

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

Priyadarshi Amar[†]

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Abstract

How do quotas focused on a single dimension of identity affect the representation of individuals with multiple intersecting disadvantaged identities? In this paper, I examine the impact of quotas for marginalized caste groups on women’s representation and argue that, when gender norms are correlated with social status, quotas for marginalized groups may influence women’s representation. To empirically test this, I use a novel design that leverages quasi-random variation in the assignment of caste quotas for council member seats in rural Maharashtra. I find that, for seats with quotas for marginalized caste groups, the likelihood of women running for and winning political office is higher than that for seats without quotas. Consistent with the theory, I find evidence suggesting that these findings are driven by restrictions on upper-caste women due to fears of becoming polluted when engaging in activities that involve proximity to marginalized caste groups. The results indicate that, within contexts of discrimination and social hierarchy, higher status may act as a barrier for women in politics.

Keywords: electoral quotas, local government, gram panchayat, caste, gender, India

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[†]PhD Candidate, University of Wisconsin–Madison. Email: pamar@wisc.edu

1 Introduction

Many countries are increasingly adopting electoral quotas to improve the descriptive political representation of historically marginalized groups. Gender and ethnic quotas are prominent examples of these measures (see [Krook and O'Brien \(2010\)](#) for a comprehensive list of countries with state-mandated electoral quotas). Several studies have examined the implications of such quotas on public goods provision ([Clots-Figueras and Iyer 2023](#)), policy influence ([Clayton 2021](#)), and political participation ([Htun and Ossa 2013](#); [Hughes 2011](#); [Krook 2010](#)). However, most of these quotas address inequality along a single dimension, such as gender, class, or ethnicity, although individuals vary along multiple cross-cutting dimensions, such as gender and ethnicity ([Crenshaw 2013](#); [McCall 2005](#)). These cross-cutting dimensions raise an important question: what are the consequences of electoral quotas for those with multiple disadvantaged identities, such as women from a marginalized minority group?

Early studies on the political representation of individuals with multiple disadvantaged identities show that women from marginalized groups are more underrepresented than men from the same groups ([Darcy et al. 1993](#); [Huang 2012](#)). However, recent studies emphasize that the political implications for such individuals may not necessarily lead to worse outcomes ([Bejarano 2013](#); [Celis et al. 2014](#); [Fraga et al. 2008](#); [Mügge 2016](#)). Most of this research, however, focuses on comparisons between marginalized men and women or between women from marginalized and privileged groups. There is limited research examining differences between men and women across communities. Additionally, the existing literature on the political implications for individuals with multiple cross-cutting identities is largely focused on institutions that do not have electoral quotas. More generally, there is limited systematic evidence.

This paper addresses these gaps by examining whether quotas for marginalized ethnic groups affect women's representation. In contexts where both women and members of marginalized ethnic groups face discrimination, I theorize that the correlation

between gender norms and social status affects women's decisions to run for office and to campaign effectively. In the Indian context, caste is often considered a marker of social status, and several studies have documented that women from privileged caste groups face greater restrictions due to purity norms, particularly the fear of pollution associated with proximity to marginalized caste groups (Agte and Bernhardt 2023; Casan and Vandewalle 2017; Chakravarti 1993; Field et al. 2010; Jayachandran 2020). These purity norms not only increase the cost of running for office but also affect the likelihood of winning, as they may hinder the formation of cross-community coalitions and campaigning in neighborhoods where marginalized communities reside. Therefore, I hypothesize that quotas for marginalized groups, which reduce the number of seats available to privileged groups, may increase marginalized women's candidacy while decreasing such participation by privileged women. The net effects on women's representation are an empirical question.

To test these hypotheses, I compare women's representation in seats with quotas for marginalized caste groups and seats without any quotas in village council (GP) elections in Maharashtra, India's second-largest state. Local government in India is a crucial institution for studying quotas, as it is one of the largest adopters of electoral quotas (Beaman et al. 2009; Bhavnani 2009; Chattopadhyay and Duflo 2004a; Chauchard 2017; Jensenius 2015). Like other states in India, Maharashtra has reserved seat electoral quotas for marginalized caste groups' Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBC), as well as for women. Since my focus is on the impact of caste quotas on women's representation, I restrict my sample to seats without quotas for women.

