Do gender quotas hurt less privileged groups? Evidence from India

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Abstract

How do political gender quotas affect representation? We suggest that when gender attitudes are correlated with ethnicity, promoting female politicians may reduce the descriptive representation of traditionally disadvantaged ethnic groups. To assess this idea, we examine the consequences of the implementation of random electoral quotas for women on the representation of caste groups in Delhi. Constituencies reserved for women are less likely than unreserved constituencies to elect members of groups where the status of women is low. In practice, this means they are less likely to elect members of several traditionally underprivileged groups (especially OBC castes) and more likely to elect candidates from the Hindu upper castes. The results highlight the difficulties of balancing descriptive representation on multiple, cross-cutting dimensions, and the possible unintended consequences of the type of single-dimension quotas currently proposed for inclusion in the Indian constitution.

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1   Introduction

Women continue to be underrepresented in elected office in nearly all countries, a concerning fact given the evidence that female politicians are more active in advocating positions important to women (Chattopadhyay and Duflo, 2004; Barnes, 2016). At the same time, in many countries other ascriptive identities such as ethnicity, caste, race, and religion are highly salient to both parties and voters and correspond to differences in political representation (Cederman, Wimmer and Min, 2010). To rectify these problems of descriptive representation, many countries and political parties have introduced electoral quotas to benefit either women or underrepresented minorities. Such "unidimensional" quotas raise obvious problems: Will attempts to increase descriptive representation on one dimension have effects on descriptive representation on the other dimension? Will policies intended to increase the number of African-American politicians reduce the number of female politicians? Will policies intended to increase the number of women reduce the number of politicians from lower caste groups?

These types of unintended consequences are plausible because we have reason to think that women from marginalized groups (at the *intersection* of two disadvantaged identities) tend to be especially disadvantaged. While the literature on intersectionality has emphasized the complicated and occasionally counterintuitive nature of its effects, a major theme has been the compounding negative effects of belonging to multiple disadvantaged categories, such as women of color in the United States or lower caste women in India (Crenshaw, 1989; McCall, 2005).

Despite its prominence in the intersectionality literature, concern about compounding disadvantages is not a feature of the large and growing literature on electoral quotas. In many cases, these authors address the effects of quotas unrelated to intersectionality, such as policy outcomes (Chattopadhyay and Duflo, 2004; Iyer et al., 2012), or focus on why specific types of quota policies are enacted (Htun, 2004). By contrast, the literature on the relationship between these two different dimensions of descriptive representation, and the effects of imposing quotas on only one dimension, is small. It has generally found either that both party and constituency quotas on one dimension *increase* or have no impact on the representation of disadvantaged groups on the other dimension (Celis et al., 2014; Tan, 2014; Folke, Freidenvall and Rickne, 2015; Jensenius, 2016; Cassan, Vandewalle et al., 2017), or focuses only on their effect on the representation of the intersectional category (Hughes, 2011). This echoes work in American politics that shows female-minority intersectionality having non-negative effects on running for office after gender and race are accounted for

(Philpot and Walton, 2007; Fraga et al., 2008; Bejarano, 2013; Scola, 2013).

This paper develops an intuitive theoretical framework for understanding the interactions between two crosscutting ascriptive identities such as gender and ethnicity. The effect of exogenously increasing the representation of one identity (through quotas) on the representation of the other identity depends on the number of potential candidates who possess both traits. Where the number of such candidates is disproportionately high, quotas will increase the representation of the second identity; where the number is disproportionately low, quotas will reduce it. One important factor in shaping these candidate pools is differences in gender attitudes, with female candidates being less common among groups that discourage the social involvement of women outside the home.

The theory implies that in a large set of cases we should expect electoral quotas in one dimension to reduce representation of disadvantaged groups on the other dimension–the opposite of existing findings. Where members of less advantaged groups are less common among potential female candidates than male ones, the effect of quotas on representation of less advantaged groups should be negative. This implies that one-dimensional gender quotas should negatively impact minority representation in cases where 1) attitudes towards women's political and social participation are correlated with ethnicity, and 2) where more restrictive attitudes are common among disadvantaged groups. These scope conditions describe a large set of developing and non-developing countries where women have higher social status among elite than among non-elite groups. In these circumstances, rules to improve representation of women will lead to increases in the representation of the elite and a reduction in the representation of individuals from historically marginalized groups.

This theory is tested using data on gender quotas and caste representation from elections to local government bodies in Delhi, India. This case has three important advantages. First, as in most other Indian local bodies, mandatory female representation was randomly assigned at the constituency level, eliminating the possibility that quotas are endogenous to constituency-level traits. Second, unlike most other Indian local bodies, elections in Delhi feature only very limited quotas for members of traditionally underrepresented caste groups, making them unidimensional in practice. Finally, the effects of single dimension gender quotas are an issue of direct policy importance in India, since the extension of such quotas to state and national legislatures through a constitutional amendment is being actively considered at the time of writing, and is part of the platform of the two largest national parties.

In India, attitudes towards the social status of women vary sharply among social groups (Liddle and

[Joshi](), [1986]()). In Northern India, members of Hindu upper caste groups with long traditions of western education tend to express strongest support for the political and social equality of women. By contrast, members of "backward" caste groups tend to be less supportive of women's rights, and correspondingly sympathetic to an "honor culture" that condones the use of violence to enforce restrictions on women. These between-group differences have historically led to upper caste Hindu women being overrepresented among female politicians and activists in India.

As the theory predicts, the existence of these cross-group differences in social attitudes meant that the imposition of gender quotas in Delhi changed the caste composition of elected candidates. While data on the caste of candidates is not publicly available in India, we were able to estimate the caste of nearly all the successful candidates through intensive fieldwork. Overall, reservation for women increased the probability of a constituency electing a candidate from a caste with less traditional gender norms by 8.7 percentage points. In practice, this increase benefited members of the Hindu upper castes, in particular the Brahmins and Banias, while the representation of members of the Other Backward Classes (OBC) category declined. These results also hold within the entire candidate pool, including non-winners. The estimated effect is probably smaller than it might otherwise be because of the ability of male candidates to field weaker *proxy* candidates. Reservation had no effect, either positive or negative, on the education and self-reported household wealth of elected candidates.

While several factors might lead lower caste women to be underrepresented in candidate pools, we find suggestive evidence that the differences we see are linked to differences in attitudes between groups, rather than differences in women's education, wealth or level of political information. Groups with higher support for women's rights in opinion polling tend to benefit from reservations, while richer groups do not necessarily do so. There is little evidence for three alternative mechanisms: Discrimination by parties, discrimination by voters, or between-party differences.

2   Gender Quotas and Ethnicity: A Simple Theory

Women and members of specific ethnicities are underrepresented in the political process in many countries. Some of the proposed causes for this include the existence of closed networks of dominant group candidates and incumbents ([Besley et al.](), [2017]()), and smaller pools of self-defined potential female candidates ([Lawless](), [2015](); [Lawless and Fox](), [2010]()). To rectify these inequalities, many countries have imposed ethnic or gender-

based electoral quotas: In 2011, 51 countries had some form of gender quota while 18 had some form of ethnic quotas (Hughes, 2011), though the form of the quotas often differs between the two dimensions (Htun, 2004). These quotas can have a variety of potential consequences for policy outcomes (Chattopadhyay and Duflo, 2004; Iyer et al., 2012), post-quota descriptive representation (Bhavnani, 2009), electoral dynamics (Auerbach and Ziegfeld, 2016), and candidate quality (Besley et al., 2017).

This paper examines a separate question: *What is the effect of quotas on one trait to descriptive representation on the other politically salient traits?*. There has been some limited observational work on this question, most of which argues that quotas on one ascriptive dimension *improves* descriptive representation on other dimensions. Tan (2014) finds that electoral reforms designed to benefit ethnic minorities had a positive effect on women's representation in Singapore, while Folke, Freidenvall and Rickne (2015) find that gender quotas had an overall null effect on women's representation in Sweden. Holmsten and Moser (2009) and Holmsten, Moser and Slosar (2010) find that majority-minority districts and ethnic parties tend to reduce women's representation. Celis et al. (2014) find a strong advantage for minority women in quota seats in Belgium, though they are skeptical that this can be traced entirely to quotas. In concurrent work, Cassan, Vandewalle et al. (2017) find that electoral reservations for women reduce the representation of a highly aggregated "high caste" category in village council elections in India.

Hughes (2011), using observational cross-national data, differs slightly from this pattern and finds that gender and ethnic quotas benefited dominant group women and non-dominant group men (respectively) more than non-dominant group women, though she does not consider effects on overall gender and ethnic representation. While Hughes (2011) (Table 3) shows that gender quotas increases the representation of "majority group" women more than other women, this does not necessarily mean that the overall representation of the majority group would rise in quota seats—this would depend on the ethnicity of the male candidates who are being displaced. This paper complements Hughes' account by exploring the broader implication of quotas.

In the next sections, we develop a general theoretical framework for the interaction of quotas with multiple identities that both provides an explanation for the mixture of results in existing studies and additional predictions. This question is empirically interesting if quotas are granted on one dimension but not the other. If (less commonly) quotas are given on both dimensions at the same time, descriptive representation on both dimensions will tend to improve mechanically (Hughes, 2011).

2.1 Crosscutting Identity Dimensions and Quotas

Consider a society with two ascriptive identities, *P* and *Q*, which citizens either do or do not possess. These traits crosscut each other: One can possess either one, both, or neither. Informally, we will sometimes refer to these two identities as female gender and disadvantaged or minority group ethnicity, two identities that are crosscutting and politically salient. However, this framework could be applied to any pair of crosscutting identities.

