2016.
- Kaivan Munshi and Swapnil Singh. Social status, economic development and female labor force (non) participation. Technical report, National Bureau of Economic Research, 2024.
- Ramya Parthasarathy, Vijayendra Rao, and Nethra Palaniswamy. Deliberative democracy in an unequal world: A text-as-data study of South India’s village assemblies. *American Political Science Review*, 113(3):623–640, 2019.
- Tasha S Philpot and Hanes Walton Jr. One of our own: Black female candidates and the voters who support them. *American Journal of Political Science*, 51(1):49–62, 2007.
- Stéphanie Rousseau. Indigenous and feminist movements at the constituent assembly in bolivia: Locating the representation of indigenous women. *Latin American Research Review*, 46(2):5–28, 2011.
- Becki Scola. *Gender, race, and office holding in the United States: Representation at the intersections*. Routledge, 2013.
- Dara Z Strolovitch. Do interest groups represent the disadvantaged? Advocacy at the intersections of race, class, and gender. *The Journal of Politics*, 68(4):894–910, 2006.
- Ana Catalano Weeks. *Making gender salient: From gender quota laws to policy*. Cambridge University Press, 2022.

Supplementary Information for “Do Electoral Quotas for Marginalized Ethnic Groups Improve Women’s Representation? Evidence from India”

List of Tables

2.1	Theoretical Predictions for Women’s Political Representation	10
5.1	Effect of Caste Quotas on Women’s Representation	19
5.2	Effect of Caste Quotas on Women’s Representation for Sarpanch Seats . . .	21
6.1	Inter-group differences in Gender Norms	24
6.2	Effect of Caste Quotas on Political Competition	26
6.3	Seats in Aambad GP and Deothan GP	28
6.4	Heterogenous Effect of Caste Quotas by Excluded Seat Type	30
A1	Comparing between Sample and Non-Sample GPs	A2
A2	Comparing Election Statistics between Sample and Non-Sample GPs . . .	A2
A3	Effect of Caste Quotas on Likelihood of a Woman Candidate	A3
A4	Effect of Caste Quotas on Women Candidacy	A4
A5	Effect of Caste Quotas on Women’s Representation by Caste Group	A5
A6	Effect of Caste Quotas on Women Candidacy (Sarpanch)	A6
A7	Relationship Caste and Women’s Candidacy in Open Seats	A7
A8	Relationship Caste and Women’s Winnability in Open Seats	A7
A9	Women Candidacy, Caste Quotas and Women Winners	A8

List of Figures

3.1	Council Seats in Aambad GP	13
4.1	Council Seats in Aambad GP (Sample)	15
4.2	Distribution of Main Outcomes	16
4.3	Council Seats in Aambad GP (Ward Fixed Effects Sample)	17
6.1	Caste, Gender and Candidacy in Open Seats	23

6.2	Caste, Gender and Winning in Open Seats	27
B1	Seats in Aambegaon GP	A9
B2	Gender and Caste in Open Seats	A9
B3	Caste of Women Candidates in Seats with Gender Quota	A9

A Additional Tables

Table A1: Comparing between Sample and Non-Sample GPs

	Full State	Sample with GP FE	Sample with GP Ward FE
Total Population	2155.144 (1882.163)	2241.483 (1949.908)	2696.55 (2176.239)
Total Area(Km)	4054.506 (150480.6)	4073.546 (157669.6)	1033.997 (10433.27)
Total Population	2155.144 (1882.163)	2241.483 (1949.908)	2696.55 (2176.239)
Share SC	.124 (.105)	.126 (.104)	.136 (.102)
Share ST	.154 (.258)	.15 (.249)	.142 (.215)
N	19423	15735	3582

Table A2: Comparing Election Statistics between Sample and Non-Sample GPs

	Full State	Sample with GP FE	Sample with GP Ward FE
No. of candidates	2.317 (1.043)	2.246 (.932)	2.253 (.859)
Whether any candidate is a woman	.168 (.374)	.158 (.365)	.175 (.38)
No. of female candidates	.205 (.509)	.186 (.465)	.212 (.503)
Prop. female candidates	.101 (.253)	.096 (.248)	.104 (.251)
Female winner	.076 (.265)	.071 (.258)	.091 (.288)
OBC Quota	.224 (.417)	.226 (.418)	.331 (.471)
Open (No quota)	.473 (.499)	.473 (.499)	.366 (.482)
SC Quota	.148 (.355)	.151 (.358)	.188 (.391)
ST Quota	.156 (.363)	.15 (.357)	.115 (.319)
N	71110	64705	20967

Table A3: Effect of Caste Quotas on Likelihood of a Woman Candidate

	(1)	(2)
Panel A: Members sample		
Caste Quota	0.083*** (0.0033)	0.083*** (0.0061)
Control Mean	.096	.111
No. of Observations	57942	19165
Panel B: Sarpanch sample		
Caste Quota	0.13*** (0.014)	0.13*** (0.015)
Control Mean	.171	.173
No. of Observations	4284	3904
GP FE	Yes	-
GP Ward FE	No	Yes