My empirical strategy employs a novel design that leverages quasi-random variation in the assignment of caste quotas for council member seats within GP wards. Council member seats are embedded in wards. In each ward, every seat has a separate ballot and elects a single member, but all seats share the same electorate (essentially, the

same constituency). Additionally, the quota status of the seats varies, allowing for the comparison of two seats that are within the same constituency but have different quota status.

I rely on large-scale, publicly unavailable administrative data on election statistics, which includes candidates' and winners' characteristics for village elections from 2018 to 2022. First, I examine the causal effect of caste quotas on women's candidacy. I find that the likelihood of having at least one female candidate is significantly higher in seats with caste quotas compared to those without. These findings are robust to alternate measures of candidacy, such as the number of women candidates and the proportion of women candidates. Second, the positive effects extend beyond candidacy. I find that the likelihood of a woman winning in caste quota seats is higher than in open seats. In addition to council members, each GP also has a village chief (sarpanch). The quota assignment for sarpanch seats depends on the population in the block (an administrative unit higher than the GP), and on the quota history. Controlling for block-level characteristics and their population shares in the GP, I find similar results for sarpanch seats. That said, these findings are not as robust, because I do not have data on quota history to control for this factor.

Altogether, these findings provide strong and consistent evidence that quotas for marginalized caste groups improve women's representation in political office as well as on the ballot. The effects size are large: a 40% increase relative to the control mean in women's candidacy and more than a 100% increase in women's representation in office. These findings alleviate potential fears that affirmative action policies targeting a single dimension of identity may create new cross-cutting inequalities. They have important policy implications in the Indian context, as well as in other settings where discussions on multidimensional or sub-categorization of affirmative action policies are prominent.

To explore the mechanism, I examine the gender gap in candidacy and representation in seats without quotas. Consistent with my theory, I find that the gender gap

is larger among high castes compared to SC, ST, and OBC castes. This suggests that women from marginalized caste groups face fewer restrictions on electoral activity due to gender norms. Additionally, I compare potential women politicians from marginalized castes to those from high castes in seats with gender quotas. Specifically, I compare the characteristics of women winners in seats with gender quotas to those in seats with both gender quotas and quotas for marginalized caste groups. The idea is that gender quotas may provide a pathway to political power in seats without institutional protection for women (Bhavnani 2009; Goyal 2024; Karekurve-Ramachandra 2020). I find that women from marginalized castes have fewer children, are younger, and possess more past electoral experience compared to women from general castes. Altogether, the findings provide suggestive evidence supporting the mechanism that gender norms associated with status make it more costly for women from general castes to participate in activities outside the household that require engagement with marginalized castes.

This paper makes several contributions to the existing literature on electoral quotas. First, I build on the theoretical insights to explain how the interaction between electoral quotas, status, and gender norms shapes representation. Second, I provide causal estimates on the effects of electoral quotas on the political representation of individuals with multiple cross-cutting identities. In this way, I address a gap where most existing work offers only correlational evidence, with the exceptions of Karekurve-Ramachandra and Lee (2020) and Cassan and Vandewalle (2017). Studying the representation consequences of quotas for individuals with multiple disadvantaged identities is crucial because descriptive representation has important welfare implications, especially in low- and middle-income countries (Brulé and Toth 2022). Several studies demonstrate that improvements in the descriptive representation of underrepresented groups as a result of quotas affect policy (Barnes 2016; Pande 2003) and the type of public goods provided (Chattopadhyay and Duflo 2004b; Chin and Prakash 2011; Gulzar et al. 2023). This study also complements a relatively new but growing body of literature that ex-

amines the political effects of electoral quotas, such as representation when quotas are removed (Bhavnani 2009), mobilization (Dunning and Nilekani 2013), political competition (Auerbach and Ziegfeld 2020), upward political mobility (Goyal 2024; Karekurve-Ramachandra 2020), and participation in public meetings (Parthasarathy et al. 2019).

Additionally, I contribute to the literature on affirmative action policies and the identities of beneficiaries more broadly. Several studies have highlighted that individuals at the intersection of race and gender experience worse outcomes in various settings, such as the labor market (Reskin 2000) and admission to academic institutions (Fernandez et al. 2022). To address these inequalities, governments have implemented affirmative action policies in government jobs and higher education (Kaletski and Prakash 2016). These findings underscore the conditions under which such policies may exacerbate or mitigate inequalities in other institutions with affirmative action measures.