Within each society, certain citizens are willing and able to mount viable candidacies for elected office. The factors associated with being willing and able to run may differ considerably across societies, and will be discussed in detail in the next section. *p* and *q* are the proportions of individuals who possess identities *P* and *Q within the pool of viable candidates*. As noted, these proportions may differ considerably from the proportion of individuals with these traits in the population as a whole. For simplicity, if we assume that all viable candidates have an equal chance of winning the election, the proportion of winning candidates from groups *P* and *Q* will be *p* and *q*, their respective proportions in the candidate pool. Note that this framework could apply to competition for a nomination through "all woman shortlists," to competition for a list place with list quotas, or constituency-level quotas.[1]

Now, consider that some proportion of seats larger than *p* is reserved for individuals with trait *P* (say, women). Its effect on the representation of trait *Q* (for instance, minority ethnicity) is as follows: In the reserved seats, only women can run, so the proportion of viable minority candidates is a function of the covariance of *p* and *q*. *Where this covariance is positive, the proportion of minority candidates will increase (relative to their proportion in the pool). When it is negative the proportion of minority candidates will decrease, and zero covariance will yield no effect.* These three possible states of the world, with their differing empirical implications, are summarized in Table 1.

It is important to note that these implications hold only if the pool of *potential* candidates and the candidate selection procedures do not change in response to the quotas. If parties respond to the quotas by nominating very unqualified and/or unambitious individuals who are demographically similar to the male pool (or perhaps from the same families), the effect of the quotas could be zero. We will return to this "proxy candidate" problem in section 5.3.

The simplest state of the world is one where the proportion of members of disadvantaged ethnicity

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[1]Htun (2004) shows that party-level quotas are more common for gender quotas than seat-level reservations.

Table 1: Social Conditions and the Effect of Gender Quotas

Relative Representation of Women in Minority Candidate Pool	Possible Contributing Social Conditions	Predicted Effects of Gender Quotas	Examples
Proportional representation of women	Candidate pool highly representative of population	No change in minority representation	Elections with no candidacy threshold.
Overrepresentation of women	(1) Relatively higher socioeconomic status of women in the minority group	Increases in minority representation	Higher proportion of elected females among African American officials than among white officials in the USA (Philpot and Walton, 2007; Scola, 2013).
	(2) Social attitudes favoring minority women's participation		Larger representation of minority women than men in Europe (Celis et al., 2014; Mügge, 2016).
Underrepresentation of women	(1) Relatively lower socio-economic status of women belonging to marginal group (2) Traditional gender norms/attitudes (especially among women) within the minority group	Decreases in minority representation (H1)	

within the pool of viable female candidates is exactly equivalent to their proportion among the pool of male candidates. Here, the imposition of quotas will have no effect on the descriptive representation of group *Q*, since the two candidate pools do not differ in their ethnic composition. If the candidate pool was identical to the population as whole, a gender quota could have little effect, since the proportions of women within each group are relatively similar. Put differently, if everyone's chances of being elected are the same, underrepresentation is impossible. For this reason, we should be cautious about predicting intersectional effects in races where the barriers to office holding are very low.

2.2   Underrepresentation of Minority Women in the Candidate Pool

In many cases, the proportion of female minority candidates might be less than half of the proportion of minority candidates. This leads to minorities being underrepresented within female candidates. As noted in section 2.1, such a pattern will lead gender quotas to have a negative effect on the representation of individuals from underrepresented groups.

Two families of explanations can be identified for underrepresentation of minorities in the pool of female

candidates. The first is low levels of *socio-economic status and education* among women from disadvantaged groups relative to women from non-disadvantaged groups and men from marginal groups. In most cases, viable candidates must pass through some sort of a selection process (formal or informal): They must be well-connected, wealthy, politically informed, ambitious, from a political family, or some combination thereof. Less educated individuals might not be aware of political opportunities or have made useful connections in the political world, and make less impressive candidates. These processes might eliminate some types more than others, and that these elimination processes will not be simply additive. One circumstance that would prompt this is if members of the *PQ* intersection (i.e., minority women) have low levels of education, political connections, or other traits that are predictive of becoming a viable candidate.

Given the large literature on disadvantages of membership in the intersection of multiple disadvantaged traits, it is reasonable to expect that this pattern would hold in some cases. In fact, many scholars have argued that women from disadvantaged groups like African American women or women in developing countries are "doubly disadvantaged. "The larger literature on intersectionality explicitly makes this point, emphasizing that disadvantaged identities in combination produce low levels of socioeconomic status that cannot be predicted based solely on identities themselves (Crenshaw, 1989; McCall, 2005).

A shortage of viable candidates among members of the *PQ* intersection may also reflect *gender attitudes* within category *Q*. One of the biggest obstacles to the candidacy of women is social attitudes that discourage (or do not encourage) participation of women in politics. This might entail spouses and male relatives prohibiting women from contesting (or taking the preliminary steps to run). More subtly, they might include generalized attitudes like "politics is for men". Women and women's issues might be seen as a distraction from the groups' concerns and cultural values (Crenshaw, 1989). If members of group *Q* are more likely to hold these views, this will lead to these groups being underrepresented among female candidates, and thus among the winners of women-only seats.

These attitudes might lead men to prevent women from running for office, either by sanctioning women who take this step or by failing to support/encourage those that do. Such a pattern would seem particularly plausible when we consider how powerful internalized gender stereotypes can be in conditioning political participation. Lawless and Fox (2010), for instance, find that American women were more than twice as likely as men to rate themselves as "not at all qualified" for office and that this gap explains most differences in political participation. Among countries and groups where gender stereotypes are more strongly held, we might expect such effects to be stronger.

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The existing literature on intersectionality provides several suggestions for why gender attitudes could be especially regressive among traditionally underprivileged groups. While we do not believe that there is one exclusive explanation for this correlation, we highlight a set of mechanisms that seems particularly important in many poor countries. In many circumstances, both urbanization and education are strongly correlated with approval of an expanded social role for women. Educated and urban individuals may have improved access to opportunities for employment and social engagement outside the home for women that would not be available to the illiterate or in villages. Urban and educated individuals may also be more aware of the ideas of national and international feminist movements. Finally, the type of male reputational incentives that underly an "honor culture" are less likely to be relevant for those living in larger communities or with stronger links to the formal economy. Since disadvantaged groups are often less urban and educated (indeed, this is why they are considered disadvantaged), they in many cases retain gender norms that have been abandoned by more "advanced" groups.

Below, we discuss in detail the evidence for cross-group differences in gender attitudes in our main empirical case, India. However, there is reason to think that large differences in gender attitudes between advantaged and disadvantaged social groups are quite common. Inglehart and Norris (2003), for instance, show that residents of wealthy and non-Muslim countries are more accepting of non-traditional gender roles than other countries. Similarly, within a wide variety of societies middle class people are more likely to be supportive of women's rights (Baxter and Kane, 1995). This discussion in conjunction with the states of the world described in table 1 gives us a testable hypothesis that will be the main focus of the tests in section 4:

H1: Where there are differences between ethnic groups in gender norms, the imposition of electoral quotas for women will reduce the representation of ethnic groups with restrictive gender norms.

Note that the theory could also be applied in the opposite direction. When there are differences between ethnic groups in gender norms, the imposition of electoral quotas for groups with restrictive gender norms will reduce the representation of women. While some work in the existing literature might support this contention (Holmsten and Moser, 2009; Holmsten, Moser and Slosar, 2010), we will not discuss this implication in the paper, as we do not test it empirically.

2.3 Overrepresentation of Women in the Candidate Pool

Under a corresponding set of circumstances, the supply of viable candidates adopting both identities P and Q is larger than pq. In such cases, gender quotas will have a positive effect on minority representation.

Below, we show that this is not the case in urban India. However, the plausible circumstances are worth examining particularly given the prevalence of positive interaction effects in the existing literature.

First, women from underprivileged groups could have high levels of socio-economic status relative to men from these groups. If P and Q are positively correlated within the elite population as a whole, any restriction on one will tend to increase representation of others. For example, if women are overrepresented in non-traditional occupations, we should expect that quotas for women will increase the number of candidates from non-traditional occupations. This type of correlation is unlikely to hold if the second dimension is ascriptive, since gender ratios vary much less between ethnic groups than between population groups. However, some women from disempowered groups suffer less from social disadvantages that might inhibit participation, such as poor education and incarceration, than men from the category. This may be one reason why women make up a higher proportion of African American elected officials than among white elected officials in the United States (Philpot and Walton, 2007; Scola, 2013).[2]

Second, voters and parties may be more likely to favor women from disadvantaged groups than might be expected, because social attitudes favor their participation more than men from those groups. Celis et al. (2014) and Mügge (2016) show that while both women and ethnic minorities face obstacles in winning political office in Europe, minority women are viewed as less threatening, and are thus relatively well represented. Additionally, Fraga et al. (2008) and Bejarano (2013) argue that Latina women in the United States benefit from both the ability to build alliances with other groups and a "softer" racial identity.

Finally, women from disadvantaged groups might be favored by elites in order to preserve the position of men from advantaged groups. Outsider group women provide more diversity per capita thereby leading to a "complementarity bonus". Similarly, Jensenius (2016) finds that much of the increase in nomination of women in India has come in constituencies reserved for Scheduled Castes and Scheduled Tribes, in part to preserve the position of upper caste men in unreserved constituencies. Table 1 summarizes the conditions that might plausibly be associated with over/underrepresentation of women and our expectations about the effects of gender quotas.

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[2]The same pattern might also hold if the candidate pool contains a large number of low SES men from high-status groups due to incumbency or access to political networks (Besley et al., 2017). By eliminating these overrepresented "mediocre men" from contention, electoral quotas on one dimension might lead to a candidate pool that is more representative of the population as a whole than the pool without quotas.

2.4 Additional Implications of the Theory

An additional implication of a candidate supply theory of quotas is that quotas of any sort should reduce the number of candidates (Auerbach and Ziegfeld, 2016; Jensenius, 2017). Even if candidates can move easily from seat to seat, the pool of viable female candidates is smaller than the pool of male candidates—this is why quotas were imposed in the first place. This implies that there should be a smaller set of candidates competing for each nomination in quota seats, and a smaller number of candidates overall.