Notes: This table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to seats without any gender quotas. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

Table A4: Effect of Caste Quotas on Women Candidacy

	(1)	(2)
Panel A: Outcome– Prop. women candidates		
Caste Quota	0.049*** (0.0021)	0.051*** (0.0038)
Control Mean	.08	.074
No. of Observations	64707	20970
Panel B: Outcome– No. of women candidates		
Caste Quota	0.10*** (0.0041)	0.11*** (0.0077)
Control Mean	.143	.147
No. of Observations	64705	20967
GP FE	Yes	-
GP Ward FE	No	Yes

Notes: This table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to seats without any gender quotas. Each observation is a council member seat. Caste Quota takes the value 1 if the seat has caste quota and 0 otherwise. Column (1) provides results for all GP member seats, while Column (2) presents results for member seats with variation in treatment assignment within a ward. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

Table A5: Effect of Caste Quotas on Women's Representation by Caste Group

	(1)	(2)
Panel A: Outcome– Dummy for whether any woman candidate		
SC Quota	0.076*** (0.0048)	0.078*** (0.0090)
ST Quota	0.080*** (0.0063)	0.073*** (0.011)
OBC Quota	0.067*** (0.0038)	0.076*** (0.0066)
Control Mean	.129	.129
No. of Observations	64707	20970
Panel B: Outcome– Dummy for whether winner is woman		
SC Quota	0.058*** (0.0038)	0.057*** (0.0072)
ST Quota	0.066*** (0.0049)	0.066*** (0.0087)
OBC Quota	0.068*** (0.0031)	0.066*** (0.0053)
Control Mean	.041	.051
No. of Observations	58454	19699
GP FE	Yes	-
GP Ward FE	No	Yes

Notes: Table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to seats without any gender quotas. Each observation is a council member seat. OBC Quota take value 1 if the seat has OBC quota and 0 otherwise. Similarly, I code SC and ST Quota. Column (1) provides results for all GP member seats, while Column (2) presents results for member seats with variation in treatment assignment within a ward. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

Table A6: Effect of Caste Quotas on Women Candidacy (Sarpanch)

	(1)	(2)
Panel A: Outcome– Prop. women candidates		
Caste Quota	0.078*** (0.0069)	0.082*** (0.0076)
Control Mean	.061	.063
No. of Observations	4336	3947
Panel B: Outcome– No. of women candidates		
Caste Quota	0.22*** (0.021)	0.23*** (0.023)
Control Mean	.202	.203
No. of Observations	4336	3947
Block FE	Yes	Yes
Share SC pop.	No	Yes
Share ST pop.	No	Yes
Election Year FE	Yes	Yes

Notes: This table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to seats without any gender quotas. Each observation is a council member seat. Caste Quota takes the value 1 if the seat has caste quota and 0 otherwise. Column (1) provides results for all GP member seats, while Column (2) presents results for member seats with variation in treatment assignment within a ward. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

Table A7: Relationship Caste and Women's Candidacy in Open Seats

	(1) Ward	(2) Ward	(3) Sarpanch
Marginalized Caste	0.025*** (0.0039)	0.0051 (0.0037)	0.018* (0.0098)
Control Mean	.055	.05	.06
No. of Observations	77229	73478	6836
GP FE	Yes	-	-
GP Ward FE	No	Yes	-
Block FE	-	-	Yes
Election Year FE	-	-	Yes

Notes: This table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to open seats. Each observation is a candidate. Marginalized Caste takes the value 1 if the candidate is from SC/ST/OBC caste and 0 otherwise. The outcome variable is 1 if the candidate is a woman and 0 otherwise. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

Table A8: Relationship Caste and Women's Winnability in Open Seats

	(1) Ward	(2) Ward	(3) Sarpanch
Women from marginalized Caste	-0.010 (0.028)	-0.056 (0.055)	-0.077 (0.081)
Control Mean	.51	.443	.33
No. of Observations	2042	1036	356
GP FE	Yes	-	-
GP Ward FE	No	Yes	-
Block FE	-	-	Yes
Election Year FE	-	-	Yes

Notes: This table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to open seats. Each observation is a female candidate. Women from marginalized Caste takes the value 1 if the female candidate is from SC/ST/OBC caste and 0 otherwise. The outcome variable is 1 if the candidate is a winner and 0 otherwise. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

Table A9: Women Candidacy, Caste Quotas and Women Winners

	(1) Ward	(2) Ward	(3) Ward	(4) Ward	(5) Sarpanch	(6) Sarpanch
Caste Quota	0.025*** (0.0012)	0.0012 (0.00079)	0.027*** (0.0023)	0.0060*** (0.0015)	0.025*** (0.0031)	0.0032 (0.0024)
Control Mean	.035	.035	.024	.024	.018	.018
No. of Observations	164477	164477	157420	157420	15885	15885
Female Cand.	No	Yes	No	Yes	No	Yes
GP FE	Yes	Yes	-	-	-	-
GP Ward FE	No	No	Yes	Yes	-	-
Block FE	-	-	-	-	Yes	Yes
Election Year FE	-	-	-	-	Yes	Yes

Notes: This table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to seats without gender quotas. Each observation is a candidate. Caste Quota takes the value 1 if the seat is reserved for SC/ST/OBC and 0 otherwise. The outcome variable is 1 if the winner is female and 0 otherwise. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.