Lastly, I contribute to the broader literature on women's representation. Existing literature has examined the roles of the differential costs of running for office, voter discrimination, and gendered perceptions of self-efficacy as the main reasons for the underrepresentation of women in politics (Ashworth et al. 2024; Fox and Lawless 2011; Lawless 2015). This study highlights that, in contexts of discrimination, high social status, which is typically associated with positive outcomes, may act as a barrier for women

2 Conceptual Framework

In contexts where certain groups are historically underrepresented, citizens from traditionally elite groups tend to dominate candidate pools and political offices, because they typically have the lowest cost of running for office (Chattopadhyay and Duflo 2004b). In single-member electoral districts, electoral quotas limit office to citizens of a particular group, thereby increasing their descriptive representation. However, electoral quotas are typically implemented on a single dimension, while individuals belong to multiple identities, such as gender as ethnicity.

How do electoral quotas shape the representation of those with multiple, cross-

cutting identities? Specifically, what are the consequences for individuals at the intersection of multiple disadvantaged identities, such as women from minority ethnic groups, in contexts where both women and minorities are underrepresented? Assuming that compounding inequalities increases the cost of running for office, different dimensions of disadvantaged identities intersect and amplify one another. Several studies have highlighted the consequences of this phenomenon by examining disparities in descriptive representation. For instance, [Darcy et al. \(1993\)](#) show that redistricting efforts improved the representation of Black politicians, but most of these gains were for Black men, not women. In a setting with gender quotas and quotas for indigenous groups, [Huang \(2012\)](#) find that the representation of indigenous women worsened over time, even as the representation of other women increased. The authors argue that this occurred because neither indigenous groups nor women's groups prioritized the representation of indigenous women, suggesting the need for multi-dimensional quotas.

Other studies argue that outcomes for those at the intersection of multiple disadvantaged identities may not always be worse. The socioeconomic status of women from marginalized minority groups may be better due to the high incidence of incarceration among men, leading to poor levels of education for the latter ([Philpot and Walton Jr 2007](#); [Scola 2013](#)). Additionally, voters may prefer women from marginalized groups over men, as they may be considered less radical ([Celis et al. 2014](#); [Mügge 2016](#)). For the same reason, marginalized women might find it easier to build or be a part of cross-cutting coalitions ([Bejarano 2013](#); [Fraga et al. 2008](#)).

In this paper, I explore how differential social norms across groups impact individuals at the intersection of multiple identities. Focusing on the consequences of quotas for marginalized groups on women's representation, I examine how varying gender norms across groups influence women's political participation. Quotas for marginalized groups reduce the number of seats available for traditionally elite groups. This reduction in eligible seats can either enhance or diminish women's representation, de-

pending on the gender norms within each social group. Specifically, if gender norms are more restrictive for women from traditionally elite groups, quotas from marginalized groups can improve women's representation. Gender norms may affect candidacy by increasing the cost of running for office and may also limit the formation of electoral alliances with other groups, thereby influencing the probability of winning. Drawing on insights from the extensive literature on caste and gender, I argue that gender norms are particularly restrictive for women from traditionally elite groups, due to cultural expectations that limit their mobility in activities requiring engagement with lower-caste groups, driven by fears of pollution (Agte and Bernhardt 2023; Cassan and Vandewalle 2017; Chakravarti 1993; Field et al. 2010; Jayachandran 2020). These fears may restrict their movement during elections, such as avoiding campaigning in neighborhoods dominated by lower-caste groups or hindering their ability to form cross-caste electoral alliances. Consequently, I expect caste quotas to increase both women's candidacy and the likelihood of a woman winning.

Theoretically, this paper builds on the insights provided by Karekurve-Ramachandra and Lee (2020) and Cassan and Vandewalle (2017), which examine the effects of gender quotas on the representation of less privileged groups and highlight the role of differential gender norms in explaining their results. A key distinction between gender and caste quotas is that, under gender quotas, women compete with other women, who can be from the same or different communities. However, in seats with caste quotas, women and men from the same community compete for political office. Hence, within-caste gender norms play a more significant role under caste quotas compared to gender quotas, where both inter-community dynamics and differential gender norms are at play.