Finally, note that the theory holds at the seat level, but not *necessarily* at the legislature level. A negative effect of quotas on ethnic representation in reserved seats could be compensated by an increase in the representation of the ethnic group in unreserved seats (Folke, Freidenvall and Rickne, 2015). For instance, a party–forced to reserve 50% of its seats for women–which was determined to have 5% of its candidates be Muslim and found it impossible to identify any plausible female Muslim candidates could informally reserve 10% of the male seats for Muslims. In this case, a negative association of quotas with lower Muslim representation at the seat level would be associated with no change in Muslim representation in the chamber level. However, in Section A.1 we show that our results hold at the chamber level.

3 Reservations in India

3.1 Historical Background

One of the most basic problems in the quota literature is the possibility of selection effects. Countries and parties that adopt quotas differ systematically from those who do not, often being more supportive of the rights of women and minorities than non-adopting countries and parties. Even exogenously imposed devices such as majority-minority districts may lead to unobserved differences between units. Hence, the ideal research design would involve a country or party where the quota seats are chosen randomly.

This problem has been a key factor in the growth of the literature on electoral quotas in India. India has historically seen low levels of descriptive representation of both women and members of specific caste groups. This has led to the implementation of a complicated series of quota policies. Since independence (and in some cases, even before) members of two categories of ascriptive groups, the Scheduled Castes (SCs) and Scheduled Tribes (STs) have enjoyed reserved legislative seats at all levels of government proportional to their share of the population. Over the course of 20th century, many states granted reserved seats in local

(though not state or national) government to members of a slightly better off category of castes, the Other Backward Classes (OBCs). Unlike gender quotas, the reserved seats for these groups are chosen through non-random procedures that take into account the local population of each category (Jensenius, 2017).

While attempts to guarantee descriptive representation of women in India have a long history, the 73rd and 74th amendments to the Constitution in 1992 represented the first use of legal gender quotas on a large scale. They mandated that one third of all seats in local bodies be reserved for women, with these reservations crosscutting existing patterns of caste reservation. In many states, this was soon increased to 50% reservation. Crucially, these reservations were in nearly all cases assigned randomly, either through a random drawing or the alternation of odd and even numbered constituencies. A large literature has examined the effects of these reservations (Chattopadhyay and Duflo, 2004; Iyer et al., 2012; Bhavnani, 2009; Chauchard, 2014; Cassan, Vandewalle et al., 2017). In recent years, there have been serious proposals, backed by the two major parties, to expand female reservation to the state and national legislatures too.

3.2 Reservations in the Municipal Corporation of Delhi

Delhi, the capital of India, has the status of an independent state, with a population of 16.8 million people. Until 2012, local government services in nearly all of this area was controlled by a single entity, the Municipal Corporation of Delhi (MCD). The MCD is overseen by 272 seat single chamber legislature, elected from single member constituencies by a first past the post system. In 2012, the MCD was divided into three large corporations (North, East, and South) though constituency boundaries did not change. Though the state government controls important policy areas (including the regulation of local elections), the MCD and its successors regulate a range of activities of great local salience, including sanitation, street construction, and land use planning (John, 2007).

The primary attraction of the MCD elections as an object of study is the limited scope of caste reservation relative to other Indian local bodies. Of the 272 constituencies, in 2017, 46 were reserved for members of the SC category (male and female). However, there were no reservations for STs (of whom there are very few) and OBCs. This means that the vast majority of seats are not guaranteed to particular castes, even though there is considerable social inequality (discussed in section 4) between the various non-SC castes.

We consider the three most recent local elections, in 2007, 2012 and 2017. In each of these elections a rotating proportion of constituencies—one third in 2007 and one half in 2012 and 2017—were reserved, and could only be contested by women. The reserved non-SC constituencies were chosen by taking the official

list of constituencies and taking every third constituency (2007) or every other constituency (2012, 2017).[3] Since seats for SCs are scattered unpredictably throughout the list (and are shifted after each census), manipulating this pattern would be impossible even for a government in full control of constituency numbering.[4] This is reflected in the fact that such "odd even" reservations in India are regarded by both scholarly and practicing observers as random (Chattopadhyay and Duflo, 2004; John, 2007). Further, the evidence for randomization could also be inferred by the fact that some of the most powerful councillors in all three elections were not allowed to compete in their respective wards due to a change in the ward-reservation status.[5] In Table A.5 on page A-9, we show that reserved and unreserved constituencies are similar to reserved ones on a variety of pre-treatment characteristics.

4 Caste, Inequality, and Gender

4.1 Caste and Gender in India

The effects of quotas are complicated by the existence of considerable variation across caste and religious groups in the social status, economic and educational position of women. In part, this reflects economic constraints: Poorer families may choose to educate male rather than female children. However, these intergroup differences are cultural as well as economic. Individuals from non-elite groups are less likely to be exposed to the more liberal values common within the Anglophone elite and urban areas in general. Wealthy farmers, for instance, may be more conservative than poor urbanites, and the "new rich" more conservative than the "old rich". As a result, while many Indian women have managed to obtain university education and middle-class employment outside the home, those that do are disproportionately upper caste and middle class (Liddle and Joshi, 1986). Table A.2 on page A-6, taken from the 2004-5 National Family Health Survey survey, shows that women in the upper and middle caste categories are better represented among educated women than among educated men.

This pattern is especially remarkable because in pre-colonial India the seclusion of women in the home was considered mark of high caste status (Liddle and Joshi, 1986). Since then, the association between the control of women's social opportunities, family caste status, and honor has faded somewhat in urban India,

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[3]Constituency lines were redrawn between 2012 and 2017.

[4]In fact, drawing of ward boundaries and implementation of reservation are controlled by the independent state election commission.

[5]For example, In 2012 former mayor P R Sawhney and leader of the opposition J K Sharma saw their wards reserved. In 2017, the BJP Delhi chief Satish Upadhyaya and Congress party chief Farhad Suri could not compete from their existing wards. .

but village landlords are regarded to be the most enthusiastic proponents of female seclusion (Mandelbaum, 1993), a finding echoed in the literature on village politics (Cassan, Vandewalle et al., 2017).

These intergroup inequalities also mean that most female politicians in India have historically been upper caste Hindus, a fact long acknowledged in the secondary literature (John, 2007).[6] Table 2 shows the caste and gender of national legislatures, using Jaffrelot's 2003 data and categories. Female politicians in India are far more likely to be upper caste (and less likely to be OBC and religious minorities) than men.

Table 2: Caste and Gender of Lokh Sabha Members in Unreserved Northern Indian Seats, 1962-2004

Category	Male #	% of Men	Female #	% of Women
Forward Castes	1,025	55.26%	114	70.81%
Intermediate Castes	158	8.52%	11	6.83%
Other Backward Classes	454	24.47%	21	13.04%
SCs	28	1.51%	5	3.11%
STs	10	0.54%	2	1.24%
Religious minorities	180	9.70%	8	4.97%

Source: Taken from the CSDS MP dataset (Jaffrelot, 2003)

This pattern has been noted by practitioners, and is the reason that politicians from OBC groups have been the main opponents of the current proposals for women's reservation at the state legislative and national assembly levels. Lalu Prasad Yadav, leader of the Rashtriya Janata Dal, dubbed the proposed bill as a "political blunder" and alleged that it was a conspiracy hatched by both BJP and Congress parties to suppress representation of women belonging to the OBC, ST/SC, and Muslim communities and has contended that "[Upper caste] women like Sushma Swaraj never needed a reservation plank to reach the top. It proves that the proposed Bill will only serve to further the interests of the elite classes" (Banerjee, 2008).

4.2 Major Caste Groups in Delhi

Delhites possess thousands of endogamous caste, tribal, religious, and regional identities, which occasionally crosscut each other or nest within each other. However, in this section we discuss only a finite number of discrete castes and religious groups. These are the "politically relevant" categories (Cederman, Wimmer and Min, 2010): The identities that politicians use for the purposes of mobilization and self-promotion, and the categories into which practitioners mentally divide voters and voters mentally divide politicians. In deciding which groups are politically relevant, we closely follow Kumar (2013), the most recent scholarly treatment of Delhi politics. However, these categories accord very closely with those used by the practitioners we

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[6]Constituencies reserved for SCs and STs constitute a partial exception to this pattern (Jensenius, 2016).

encountered during our fieldwork, other observers of Delhi politics, and general works on caste politics in Northern India.

Upper Caste Groups: Brahmins (traditionally priests) and *Banias* (traditionally merchants) are groups that carry high-status within the Hindu caste hierarchy: They are the supposedly *twice-born* or "clean" castes with long traditions of literacy and urban residence. These castes were also the groups most likely to be employed within the colonial bureaucracy (Kumar, 2013, 37-8). *Rajputs* (traditionally warriors) share the twice-born status of the Brahmins and Banias, but are in general poorer, less educated, and newer to the city. This reflects the historical position of the caste as landowners in areas somewhat distant from Delhi, and their lower levels of engagement with the colonial bureaucracy and educational system. *Kayasths* and *Khatris* have a contested ritual position, but have traditions of literacy and a close association with the colonial bureaucracy

OBC Groups: The term OBC (Other Backward Classes) refers to a set of groups considered by the state to be socially more marginal than the upper castes. The *Jats* are a large caste group with a ritual status above most Shudras but below the twice-born castes. The Jats were the largest landowners in the Delhi region in the colonial period, and were one of the communities targeted for recruitment into the colonial army, but were less well represented within the colonial educational system. While in some villages Jats would be considered "upper caste" (Cassan, Vandewalle et al., 2017),[7] in the Delhi context they are more traditional in cultural orientation than the upper caste groups. Ethnographic accounts note Jats as being strong exponents of the seclusion of women, which they identify with personal honor. Like the Jats, the *Yadavs* and *Gujjars* are also cultivating groups, though of lower traditional status. Outside the Jats, Yadavs and Gujjars, the OBC category contains a large number of small castes, often associated with particular traditional crafts. While these groups are collectively large, their internal fragmentation and general poverty mean that they are by far the most underrepresented category in Delhi politics.