B Additional Figures

Figure B1: Seats in Aambegaon GP

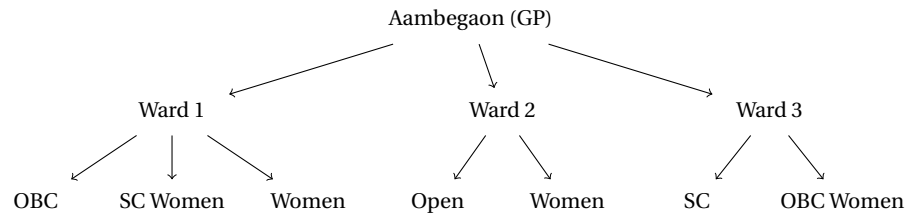
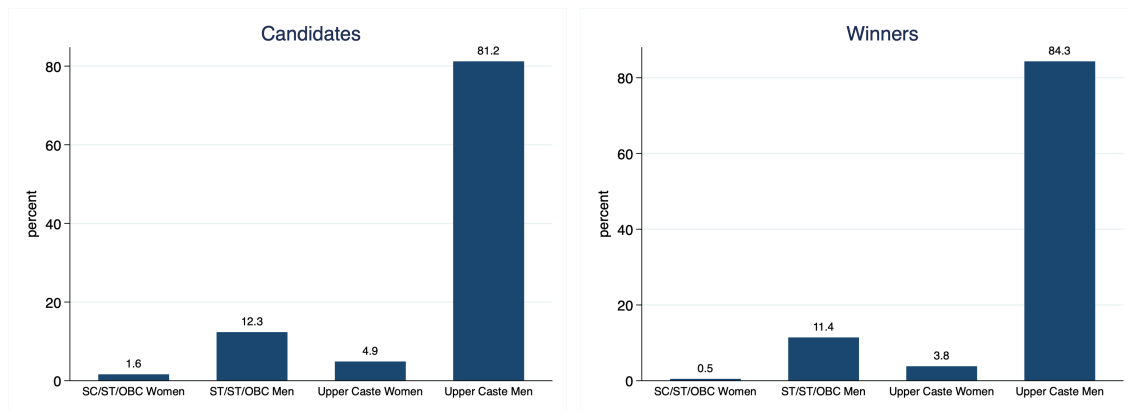
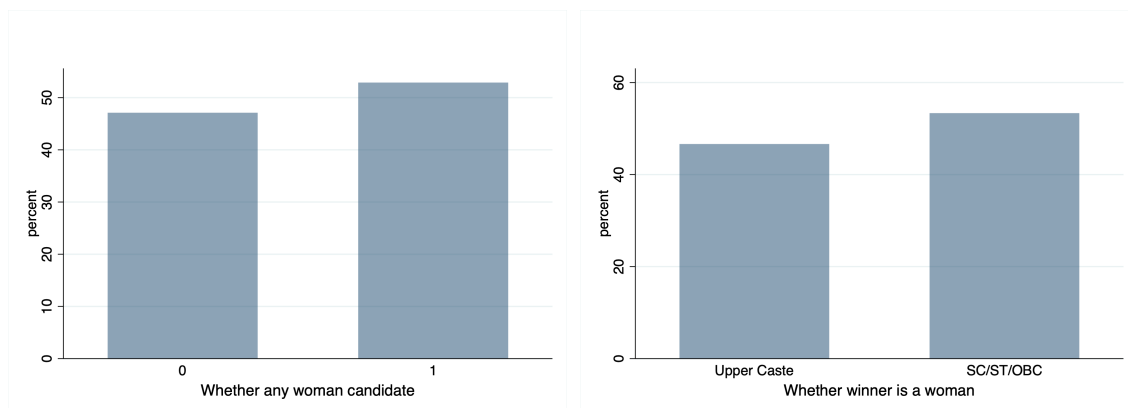


Figure B2: Gender and Caste in Open Seats



Notes: This figure shows the distribution of gender and caste in open seats.

Figure B3: Caste of Women Candidates in Seats with Gender Quota



Notes: This figure shows the percent of upper caste and SC/ST/OBC women candidates in seats with quotas for women but no reservations on caste.