3 Context

In this section, I build on the theoretical discussions from the previous section by providing context on caste and gender in rural India, followed by a discussion of the institutional details of gram panchayats in Maharashtra.

3.1 Caste and Gender in Rural India

The caste system stratifies Hindu society into four varnas and outcastes, who are excluded from the varnas (Dirks 1992; Srinivas 1957). Each hierarchical group is further sub-divided into caste or Jati, which is associated with a traditional occupation (Risley 1892). The salience of this structure persists through strict norms on within-caste marriage. Hence, understanding the relationship between caste and gender is crucial to assessing the costs associated with running for office for women from different caste groups.

Several studies indicate that caste norms impose more restrictive conditions on upper-caste women, affecting their mobility and economic activity (Agte and Bernhardt 2023; Cassan and Vandewalle 2017; Chakravarti 1993). Upper-caste women, constrained by the responsibilities of maintaining their high status and by fears of pollution from physical proximity to lower-caste individuals, often face barriers to activities outside the home. Cassan and Vandewalle (2017) quantitatively documents differences in gender norms between upper-caste and lower-caste women in rural India using the India Human Development Survey (IHDS) 2011-12, a nationally representative survey. They find that, while there seems to be no difference between upper and lower-caste women in measures of activities within the household, such as decision-making, upper-caste women have less freedom in labor market participation and in joining self-help groups. Additionally, Munshi and Singh (2024) highlight that, despite rapid economic development, female labor force non-participation is increasing in rural India. They argue that the withdrawal of women is often considered a signal of status, as a luxury only that upper-caste households can afford in the rural economy. Furthermore, purity norms restrict the physical mobility of women from high castes in political activities, such as village council meetings (Cassan and Vandewalle 2017). Altogether, these restrictions effectively hinder participation in the electoral process, where freedom to interact across caste groups is important for running a campaign as well as for gover-

nance.

3.2 Gram Panchayats in Maharashtra

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 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 embed-

ded in wards, which are sub-units of a GP. Within each ward, a seat elects one member. A ward must have at least two and at most 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 usually around 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. Table 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.

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

¹Regions identified by a high share of the Scheduled Tribes (ST) population historically disadvantaged minority group.

Table 3.1: Seats in Aambad GP

Ward name	Seat type
Ward no. 1	Open, OBC Women, Women
Ward no. 2	Open, Women, ST Women
Ward no. 3	Open, OBC, Women

Notes: Quota status of each seat in Aambad GP, Akole Block, District Ahmadnagar.

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 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 General. 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 win-

ners' characteristics for council seats across 22,499 GPs between 2018 and 2022.

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. Table 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.

Table 4.1: Seats in Aambad GP

Ward name	Seat type
Ward no. 1	Open, OBC Women, Women
Ward no. 2	Open, Women, ST Women
Ward no. 3	Open, OBC, Women

Notes: Quota status of each seat in Aambad GP, Akole Block, District Ahmadnagar.

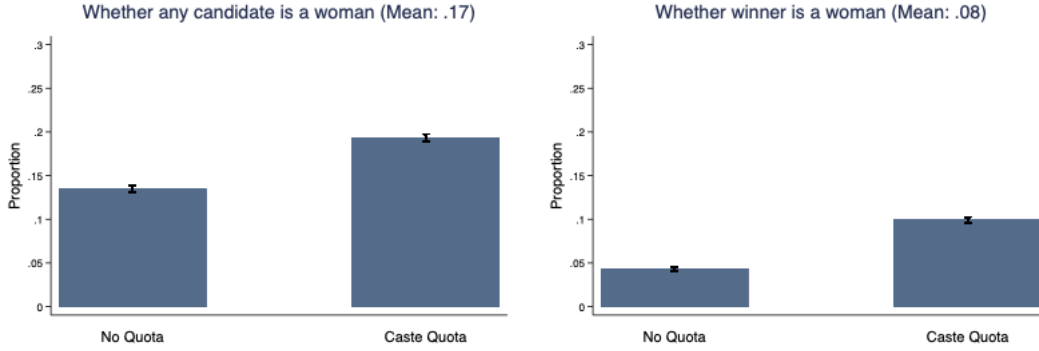
Figure 4.1 presents the distribution of outcomes by the quota status of the seats. Overall, approximately 17% of the seats have at least one woman candidate, and 8% have a woman winner. The data also show a statistically significant difference in the proportion of women candidates and winners by quota 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:

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

where Y_{swgt} is an outcome of interest in a seat s , ward (sub-GP level unit) w , GP g , and

Figure 4.1: 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.

election year t . 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. $\text{Caste Quota}_{swgt}$ 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 .² 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. In both specifications, I control for election year fixed effects and block fixed effects.³ Table 4.3 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

²Because the analysis is done on cross-sectional data, the specification cannot control ward-year fixed effects.