SCs: The *Scheduled Castes* (which, in Delhi, tend to be treated as a unit by outsiders) are a group defined by their traditional exclusion from the Hindu ritual community. SCs remain very poor, despite affirmative action programs designed to help them. In the political sphere, SCs, unlike the other categories discussed here, are guaranteed a proportion of seats in the corporation, meaning that very few contest general category seats.

Religious Minorities: Religious minorities in Delhi tend to live in clustered ghettos, a product of the

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[7] Cassan, Vandewalle et al. (2017) appears to code both Jats and most Muslims as "high caste."

city's history of religious violence. *Sikhs* are a small minority in Delhi, including individuals at variety of economic levels. *Muslims* tend to be poor, a product of pervasive social discrimination. While both these religions contain some members of the castes discussed above, for political purposes they are generally categorized by religion, a practice we have followed here.

4.3 Evidence for Intergroup Differences

Do these groups differ from each other on observable social traits that might predict the emergence of female politicians? This section describes these differences using data from the women's questionnaire of the 2004-5 National Family Health Survey (International Institute for Population Sciences, 2007).

4.3.1 Social Attitudes and Gender Norms

Table 3 shows cross-group differences in social attitudes among women.[8] One subtle indicator of the status of women (and the prevalence of dowry) is the percentage of boys among the children. A high ratio indicates a large number of "missing" women caused by sex-selective abortion. While the proportion of male children is higher than .5 (and statistically significant) among nearly all groups in both male and female samples, the number is highest among Yadavs (.57) and Jats (a remarkable .61). The ideal number of children (another rough indicator of traditional gender attitudes) is also higher among lower castes groups, particularly Muslims. A final indicator of the internalization of traditional gender norms is the proportion of *women* saying that wife beating is permissible under some circumstances. Despite its social undesirability, this belief seems relatively common in Delhi. However, it is much less common among the upper castes than lower castes: Remarkably, among Muslims, Yadavs, Gujjars and Jats, more than 30% of women agree with this view.

Based on their responses to these three questions, we categorized social groups into two categories, one with more traditional gender norms (e.g., higher ratio of male children, higher desired number of children, and a higher approval of wife beating) and one with less. To arrive at a classification, we utilized a simple K-means clustering approach–a model free classification approach–on the female sample survey. The five twice born groups and Sikhs are all classified as having less traditional gender attitudes, while Muslims, SCs and the OBC groups are classified as having more traditional gender attitudes.

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[8]We believe, following Lawless (2015), that these are more relevant for female candidacy decisions than male attitudes.

Table 3: Gender Attitudes by Caste in Delhi

Category	N	Sex Ratio	Ideal Number of Children	Approve of Wife Beating
Less Traditional Gender Norms				
Bania	309	55%	1.91	13%
Brahmin	386	54%	1.92	18%
Kayasth	30	45%	1.79	3%
Punjabi Khatri	116	54%	1.85	8%
Rajput	298	55%	2.02	20%
Sikh	48	53%	1.78	4%
More Traditional Gender Norms				
Gujjar	26	55%	2.20	35%
Jat	104	61%	2.00	32%
Yadav	91	57%	2.24	35%
OtherOBC	238	54%	2.16	34%
Muslim	369	52%	2.40	28%
SC	750	52%	2.20	36%
ST	36	50%	2.39	47%

Source: National Family Health Survey 2004-5. All respondents are adult women. Sex ratio is significantly different from .5 at the 5% level for all groups except STs, Sikhs, Gujjars and Kayasths.

4.3.2 Female Economic Autonomy

Table A.2 on page A-6 shows cross-group differences in women's socio-economic status and level of information. Bania women are seven times as likely to have received higher education than Muslim women, and 46 percentage points more likely to read a newspaper than Muslims. Cross-group differences also hold for household wealth and professional employment.

Using the same K-means procedure described above, we grouped the castes based on the socio-economic variables. The groupings are identical to the groupings for gender attitudes, with the exception of the Jats—in terms of newspaper readership and wealth index, Jat women appear more similar to the traditional upper castes than to other OBCs. This reflects the peculiar social position of the Jats as the most important landowning group in the region, which has both solidified their attachment to certain more traditional social patterns and improved their economic position. In the alternative mechanisms section, we the consequences of using this economic classification of the position of women.

5 Results

5.1 Collecting the Data

Caste is a highly salient dimension for political mobilization and distribution in India, and the building block for many political parties and politician vote banks (Jaffrelot, 2003). Its very importance has made caste a sensitive topic in India. While the Indian state collects detailed data on female candidates, it does not record candidate caste (outside of listing reserved seats separately) and does not collect census data on identities other than religion and membership in the SC and ST categories.

To collect information on candidate caste, we engaged in an intensive program of fieldwork-based data collection in Delhi. In some cases, caste identity can be estimated with a high degree of reliability from surnames or spouse's surnames. However, in many cases candidates have no last names at all or had a "neutral" or ambiguous surnames such as "Kumar", "Pal", "Singh" etc. Therefore, we supplemented the use of last names with our interviews with party officials, elected councillors, journalists, activists, and perusal of public social media accounts.

Caste information is widely diffused among politically aware Delhites, a fact made clear during our interviews with various party members and elected officials. An elected official told us: "We definitely know the caste of the candidates, but it is not available on paper".[9] Hence, we were able to estimate the relevant category based on informant information or very strong last name evidence for 97.06% of corporators in 2017, 93.75% in 2012 and 91.2% in 2007.[10]

The caste data was merged with data on reservations status, vote totals and party affiliation taken from the Delhi State Election Commission. We also collected and digitized data on the household assets, occupations and education levels of candidatesfrom the affidavits submitted to the EC. This data is only available for the 2012 and 2017 elections, after the affidavit requirement was instituted.

5.2 The Effect of Quotas

We now discuss the effects of quotas for women on the political representation of castes. Table 4 shows the raw data for reserved and unreserved constituencies pooled across the three election years. Constituencies

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[9]Author interview with an elected councillor (name and party affiliation withheld on request), New Delhi May 29, 2017.

[10]There were instances during our fieldwork where we were able to estimate the "caste category" (e.g. "OBC") but not the specific caste of the candidates. Thus, we were able to estimate relevant category with relatively low confidence for 98.02 % of corporators in 2017, 95.96% in 2012, and 97.06% in 2007. Our main analysis uses the high confidence classification.

reserved for members of the scheduled castes (of either gender) are not included since there is (by design) no variance in member caste category within these constituencies. A few patterns are evident. First, reserved constituencies are more likely than unreserved constituencies to elect Brahmin and Bania candidates relative to members of less privileged groups. 37.2% of winners were Brahmin and Bania in unreserved constituencies, while 43.8% of winners were Brahmin and Bania in constituencies reserved for women. Overall, the probability that a constituency will elect a member of a group with more traditional gender norms is 61% in reserved constituencies and 68.7% in unreserved constituencies.

Table 4: Estimated Winner Caste by Quota Category

Caste	Not Reserved	Reserved	Total	Electorate [Est.]
Less Traditional Gender Norms				
Bania	17.4	21.6	19.3	6.2
Brahmin	19.7	21.6	20.5	15.2
Kayastha	2.0	1.1	1.6	2.7
Khatri	9.1	8.6	8.9	7
Rajput	11.1	12.2	11.6	8.5
Sikh	1.7	3.6	2.5	3
More Traditional Gender Norms				
Gujjar	8.0	4.0	6.2	1.2
Jat	17.1	12.9	15.3	4.2
Yadav	4.3	5.8	4.9	3.6
Other OBC	0.6	1.1	0.8	11.1
Muslim	7.7	5.8	6.8	8.6
Scheduled Caste	1.1	1.8	1.4	17.3
Total	100.0	100.0	100.0	

Note: Table shows the percent of candidates from each caste in constituencies with no caste reservation, pooled over the 2007-2017. See Table A.10 on page A-13 for count data. The estimates for population as a percentage of the electorate are based on Lokniti-CSDS Delhi Assembly election 2015 post-poll survey. https://tinyurl.com/LokNiti-CSDS.

This alteration in the castes of representatives does not make the MCD more representative of the population. As Table 4 shows, all the major Hindu castes are overrepresented relative to their share of the population, and overrepresentation comes at the expense members of the smaller OBC castes and Muslims. The lower number of Jat members and higher number of Bania members in reserved constituencies thus represents the transfer from one politically privileged group to another. While descriptive representation of castes is worse in reserved constituencies than in unreserved ones (with an index of dissimilarity of .283 versus .292)[11] this difference is very modest in size relative to the redistributive effects of reservation within

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[11]This is calculated as half the summed differences between corporation representation share and NFHS population share for all groups.

the advantaged groups.

Table 5 examines these effects using a set of logistic regression models. The estimating equation for Panel A is:

$$Y_{iy} = \alpha + \gamma_y + \delta ReservedForWomen_i + \varepsilon_{iy} \tag{1}$$

Where Y_{iy} is the log odds of a member of a non-upper caste group being elected in a specific constituency-year, γ_y is a vector of year effects, and δ is the parameter of interest. Note that the inclusion of the year fixed effects is necessary because the proportion of reserved constituencies varies from year to year.[12] Tables A.9 on page A-12 reports alternative set of results using linear models. Panel C in table 5 and A.14 on page A-16 show that the results can be replicated using data on candidate characteristics, rather than the characteristics of winners.