³Note that this analysis uses cross-sectional data, leveraging spatial variation. However, there is temporal variation due to the differing timing of village council elections across the state.

the black seats are included in the sample with ward fixed effects, because variation in treatment assignment within a ward occurs only in Ward No. 3.

Table 4.2: Seats in Aambad GP by specification

Ward name	Seat type
Ward no. 1	Open, OBC Women, Women
Ward no. 2	Open, Women, ST Women
Ward no. 3	Open, OBC, Women

Notes: Quota status of each seat in Aambad GP, Akole Block, District Ahmadnagar.

Additionally, I examine the heterogeneity in the effects of caste quotas by the type of gender quota seats in the excluded sample. For instance, Table 4.3 shows the seats in Aambad and Deothan GPs. 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: there is one seat reserved for women in Aambad and one reserved for OBC women in Deothan.

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:

$$Y_{swgt} = \alpha + \beta_1 \text{Caste Quota}_{swgt} + \beta_2 (\text{Caste Quota}_{swgt} \times \text{Women Excluded}_{wgt}) + \beta_3 (\text{Caste Quota}_{swgt} \times \text{Caste Women Excluded}_{wgt}) + \gamma_w + \delta_t + \epsilon_{swgt} \quad (2)$$

where $\text{Caste Quota}_{swgt} \times \text{Women Excluded}_{wgt}$ 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, $\text{Caste Quota}_{swgt} \times \text{Caste Women Excluded}_{wgt}$ 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 4.3: Seats in Aambad GP and Deothan GP

Aambad GP			Deothan GP	
Ward name	Seat type		Ward name	Seat type
Ward no. 1	Open, OBC Women, Women		Ward no. 1	ST, OBC, ST Women
Ward no. 2	Open, Women, ST Women		Ward no. 2	ST, ST Women, ST Women
Ward no. 3	Open, OBC, Women		Ward no. 3	ST, ST Women
			Ward no. 4	OBC, OBC Women, Women
			Ward no. 5	ST, OBC Women, Women
			Ward no. 6	ST, Open, OBC Women

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

For examining the effect of OBC, SC, and ST quotas on women's representation, I use the following specification:

$$Y_{swgt} = \alpha + \beta_1 \text{SC Quota}_{swgt} + \beta_2 \text{ST Quota}_{swgt} + \beta_3 \text{OBC Quota}_{swgt} + \gamma_w + \delta_t + \epsilon_{swgt} \quad (3)$$

where SC Quota_{swgt} 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_{swgt} and OBC Quota_{swgt} 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:

$$Y_{pbt} = \alpha + \beta \text{Caste Quota}_{pbt} + X'_{pbt} \theta_{pbt} + \gamma_b + \delta_t + \epsilon_{vbt} \quad (4)$$

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. 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. That said, the assignment of quotas also depends on the quota history for sarpanch seats in the GP, and I do not have the data to directly control for quota history; hence, the results for sarpanch seats are not as robust as those for council member seats.

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

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.

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

	(1)	(2)
Panel A: Outcome–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– 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
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 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.

Additionally, I examine whether the effects of caste quotas are robust to other common measures of women's candidacy in Table A.1. The results for the proportion of women candidates are in Panel A, and the results for the proportion of women winners are in Panel B. I find that the results are consistent across these measures. It is important to note that I observe a significant decline in the number of candidates due to caste quotas, which aligns with the findings of Auerbach and Ziegfeld (2020). However, the percentage decline in the number of women candidates is much greater than the overall percentage decline in the total number of candidates. That finding suggests that the effect on women's candidacy is driven by a decline in women candidates, rather