Model (1) reports the results of the core model, where the outcome is the election of candidate from the set of groups identified in section 4.3.1 as having more traditional gender norms (Gujjar, Yadav, OBC, Muslims, and Scheduled Castes/Tribes). There is a negative and statistically significant association between the quotas for women and the election of corporators from these groups. Reservation for women increased the probability of a constituency electing a candidate from a group with less traditional gender norms (Hindu upper castes and Sikhs) by 10 percentage points. Given the composition of these two groupings, this means that the proportions of winners who are either OBC or Muslim falls and the proportion of Hindu upper castes rises. Additional models show that this effect can be produced using a variety of alternative categorization schemes. The negative association between the election of non-upper castes and quotas holds in Model (2) as well. Model (3) tests the hypothesis on a broad set of traditionally educated high-status castes–Brahmins, Banias, Kayasths and Khatris. Model (4) narrows the definition of upper castes to include only Brahmins and Banias. As expected, we see a positive and statistically significant effect of female reservation on this group. Models (5) and (6) focus on the effect of reservations on the representation of two specific groups, Muslims and Jats. Female reservations are associated with fewer members of both these groups winning, though only the result for Jats is statistically significant. Very similar results appear when candidate traits are measured (Panel C). This alternate measure is important because it shows, consistent with our theory, that the results are driven by changes in the overall pool of available candidates, rather than selection of

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[12]Table A.13 on page A-15 conducts tests for each year seperatly. While none of the results are statistically significant on its own, due to the considerable reduction in sample size, the effect are all negative and similar in magnitude to those in the pooled model, indicating that the results are not unique to one particular year.

winners within that pool.

One feature of the results that might give pause is the modest substantive size of the effect: Even 100% gender quotas would not come close to eliminating OBC presence in the legislature. However, there are two reasons to think that Panel A of Table 4 reports a conservative estimate of the effect of gender quotas. First, male candidates may be able to circumvent the spirit of the quotas by using female relatives as proxy candidates where there are no female candidates from a group available, biasing the effect towards zero. Below, we will see that proxy candidates are more common among candidates from more traditional norms groups.

Second, Delhi is a segregated city, and some constituencies are dominated by a single politically power-ful group to the extent that *all* plausible candidates (male or female) are from that group. In such a situation, it would be impossible for gender reservation to affect the ethnic identity of candidates, though it might affect the number of candidates. This hypothesis receives strong support from Panel B of Table 5, which includes constituency fixed effects. These models will exclude three sets of observations: One, all observations in 2017 (after the redrawing of constituency boundaries). Two, the 50% constituencies where reservation sta-tus did not change between 2007 and 2012. Three, all observations where the caste category of the winner remained constant between the two years (and is thus perfectly predicted). Therefore, the constituency fixed effects models (Panel B of Table 5) include a much smaller number of observations than the corresponding models in Panel A. Despite this, the estimates are still statistically significant, and much larger in substan-tive size than in Panel A. These results indicate that the positive association between gender quotas and the representation of castes with less traditional gender norms (especially the OBC castes) is larger once we account for the overdetermined nature of members of these groups winning in some constituencies.

Tables A.7 on page A-10 and A.8 on page A-11 test if the results are a product of patterns of missing data. We test the extreme versions of such bias by recording all missing cases as members of the advantaged category (Table A.8), or of the disadvantaged category (Table A.7). The coefficients and standard errors remain virtually identical in these models. Further, we also conducted tests to see if the results change over time. In order to do so, we estimated the models for each year separately (Table A.13) and none of the results are statistically significant on its own.

Table 5: Gender Quotas and Winner Identity

Panel A: Main Results[✠]

Variables	(1) More Traditional Gender Norms Group[†]	(2) Non-Twice Born[†]	(3) Professional Elite[†]	(4) Brahmin-Bania	(5) Muslim	(6) Jat
Female Reservation	-0.385**	-0.359**	0.314*	0.334**	-0.352	-0.425*
	(0.173)	(0.165)	(0.165)	(0.168)	(0.331)	(0.235)
2012	0.190	0.336*	-0.190	-0.360*	0.329	-0.256
	(0.213)	(0.202)	(0.202)	(0.204)	(0.399)	(0.312)
2017	0.398*	0.510**	-0.407**	-0.573***	0.197	0.631**
	(0.209)	(0.200)	(0.200)	(0.204)	(0.405)	(0.269)
Constant	-0.637***	-0.190	0.183	-0.248	-2.650***	-1.735***
	(0.160)	(0.152)	(0.152)	(0.152)	(0.310)	(0.216)
Observations	628	628	628	628	628	628

Panel B: Models with Constituency Fixed Effects

Variables						
Female Reservation	-1.732**	-1.432**	1.408**	1.784***	2.410	-2.097**
	(0.695)	(0.558)	(0.638)	(0.633)	(2.124)	(0.860)
2012	0.291	0.734*	-0.578	-1.320***	2.014	-1.133*
	(0.458)	(0.409)	(0.426)	(0.465)	(1.500)	(0.607)
Constant	0.720	0.349	-0.415	-0.232	-1.007	1.615
	(1.647)	(1.473)	(1.629)	(1.461)	(1.765)	(1.981)
Observations	84	106	98	96	12	54

Panel C: Count of Major Party Candidates as Dependent Variable[▼]

Variables						
Female Reservation	-0.378***	-0.332***	0.179	0.171	0.299	-0.103
	(0.129)	(0.124)	(0.164)	(0.177)	(0.260)	(0.483)
Count of Candidates	-0.0499***	-0.0544***	0.00694	0.0217	0.107***	0.000316
	(0.0156)	(0.0152)	(0.0184)	(0.0192)	(0.0232)	(0.0542)
2012	0.361***	0.420***	0.282*	0.143	0.713***	0.644
	(0.122)	(0.118)	(0.160)	(0.170)	(0.268)	(0.482)
Constant	-0.240	-0.180	-1.446***	-1.643***	-3.714***	-3.636***
	(0.171)	(0.166)	(0.226)	(0.239)	(0.359)	(0.672)
Observations	544	544	544	544	544	544

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

[†]*More Traditional Gender Norms Group* includes Gujjars, Jats, Yadavs, OBCs, Muslims, SCs and STs. *Non-Twice born* includes Gujjars, Jats, Yadavs, OBCs, Muslims, SCs, STs and Sikhs. *Professional elites* include Brahmin, Bania, Kayastha, Khatri and Sikhs
[✠]Models in **Panel A** are logistic regressions with constituency-year as the unit of observation and whether candidate from a specific group of castes wins election as the dependent variable. Constituencies reserved for SCs are excluded. Models in **Panel B** include constituency fixed effects.
[▼]Models in **Panel C** are poisson count models with year fixed effects where the dependent variable is the count of candidates.

5.3 Additional Evidence for the Mechanism: Proxy Candidates

One common critique of women's reservations in developing countries is that they lead to the election of *proxy candidates*: Women who merely act as stand-ins for husbands or other male relatives (John, 2007; Chattopadhyay and Duflo, 2004). This process would bias toward zero the effect of gender quotas on caste representation, since if everyone has a female proxy and using one is costless, the caste composition of the female and male pools should be identical.

If, on the other hand, the use of proxy candidates is costly and inconvenient, they should be common only when the proxied male has skills or attributes that would be difficult to replicate in the pool of female potential candidates. In this case, if parties are seeking candidates from a group where there are fewer female candidates, the imposition of quotas will make proxy candidates seem more attractive than other female candidates—in fact, there may be no non-proxy female candidates available. Conversely, proxy candidates will be less common if there are viable female candidates competing for resources and votes within the same group. We should thus expect proxy candidates to be more common among women from disadvantaged groups.

Measuring proxy candidates is difficult, since these candidates do not announce themselves as such, and there is no clear definition. Table 6 shows the proportion of candidates who possess two traits that emerged during our fieldwork interviews as being typical of proxy candidates. The first of these is lack of a Permanent Account Number (PAN), a number given to all Indian taxpayers. Individuals without PAN have never engaged in formal economic activity. The second is listing one's occupation as housewife. While these measures are somewhat ad hoc, we believe that they are the best available measures of this concept.

Table 6: "Proxy" Candidates by Caste and Reservation

Category	PAN Card	Housewife	Spouse is Housewife	N
Unreserved Less Traditional Norm Group	93.3%	7.4%	17.8%	208
Unreserved More Traditional Norm Group	91.3%	12.9%	26.7%	220
Female Reserved Less Traditional Norm Group	90.0%	14.6%	0	109
Female Reserved More Traditional Norm Group	85.5%	29.5%	0	153

Data is from unreserved seats in 2012 and 2017.

The results show clear differences across castes groups and genders. While housewives and non-PAN holders are unsurprisingly rare, both are relatively more common in reserved seats. This pattern is relatively

stronger outside the upper castes, and housewives are twice as common among lower caste candidates. Note that this does not reflect lower levels of household wealth among these groups (Table A.12 on page A-14). This suggests that the effects in Table 5 would be somewhat larger if proxy candidates were excluded.

6   Alternative Mechanisms

6.1   Differences in Economic Status of Women

The main results showed that groups with more traditional gender norms see their representation reduced by gender quotas. However, most of these groups are also more disadvantaged economically than the groups that gain representation, and in particular have a lower proportion of women with higher education and professional jobs. This suggests a different interpretation of the results, albeit still consistent with the theoretical framework: Changes in groups representation in quota seats occur not because the cultural attitudes of some groups keep them underrepresented in the female candidate pool, but because these groups have fewer women wealthy and educated enough to be in the candidate pool.

There is a reasonable degree of correlation between gender attitudes and economic and educational position of women at the group level. [13] The one exception is the Jat caste, which has relatively many educated and prosperous women and which also holds more traditional norms about the behavior of women. As Table 5 showed, Jats are represented at lower levels in reserved than non-reserved constituencies, an indication that the results are not driven by differences in group wealth. In fact, the results are smaller in substantive size and statistically insignificant when castes are categorized by the economic status of women rather than opinions on family issues (Table A.11 on page A-13).

6.2   Other Mechanisms

In appendix A.1 on page A-3, we discuss several alternative mechanisms including discrimination against lower caste women by parties, dominance of BJP in Delhi politics, and role of political dynasties. None appear to explain the results as convincingly as differences in gender attitudes. This section also shows that quotas effect the overall composition of the chamber, rather than leading to a redistribution of caste groups across seats.