than a general reduction in political competition. I also examine the heterogeneity in the effects of caste quotas based on the type of excluded gender quota seat, with the results presented in Table A.3. The findings indicate that the effect of caste quotas varies depending on the type of excluded gender quota, resulting in different consequences for women's candidacy and representation. For candidacy, the effect of caste quotas is driven by wards where seats with quotas for women but no restrictions on caste are excluded. That said, as shown in Figure A.1, a similar proportion of SC/ST/OBC and upper-caste women contest in these seats, alleviating fears that the effect of caste quotas may be overestimated. Conversely, the effect of caste quotas on the likelihood of a woman winning is significantly reduced in wards where seats with both caste and women quota seats are excluded, suggesting an underestimation of the caste quota effect. Women from OBC, SC, and ST groups may prefer to contest in seats with both caste and gender quotas rather than compete against men from their community in seats with caste quotas only.

Next, I present the results for each marginalized group separately, examining the effects of OBC, SC, and ST quotas on women's representation in Table A.2. The results indicate that SC, ST, and OBC 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 in Table A.4. 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, respectively. 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 in Columns (1) and (2), respectively.

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 \(2017\)](#) 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 members are elected from much smaller and more homogeneous electorates.

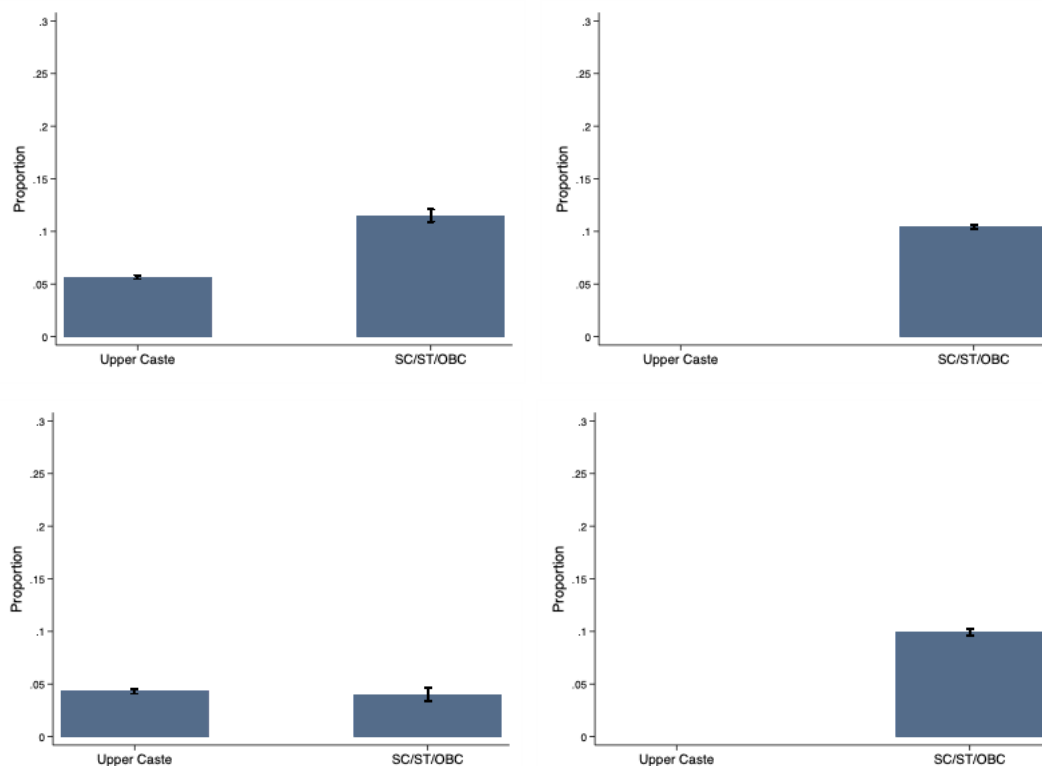
6 Discussion

In this section, I present evidence supporting the underlying mechanism, and discuss alternate explanations. Recall my argument that women from marginalized groups have lower entry costs and a greater likelihood of winning due to purity norms that limit the participation of women from privileged groups. In the previous section, the results showed that, for seats with caste quotas, women are more likely to run for office than for seats without such quotas. One potential interpretation of this result is that women from privileged groups face stronger barriers to candidacy. Hence, when the number of seats for privileged groups is less, women's candidacy improves.