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[13]Education and social attitudes are modestly correlated at the individual level. Years of education is correlated with wife beating at ρ=-.3 overall and -.26 among Jats.

7 Discussion and Conclusion

The gender quotas imposed on Delhi Corporation elections have achieved their narrow aim of increasing the descriptive representation of women, with the 50.5% representation under current rules contrasting starkly with the 8.5% of state assembly members who were women in 2015. However, this change has also had consequences for the descriptive representation of caste groups. Constituencies with female quotas are more likely to return members of the traditional Hindu upper castes, particularly Brahmins and Banias, than unreserved constituencies. These constituencies are also less likely to return members of other groups, particularly OBCs. This effect seems traceable to differences in the size of the candidate pool across groups, themselves traceable to cultural differences in the status of women between groups.

Female reservations have clearly had redistributive consequences, consequences that echo the concerns of lower caste politicians. Gender quotas tend to politically strengthen groups at the top of traditional caste hierarchies and favor empowered groups over disempowered ones. However, it is far from clear whether this redistribution is normatively undesirable. First, the changes in the caste of representatives induced by reservation lead to very minor increases in underrepresentation. With the exception of Muslims, *all* the major political groups of Delhi are over-represented at the expense of the smaller OBC castes.

Second, the literature on caste and gender representation emphasizes that *both* increases in representation of women and representation of disadvantaged ethnic groups can change policy by bringing attention to policy areas of importance to these groups (Chattopadhyay and Duflo, 2004; Iyer et al., 2012; Jensenius, 2017). However, it provides no guidance on the relative magnitudes of these two effects, or the effect of under representation on the intersection of the two groups. This represents a promising area for future research.

Finally, at least some portion of the decline in representation among non-upper castes in reserved seats is traceable to cultural attitudes in these groups, and their smaller number of educated women—factors that are changeable in the long run. Over time, the difficulties of contesting elections in a world with quotas might lead members of these groups to alter these attitudes and more actively encourage women to get involved in politics. There is very limited evidence that this is occurring–certainly the negative effect of quotas appear to be weakening in the decade we examine.

We believe that these results should generalize to a broad set of countries where the relative status of women is lower within underprivileged groups, including many developing nations. The theory also implies

that attempts to introduce unidimensional ethnic quotas in these countries will have redistributive effects between genders, though we do not test this contention. By contrast, in many developed countries, there exist strong gender and ethnic stereotypes–such as "dangerous black man" or "extremist Muslim man"– that politically disadvantage the members of the male-minority intersection. In these cases, our theory implies that gender quotas might actually raise minority representation (albeit while changing its gender composition). However, any effects may depend on the exact nature of quotas imposed, the role of partisanship and durability of these social attitudes.

One thing, however, is clear: Quotas for women can have consequences that go beyond gender. In cases where the intersection of gender and low-status ethnicity is negatively associated with the status of women, unidimensional gender quotas (like those currently proposed at the state and national levels in India) tend to favor individuals from higher-status groups. This effect should be carefully considered in the design of gender and ethnic quota systems.

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Supplemental Information: Do gender quotas hurt less privileged groups? Evidence from India

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Table of Contents

A.1 Alternative Mechanisms

A.1.1 Discrimination by Parties

One potential alternative explanation for these findings is that they reflect discrimination by parties. In this story, the candidate pools of upper and lower caste women's are similar in relative size to the male pools, but the upper caste women tend to dominate because those selecting candidates discriminated against lower caste women, perhaps only choosing candidates with whom they were familiar. In fact, politicians we spoke to tended to feel that the opposite was the case.

If parties tended to discriminate against individuals from lower caste groups in quota constituencies, we should expect at least some of the rejected candidates to ignore the parties and run as independents or candidates of minor parties. This is all the more true because running as an independent is a well-known path for rejected candidates in India, which they use as an opportunity to prove their electoral appeal to parties. Table A.1 examines the effect of reservation on the total number independent candidates (including minor party candidates), the vote for independent candidates, and the number of candidates. These results provide no evidence for reservation increasing the number of independents: On the contrary, the relationship between female reservation and the number of candidates is strongly negative: Reservation reduces the total number of candidates by 2.6.

The reduced number of candidates in reserved seats provides supporting evidence for the theory, in particular the idea that reservation reduces the pool of viable candidates. It also supports the findings of Auerbach and Ziegfeld (2016) and Jensenius (2017) on the competition-reducing effects of reservation.

A.1.2 Other Alternative Mechanisms

Another alternative explanation is that while candidate pools are similar and parties do not discriminate, voters dislike lower caste female candidates, leading them to be underrepresented among winners (and, probably, among declared candidates as well). While this possibility has been rejected in studies of American politics (Smith and Fox, 2001), it remains a serious possibility. Table A.3 on page A-7 analyses the probability of winning at the candidate level, with standard errors clustered by constituency. Note that the proportion of candidates with caste identified is lower than among these candidates than among winners. The results provide little evidence for voter discrimination against lower caste women. If anything, lower

Table A.1: Gender Quotas and the Number of Candidates

Variables	(1) # Ind.	(2) # Ind	(3) Vote Ind.	(4) Vote Ind.	(5) # Can.	(6) # Can.
Female Reservation	-0.365***	-0.373***	-0.0293***	-0.0316***	-0.275***	-0.281***
	(0.0303)	(0.0302)	(0.00985)	(0.00998)	(0.0261)	(0.0261)
SC Reservation		-0.300***		-0.0851***		-0.223***
		(0.0503)		(0.0164)		(0.0434)
SC Female Res.		0.0692		0.0153		0.0721
		(0.0808)		(0.0240)		(0.0675)
2012	-0.113***	-0.0888***	-0.0215*	-0.00906	-0.0830***	-0.0645**
	(0.0348)	(0.0327)	(0.0119)	(0.0110)	(0.0311)	(0.0290)
2017	-0.121***	-0.0566*	-0.0962***	-0.0809***	0.0233	0.0745***
	(0.0349)	(0.0324)	(0.0119)	(0.0111)	(0.0303)	(0.0281)
Constant	2.204***	2.179***	0.638***	0.630***	2.380***	2.359***
	(0.0243)	(0.0238)	(0.00888)	(0.00866)	(0.0221)	(0.0215)
Observations	678	814	678	814	678	814
R-squared			0.116	0.135		

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Note: Minor party candidates are coded as independents.
Models 1, 2 and 4 are poisson count models with the constituency-year as the unit of observation and the number of independent or total candidates as the dependent variable. Model 3 is a linear regression model with the constituency-year as the unit of observation and the vote for independent candidates as the dependent variable. Constituencies reserved for the scheduled castes are excluded in models 1, 3 and 4.
"# Ind." refers Number of Independent Candidates. "Vote Ind." refers to Vote for Independent Candidates and " # Can" refers to Total Candidates.

caste women seem to perform slightly better electorally than upper caste women in reserved constituencies, though this results is not statistically robust. At least among the (selected) group of group of lower caste women who run for office, electoral performance does not suffer, making it unlikely that the effect of reservation on representative caste comes from winnowing an otherwise representative candidate pool.

Could the results be explained by some attribute of particular political parties? In particular, the dominance of the BJP in corporation elections throughout the study period might raise concerns for the generalizability of the results, given the close association between the BJP and the upper castes. Table A.4 on page A-8 shows that these concerns do not appear warranted. The negative relationship between female reservation and lower caste representation is present among BJP members, non-BJP members, and all members, and is very similar in size across all groups. While the BJP appears less likely than other parties to nominate lower caste members overall, the relative underrepresentation of lower caste women in the BJP is similar in size to their underrepresentation in other parties.

Concerns about the prevalence of "dynastic" candidates in Indian politics are not uncommon. Family ties

are more common among upper caste than lower caste candidates, and among female candidates than male ones. However, based on state and national data it is unlikely that *dynasticism* explains over-representation of upper castes in the female candidate pool—in fact, it may keep this trend from being more extreme than it is. While dynasts are more often upper caste than lower caste, this disproportion is almost reversed among female MPs. The relatively high representation of lower caste women among dynastic candidates has been documented in Chandra (2016), where the author asserts that "(...) dynasticism among women is associated with greater representation of lower caste women and Muslim women. Among upper-caste women MPs, non-dynastic women tend to be in the majority, whereas among lower caste and Muslim women, dynastic women tend to be in majority." This is born out by the data: Among the dynastic MPs identified by Patrick French in the 2009 Lok Sabha, only 15.2% of the men were SC or ST, while the corresponding figure for women was 36.7%.[1]

A.1.3 Systemic Effects

The results reported here, following the existing quota literature, compare quota constituencies to non-quota constituencies. These results cannot address a potentially interesting counterfactual: Did the imposition of quotas lead to lower level of non-upper caste representation at the chamber level? In practice, this means examining whether the reduction in the representation of certain groups in reserved seats was compensated by an increase in their representation unreserved seats, possibly due to strategic nomination by parties. While such a mechanism might seem unlikely, it is important to rule it out: such compensation could lead to large estimated quota effects in Table 5 being associated with no actual aggregate change in descriptive representation.

Table A.6, provides some limited evidence on this question by comparing the corporation elections of 2017 to the legislative assembly elections of 2015. While the legislative elections covered virtually the same territory as the corporation election, they were conducted without female reservations. As Table A.6 shows, upper castes are better represented in local elections than in state ones in Delhi, despite state seats being considered more important. While 61.5% of corporators in non-SC seats were from groups with more traditional norms in 2017, only 53% of MLAs in non-SC seats were from these groups in 2015, indicating that the representation of OBCs and Muslims in the corporations would be higher in the absence

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[1]Note also that the group identified in our fieldwork as having an especially high share of dynasts, the Jats, are relatively underrepresented in reserved seats.

of reservations.