To support this interpretation, I examine the caste and gender distribution by quota status in Figure 6.1. The left panel shows the proportion of women politicians by caste in seats without quotas, while the right panel shows this for seats with caste

quotas. The plot suggests that, in seats without quotas, the gender gap in candidacy is higher among general castes than marginalized castes (SC/ST/OBC). There seems to be no noticeable difference in the proportion of women candidates from marginalized castes in seats with and without quotas. This pattern provides suggestive evidence that women from privileged groups face greater barriers. On the other hand, the gender gap in representation is similar between general castes and marginalized castes in seats without quotas, but the gender gap is relatively lower in seats with caste quotas. This drives the main result on the likelihood of women winner. This suggests that marginalized women are more likely to win when contesting in seats with caste quotas.

Figure 6.1: Gender and Caste of Candidates



Notes: This figure shows the proportion of women in each group, such as upper caste or SC/ST/OBC. The plots on the right display the proportions for seats without quotas (open seats), while the plots on the left show the proportions for seats with quotas.

To further examine political consequences of differential gender norms, I examine the differences in characteristics of the women winners in seats with gender and

caste quotas and gender quotas in Table 6.1.⁴ Several studies suggest that exposure to the existence of gender quotas may increase political participation even for seats that are not reserved for women (Bhavnani 2009; Goyal 2024; Karekurve-Ramachandra 2020). Hence, one can expect women in seats with gender quotas and gender quotas are potential future candidates. As per the gender norm hypothesis, I expect women politicians from marginalized castes to have experience different gender norms than those that constrain privileged women. Consistent with this expectation, the results show that women in seats with caste and gender quotas are younger, have fewer children, and have more past electoral experience than women in gender quota seats, despite being from poor families.

That said, women winners in seats with gender quotas are less likely to be employed. This seems inconsistent with the theory that caste norms impose mobility restrictions. However, the fear of pollution is less a worry in labor markets in rural areas, which continue to be segregated by caste (Benjamin et al. 2010; Cassan et al. 2021). Furthermore, differences in labor market opportunities, instead of gender norms, could explain the results (Sanyal et al. 2015). In other words, if labor market opportunities are likely to be better for women from privileged groups, then they may opt out of running for office because of better outside opportunities. However, if labor market opportunities were the main factor, one would expect this effect to be similar for both men and women from privileged groups. Therefore, this explanation does not account for greater gender gap among castes in Figure 6.1.

7 Conclusion

How do quotas focused on a single dimension of identity affect the representation of individuals with multiple intersecting disadvantaged identities? I examine the effect of

⁴This analysis requires combining election winners' data with data from affidavits submitted by candidates when submitting papers. Unfortunately, the affidavit data do not contain a seat identifier; hence, combining the two datasets requires matching on poll date and fuzzy merge on candidate name. The process used algorithms designed to fuzzy merge transliterated Indian names.

Table 6.1: Effect of Gender and Caste Quotas on Characteristics of Women Winners

	(1)	(2)
Panel A: Log of Family Income		
Woman Quota with Caste Restriction	-0.29*** (0.027)	-0.34*** (0.037)
Dep Var Mean	11.231	11.237
No. of Observations	8434	3042
Panel B: Graduate		
Woman Quota with Caste Restriction	0.0082 (0.0050)	0.0018 (0.0070)
Dep Var Mean	.072	.067
No. of Observations	18213	7965
Panel C: Age		
Woman Quota with Caste Restriction	-1.28*** (0.21)	-1.23*** (0.31)
Dep Var Mean	40.241	39.894
No. of Observations	18213	7965
Panel D: No. of children		
Woman Quota with Caste Restriction	-0.11*** (0.018)	-0.16*** (0.026)
Dep Var Mean	2.024	2.033
No. of Observations	18212	7965
Panel E: Contested previous election		
Woman Quota with Caste Restriction	0.088*** (0.0070)	0.092*** (0.010)
Dep Var Mean	.139	.131
No. of Observations	18181	7940
Panel F: Unemployed		
Woman Quota with Caste Restriction	0.029*** (0.0072)	0.035*** (0.010)
Dep Var Mean	.412	.41
No. of Observations	18213	7965
GP FE	Yes	-
GP Ward FE	No	Yes
Election Year FE	Yes	Yes

Notes: This table uses data on village panchayat elections in Maharashtra between 2018-2020 and 2022. The analysis restricts the sample to all seats with gender quotas. Each observation is a council member seat. Gender & Caste Quota takes value 1 if the seat has caste and gender 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.

electoral quotas for marginalized groups on women's representation. I argue that, if gender norms vary by social status, then the reduction in seats for privileged groups as

a result of quotas can affect women's representation. Using novel administrative data on village wards in rural Maharashtra, I find that caste quotas increase women's representation on the ballot as well as in office. I also find suggestive evidence that this effect is driven by restrictive mobility norms for upper-caste women.