A.2 Additional Tables

Table A.2: Women's Economic Position by Caste in Delhi, 2004-5 Female Sample

Caste Group	N	Higher Education	Newspaper Reader	Professional Job	Wealth Index
Stronger Economic Position for Women					
Bania	309	46%	69%	7%	158118
Brahmin	386	35%	62%	10%	132891
Kayasth	30	43%	67%	20%	159671
Punjabi Khatri	116	51%	68%	11%	163775
Rajput	298	24%	51%	10%	112998
Sikh	48	35%	58%	15%	122487
Jat	104	29%	52%	10%	137762
Weaker Economic Position for Women					
Gujjar	26	12%	38%	4%	132862
Yadav	91	11%	24%	2%	63615
OtherOBC	238	9%	25%	5 %	65085
Muslim	369	6%	23%	2%	76073
SC	750	3%	24%	2%	53957
ST	36	6%	14%	3%	21026

Source: National Family Health Survey 2004-5, individual female sample. All respondents are adult women.

Table A.3: Voter Discrimination?

Variables	(1) No Caste Reservation	(2) No Caste Reservation	(3) No Caste Reservation	(4) Reserved for Women	(5) Reserved for Women	(6) Reserved for Women
More Traditional Gender Norms Group[†]	-0.0250	0.137	0.852***	0.114	0.192	0.751***
	(0.134)	(0.129)	(0.167)	(0.166)	(0.160)	(0.219)
Female Reservation	0.322***	0.0506	0.0808			
	(0.0899)	(0.0859)	(0.122)			
poorwoman	0.132	0.0543	-0.102			
	(0.214)	(0.203)	(0.253)			
2012	-0.448***	-0.540***	-0.654***	-0.491***	-0.566***	-0.664***
	(0.0897)	(0.0762)	(0.123)	(0.148)	(0.125)	(0.202)
2017	-0.424***	-0.439***	-1.086***	-0.357***	-0.388***	-0.921***
	(0.0807)	(0.0699)	(0.128)	(0.138)	(0.121)	(0.207)
BSP			1.258***			0.936**
			(0.284)			(0.463)
BJP			4.699***			4.422***
			(0.227)			(0.344)
AAP			2.721***			1.772***
			(0.305)			(0.464)
INC			2.373***			2.135***
			(0.198)			(0.301)
Num. Candidates		-0.112***	-0.0330***		-0.105***	-0.0219
		(0.00779)	(0.0112)		(0.0130)	(0.0187)
Constant	-0.771***	0.482***	-2.475***	-0.462***	0.463***	-2.275***
	(0.0753)	(0.111)	(0.222)	(0.125)	(0.148)	(0.345)
Observations	2,246	2,246	2,238	876	876	872

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

[†]*More Traditional Gender Norms Group* includes Gujjars, Jats, Yadavs, OBCs, Muslims, Scheduled Castes and Scheduled Tribes. The categorization is based on social attitudes as demonstrated in table 3.
Note: Models 1-3 are logistic regressions with the candidate-year as the unit of observation and whether the candidate won election as the dependent variable for constituencies without caste reservation. Models 3-6 are logistic regressions with the candidate-year as the unit of observation and whether the candidate won election as the dependent variable for constitutiences with female reservation (including Scheduled Caste Women). Standard errors are clustered by constituency year

Table A.4: Party Effects?

Variables	(1) All Cand.	(2) BJP	(3) No BJP	(4) All Cand.
Female Reservation	-0.411**	-0.455*	-0.345	-0.393**
	(0.184)	(0.242)	(0.278)	(0.173)
BJP	-1.584***			
	(0.306)			
INC	-0.292			
	(0.331)			
AAP	-0.455			
	(0.491)			
BSP	0.617			
	(0.558)			
2012	0.0707	0.0277	0.133	0.200
	(0.228)	(0.313)	(0.321)	(0.214)
2017	0.630***	0.405	0.825**	0.410**
	(0.237)	(0.281)	(0.365)	(0.209)
margin				-0.0111
				(0.00753)
Constant	0.349	-1.106***	0.0833	-0.489***
	(0.308)	(0.221)	(0.254)	(0.188)
Observations	628	403	225	628

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: The models are logistic regressions with the constituency-year as the unit of observation and whether candidate from a non-upper caste won election as the dependent variable. Constituencies reserved for the scheduled castes are excluded.

Table A.5: Balance Test

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Variable: Seat Reserved for Women				
More Traditional Gender Norms Group[†] **(L)**	0.245 (0.258)						
Percentage Votes Polled **(L)**		0.00259 (0.0188)					
Winning Margin **(L)**			0.00212 (0.0116)				
BJP Vote Share **(L)**				-0.0506 (0.862)			
Congress Party Vote Share **(L)**					0.771 (1.177)		
Effective Number of Parties **(L)**						-0.0705 (0.0937)	
Professional Elite[‡] **(L)**							-0.224 (0.257)
Constant	-0.0588 (0.172)	-0.0960 (0.814)	0.00282 (0.190)	0.0480 (0.338)	-0.199 (0.369)	0.287 (0.363)	0.154 (0.176)
Observations	244	270	272	272	272	272	244

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

(L) indicates a *lagged variable*

[†]*More Traditional Gender Norms Group* includes Gujjars, Jats, Yadavs, OBCs, Muslims, Scheduled Castes and Scheduled Tribes. The categorization is based on social attitudes as demonstrated in table 3.

[‡]*Professional elite* includes Brahmins, Banias, Kayasthas, Khatris and Sikhs.

Note: Models (1) -(7) are logistic regressions with lagged variables.

Table A.6: Caste at Different Levels of Government

Caste	Corp. N	Corp. %	Legis. N	Legis. %
Bania	38	19.29	8	15.68
Brahmin	42	21.32	13	25.4
Rajput	24	12.18	3	5.88
Kayastha	2	1.02	1	1.96
Khatri	19	9.64	2	3.92
Total Upper Caste	115	61.5%	27	53%
Gujjar	16	8.12	4	7.84
Jat	20	10.15	9	17.6
Muslim	16	8.12	3	5.88
OtherOBC	2	1.02	0	0
Scheduled Caste	2	1.02	0	0
Sikh	6	3.05	4	7.84
Yadav	10	5.08	4	7.84
Total Non-Upper Caste	72	38.5%	27	47%

Note: The table shows the percent and frequency of estimated winner caste in unreserved constituencies for the Delhi Corporation elections (2017) and the Delhi Legislative assembly elections (2015). The last two columns are based on information provided by Sumit Nirban http://riseofhindustan.blogspot.com/2015/02/caste-wise-complete-list-of-delhi-mlas.html Accessed 3/23/19.

Table A.7: Treating Missing Entries as Disadvantaged Group

Variables	(1) More Traditional Gender Norms Group[†]	(2) Non-Twice Born	(3) Professional Elite[‡]	(4) Brahmin-Bania	(5) Muslim	(6) Jat
Female Reservation	-0.303*	-0.359**	0.314*	0.334**	-0.352	-0.425*
	(0.161)	(0.165)	(0.165)	(0.168)	(0.331)	(0.235)
2012	0.0522	0.336*	-0.190	-0.360*	0.329	-0.256
	(0.194)	(0.202)	(0.202)	(0.204)	(0.399)	(0.312)
2017	0.0486	0.510**	-0.407**	-0.573***	0.197	0.631**
	(0.195)	(0.200)	(0.200)	(0.204)	(0.405)	(0.269)
Constant	-0.296**	-0.190	0.183	-0.248	-2.650***	-1.735***
	(0.144)	(0.152)	(0.152)	(0.152)	(0.310)	(0.216)
Observations	678	628	628	628	628	628

Standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

[†]*More Traditional Gender Norms Group* includes Gujjars, Jats, Yadavs, OBCs, Muslims, Scheduled Castes and Scheduled Tribes. The categorization is based on social attitudes as demonstrated in table 3.

[‡]*Professional elite* includes Brahmins, Banias, Kayasthas, Khatris and Sikhs.

Note: The models are logistic regressions with the constituency-year as the unit of observation and whether candidate from a specific group of castes wins election as the dependent variable. Constituencies reserved for the scheduled castes are excluded and candidates whose caste could not be estimated are treated as from disadvantaged group.

Table A.8: Treating Missing Entries as Rich Group

Variables	(1) More Traditional Gender Norms Group[†]	(2) Non-Twice Born	(3) Professional Elite[‡]	(4) Brahmin-Bania	(5) Muslim	(6) Jat
Female Reservation	-0.390**	-0.359**	0.314*	0.334**	-0.352	-0.425*
	(0.170)	(0.165)	(0.165)	(0.168)	(0.331)	(0.235)
2012	0.253	0.336*	-0.190	-0.360*	0.329	-0.256
	(0.208)	(0.202)	(0.202)	(0.204)	(0.399)	(0.312)
2017	0.562***	0.510**	-0.407**	-0.573***	0.197	0.631**
	(0.205)	(0.200)	(0.200)	(0.204)	(0.405)	(0.269)
Constant	-0.824***	-0.190	0.183	-0.248	-2.650***	-1.735***
	(0.155)	(0.152)	(0.152)	(0.152)	(0.310)	(0.216)
Observations	678	628	628	628	628	628

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

[†]*More Traditional Gender Norms Group* includes Gujjars, Jats, Yadavs, OBCs, Muslims, Scheduled Castes and Scheduled Tribes. The categorization is based on social attitudes as demonstrated in table 3.

[‡]*Professional elite* includes Brahmins, Banias, Kayasthas, Khatris and Sikhs.

Note: The models are logistic regressions with the constituency-year as the unit of observation and whether candidate from a specific group of castes wins election as the dependent variable. Constituencies reserved for the scheduled castes are excluded and candidates whose caste could not be estimated are treated as from richer group.

Table A.9: Linear Models

Panel A: Main Results[✠]

Variables	(1) More Traditional Gender Norms Group[†]	(2) Non-Twice Born	(3) Professional Elite[‡]	(4) Brahmin-Bania	(5) Muslim	(6) Jat
Female Reservation	-0.0870**	-0.0884**	0.0774*	0.0788**	-0.0220	-0.0526*
	(0.0389)	(0.0406)	(0.0406)	(0.0397)	(0.0206)	(0.0290)
2012	0.0424	0.0826*	-0.0468	-0.0869*	0.0210	-0.0247
	(0.0478)	(0.0498)	(0.0499)	(0.0487)	(0.0253)	(0.0356)
2017	0.0903*	0.126**	-0.101**	-0.136***	0.0121	0.0877**
	(0.0472)	(0.0492)	(0.0492)	(0.0481)	(0.0250)	(0.0351)
Constant	0.348***	0.453***	0.545***	0.440***	0.0671***	0.152***
	(0.0360)	(0.0375)	(0.0375)	(0.0367)	(0.0191)	(0.0268)
Observations	628	628	628	628	628	628
R-squared	0.012	0.016	0.011	0.017	0.003	0.023

Panel B: Main Results with Constituency Fixed Effects

Female Reservation	-0.101*	-0.138**	0.0943	0.131**	-0.0285	-0.0504
	(0.0538)	(0.0599)	(0.0582)	(0.0567)	(0.0259)	(0.0329)
2012[£]	0.0264	0.0719*	-0.0426	-0.0881**	0.0217	-0.0245
	(0.0377)	(0.0420)	(0.0408)	(0.0398)	(0.0254)	(0.0323)
Constant	0.0373	0.533*	0.974***	0.478*	0.0197	0.214***
	(0.246)	(0.273)	(0.266)	(0.259)	(0.0298)	(0.0379)
Observations	407	407	407	407	407	407
R-squared	0.773	0.748	0.761	0.770	0.016	0.020

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

[†]*More Traditional Gender Norms Group* includes Gujjars, Jats, Yadavs, OBCs, Muslims, Scheduled Castes and Scheduled Tribes. The categorization is based on social attitudes as demonstrated in table 3.

[‡]*Professional elites* include Brahmin, Bania, Kayastha, Khatri and Sikhs.

[£]Constituency lines were redrawn between 2012 and 2017

[✠]The models in **Panel A** are linear models with the constituency-year as the unit of observation and whether candidate from a specific group of castes wins election as the dependent variable. Constituencies reserved for the scheduled castes are excluded. Models in **Panel B** include constituency fixed effects

Table A.10: Count of Winners by Caste

	Caste	2007	2012	2017
1	Unidentified	28	19	3
2	Bania	47	38	36
3	Brahmin	46	43	40
4	Gujjar	14	16	9
5	Jat	27	21	48
6	Kayastha	3	2	5
7	Khatri	16	20	20
8	Muslim	12	16	15
9	Rajput	22	24	27
10	Scheduled Caste	48	49	48
11	Sikh	2	8	6
12	Yadav	7	14	10
21	OtherOBC	–	2	3
	Total	**272**	**272**	**272**

Table A.11: Castes categorization based on Economic Parameters

Variables	(1) Economically More Traditional Gender Norms Group [†]	(2) Non-Twice Born	(3) Professional Elite[‡]	(4) Brahmin-Bania	(5) Muslim	(6) Jat
Female Reservation	-0.236	-0.359**	0.314*	0.334**	-0.352	-0.425*
	(0.206)	(0.165)	(0.165)	(0.168)	(0.331)	(0.235)
2012	0.405*	0.336*	-0.190	-0.360*	0.329	-0.256
	(0.246)	(0.202)	(0.202)	(0.204)	(0.399)	(0.312)
2017	-0.0131	0.510**	-0.407**	-0.573***	0.197	0.631**
	(0.257)	(0.200)	(0.200)	(0.204)	(0.405)	(0.269)
Constant	-1.411***	-0.190	0.183	-0.248	-2.650***	-1.735***
	(0.192)	(0.152)	(0.152)	(0.152)	(0.310)	(0.216)
Observations	628	628	628	628	628	628

Standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

[†]*Economically More Traditional Gender Norms Group* includes Gujjars, Yadavs, OBCs, Muslims, Scheduled Castes and Scheduled Tribes. This group is categorized based on economic parameters as used in the National Family Health Survey 2004-05.

Note: The models are logistic regressions with the constituency-year as the unit of observation and whether candidate from a specific group of castes wins election as the dependent variable. Constituencies reserved for the scheduled castes are excluded.

Table A.12: Gender Quotas, Wealth and Education

Variables	(1) Education Level	(2) Log. Net Assets	(3) Education Level	(4) Log. Net Assets
Female Reservation	-0.0580	0.0395	-0.137	0.0261
	(0.0950)	(0.174)	(0.104)	(0.179)
SC Reservation			-0.568***	-2.001***
			(0.183)	(0.315)
SC Female Res.			0.485*	0.250
			(0.254)	(0.435)
2012	-0.411***	-0.100	-0.409***	-0.109
	(0.0963)	(0.174)	(0.0964)	(0.163)
Observations	489	535	489	535
R-squared		0.001		0.124

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: It is worth noting that female winners are not wealthier or better educated than male ones: Quotas change the caste of members, but not other elements of their social status.

The theoretical framework gives mixed predictions regarding the association between women's quotas and non-ascriptive measures of social status. If in general women are less wealthy and well-educated than men (as is often the case) we should expect allowing only women to run to lead to lower levels of candidate wealth and education. If, on the other hand, running for office is common only among wealthy and educated women but common among a wide spectrum of men, women's quotas could lead to female quotas increasing candidate wealth. Since we do not generally observe the pool of potential candidates, it is hard to know which of these mechanisms will dominate in practice.

As Table A.12 shows, female quotas have no strong association with either logged net winner assets or ordered winner education level. Nor does this reflect the low quality of the affidavit data. While reservation for scheduled castes has a negative and statistically significant association with both education and assets (reflecting the poverty of these groups) the estimated effect of women's reservations is tiny and statistically insignificant.Female reservation does have a statistically significant and negative association with *candidate* wealth and education, but this result is entirely attributable to the smaller of number of non-viable candidates (who tend to be less wealthy and educated) in reserved constituencies. Models 1 and 3 are ordered probit regressions with the constituency-year as the unit of observation and the ordinal education level of the winner (no qualification, primary grad., secondary grad, university grad, postgraduate degree) as the dependent variable. Models 2 and 3 are linear regressions with the constituency-year as the unit of observation and the ordinal logged net household assets of the winner as the dependent variable. Constant cutpoints are omitted for reasons of space.

Table A.13: Separate Year Models

Variables	(1) More Traditional Gender Norms Group[†]	(2) Non-Twice Born	(3) Professional Elite[‡]	(4) Brahmin-Bania	(5) Muslim	(6) Jat
Panel A: 2007[a]						
Female Reservation	-0.610*	−0.803**	0.334	0.578*	-0.900	-0.568
	(0.345)	(0.323)	(0.310)	(0.306)	(0.790)	(0.490)
Constant	−0.574***	-0.0588	0.177	-0.326*	−2.534***	−1.700***
	(0.179)	(0.172)	(0.172)	(0.174)	(0.329)	(0.237)
Observations	200	200	200	200	200	200
Panel A: 2012[b]						
Female Reservation	-0.354	-0.214	0.535*	0.446	-0.220	-0.486
	(0.294)	(0.279)	(0.282)	(0.287)	(0.524)	(0.473)
Constant	-0.461**	0.0755	-0.113	-0.665***	-2.377***	-1.968***
	(0.199)	(0.194)	(0.195)	(0.205)	(0.348)	(0.296)
Observations	207	207	207	207	207	207
Panel C: 2017[c]						
Female Reservation	-0.265	-0.170	0.0935	0.0113	-0.192	-0.329
	(0.276)	(0.270)	(0.269)	(0.283)	(0.536)	(0.330)
Constant	-0.298	0.223	-0.111	-0.652***	-2.526***	-1.149***
	(0.195)	(0.194)	(0.193)	(0.203)	(0.367)	(0.225)
Observations	221	221	221	221	221	221

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

[†]*More Traditional Gender Norms Group* includes Gujjars, Jats, Yadavs, OBCs, Muslims, Scheduled Castes and Scheduled Tribes. The categorization is based on social attitudes as demonstrated in table 3.

[‡]*Professional elites* include Brahmin, Bania, Kayastha, Khatri and Sikhs.

[abc] The models are logistic regressions for 2007, 2012 and 2017 respectively with constituency-year as the unit of observation and whether candidate from a specific group of castes wins election as the dependent variable. Constituencies reserved for the scheduled castes are excluded.

Table A.14: Proportion of Major Party Candidates as Dependent Variable

Variables	(1) More Traditional Gender Norms Group [†]	(2) Non-Twice Born	(3) Professional Elite[‡]	(4) Brahmin-Bania	(5) Muslim	(6) Jat
Female Reservation	-0.00372	0.00189	0.0236***	0.0180***	0.00639	0.00130
	(0.0121)	(0.0123)	(0.00716)	(0.00653)	(0.00423)	(0.00288)
2012	0.0312***	0.0403***	0.0177**	0.00864	0.0119***	0.00359
	(0.0118)	(0.0120)	(0.00698)	(0.00636)	(0.00413)	(0.00280)
Constant	0.0663***	0.0669***	0.0254***	0.0248***	0.00520*	0.00300
	(0.00872)	(0.00884)	(0.00516)	(0.00470)	(0.00305)	(0.00207)
Observations	544	544	544	544	544	544
R-squared	0.013	0.022	0.040	0.022	0.024	0.004

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

[†] *More Traditional Gender Norms Group* includes Gujjars, Jats, Yadavs, OBCs, Muslims, SCs and STs. The categorization is based on social attitudes as demonstrated in table 3.

[‡] *Professional elites* include Brahmin, Bania, Kayastha, Khatri and Sikhs.

Note: Models (1)- (6) in the table are linear models where the dependent variable is the proportion of candidates by caste. All models include year fixed effects.