My findings highlight that single-dimension affirmative action does not necessarily create new inequalities. Affirmative action policies may have similar impacts on beneficiaries with multiple disadvantaged identities in other sectors, such as the labor market and bureaucratic recruitment, as well as in different contexts where norms vary among social groups. To avoid new inequalities, policymakers should consider social norms, particularly the differences between the norms of beneficiary groups and those of privileged groups.

Additionally, these findings underscore how social hierarchy and the mobility restrictions it imposes can affect the political participation of women. Hence, policymakers may need to incentivize mobility and inter-group engagement to enhance women's participation in contexts with restrictive gender norms, especially if institutional protections for women are politically infeasible.

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A Appendix

Table A.1: 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	64707	20970
Panel C: Outcome– Total no. of candidates		
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
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 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.

Table A.2: Effect of Caste Quotas on Women's Representation by Caste Group

	(1)	(2)
Panel A: Outcome– 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– 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
Election Year FE	Yes	Yes

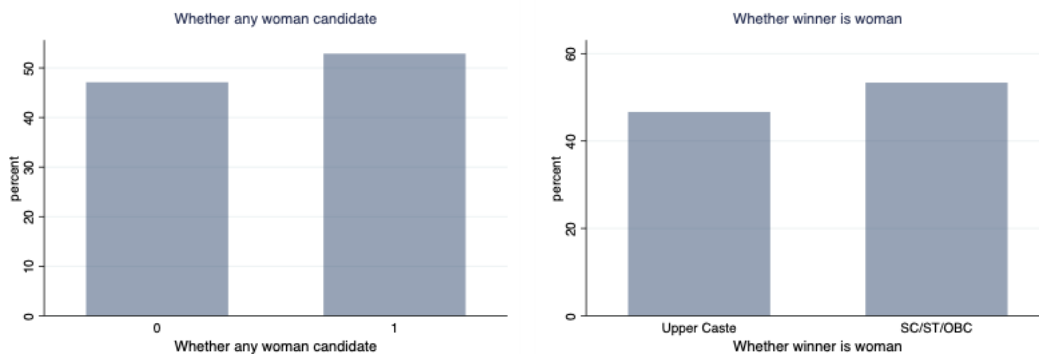
Notes: Table uses data from village panchayat elections in Maharashtra between 2018 and 2022. The sample is restricted to seats without any gender quotas. Each observation is a council member seat. OBC Quota takes value 1 if the seat has OBC quota and 0 otherwise. Similarly, I code SC and ST Quota. Column (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 A.3: Heterogenous Effect of Caste Quotas by Excluded Seat Type

	(1)	(2)
Panel A: Outcome– Whether any woman candidate		
Caste Quota	0.037*** (0.0080)	0.034 (0.023)
Caste Quota x Women Excluded	0.057*** (0.0077)	0.065*** (0.024)
Caste Quota x Caste Women Excluded	-0.021*** (0.0070)	-0.017 (0.026)
Control Mean	.129	.129
No. of Observations	64707	20970
Panel B: Outcome– 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
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 is 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.

Figure A.1: 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 restrictions on caste.

Table A.4: Effect of Caste Quotas on Women's Representation for Sarpanch Seats

	(1)	(2)
Panel A: Outcome–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– 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 is has caste quota and 0 otherwise. Caste Quota x Women Excluded_{swgt} takes a value of 1 if the seat has a quota for either SC, ST, or OBC and there is a women's quota seat in the excluded sample, and 0 otherwise. Meanwhile, Caste Quota x Caste Women Excluded_{swgt} takes a value of 1 if the seat has a quota for either SC, ST, or OBC and there is an OBC/ST/SC women's quota seat in the excluded sample. The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the GP level.