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Evidence from Municipal, State, and National Elections in India**

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Abstract

Countries around the world use electoral quotas to ensure that underrepresented groups gain legislative representation. Despite the fact that electoral quotas are *political* interventions, the large literature on the subject has mostly ignored their impact on political competition. We argue that electoral quotas diminish the number of viable candidates and increase the extent to which competition revolves around major parties. Furthermore, these effects should be most pronounced in lower-level elections, where candidates can more easily run outside major-party labels. To test our hypotheses, we draw on a rich set of quantitative and interview data collected from original fieldwork in India. We find substantial evidence that the effective number of candidates is lower in electoral districts with quotas and vote shares for major parties are higher. These effects are largest in local elections and smallest in national elections. The paper advances research on electoral competition, party politics, and institutional design.

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1. Introduction

Countries around the world use electoral quotas to ensure that underrepresented groups win legislative seats. In Belgium, for instance, each party list must include at least 50 percent women and have a woman in at least one of the top-two slots. Rwanda constitutionally mandates that women hold at least 30 percent of seats in legislative bodies (Burnet 2011), while India similarly requires that women hold at least one-third of locally elected seats. Countries as diverse as Jordan, New Zealand, Niger, and Pakistan employ some form of ethnic quotas. Others, like Romania, ensure ethnic minority representation by exempting ethnic minority parties from the electoral threshold applied to other parties (King and Marian 2012). An impressive 118 countries now use some form of electoral quota to increase the representation of women,² and at least twenty-eight countries use electoral quotas to ensure a degree of representation from specific ethnic groups (Bird 2014).

Electoral quotas have elicited significant scholarly interest. However, despite the fact that electoral quotas are *political* interventions, the burgeoning literature on the subject has mostly ignored the outcome on which electoral quotas should have the most immediate impact: political competition. What are the electoral consequences of quotas? How do they alter the nature of competition among candidates and parties? This paper advances the literature on electoral quotas by examining and explaining their impact on political competition in India, an important case in the study of quotas.³ In particular, we examine quotas—or reservations, as they are termed in

² On gender quotas, see Matland 2006, Krook 2006, Tripp and Kang 2008, and Dahlerup 2014. For a larger comparative discussion on electoral quotas, see Krook and Zetterberg 2014.

³ See, for examples, McMillan 2005, Bhavnani 2009, Dunning and Nilekani 2013, Chauchard 2014, and Jensenius 2015b.

India—for women and two historically marginalized social groups, the Scheduled Castes and Scheduled Tribes.⁴

Understanding how quotas shape electoral competition is crucial because electoral competition has important downstream effects on democratic responsiveness, public spending, and economic development.⁵ Scholars have also linked electoral competition to ethnic violence (Wilkinson 2005; Heath forthcoming). While the potential for electoral quotas to widen the set of groups with access to political power and state resources has been well studied, quotas' influence on electoral competition is far less understood. The relationship between electoral quotas and competition, therefore, merits sustained research.

We argue that quotas have two primary impacts on electoral competition. First, they diminish the competitiveness of elections in terms of the number of *viable* competitors who can stage competitive candidacies—not simply the raw number of candidates, which often includes those that muster only negligible vote shares. In the context of single-member district plurality electoral systems, the number of viable aspirants for elected office often exceeds the number of major parties in an area, leading some of those viable aspirants to run as independents or minor-party candidates. However, quotas, particularly for marginalized social groups, restrict the number of potential candidacies. Reserved seats should therefore see fewer viable candidates than non-reserved seats, closer to the number of major parties in the area.

⁴ Scheduled Castes and Scheduled Tribes are composite social categories, each composed of hundreds of different sub-castes (*jati*). On castes as ethnic groups, see Chandra 2004.

⁵ Sáez and Sinha 2010, for example, find that party competition is positively correlated with public spending because incumbents facing tight elections “overbid” in their public expenditures to win every last vote. Chhibber and Nooruddin 2004 find a negative relationship between party fractionalization and public goods provision, as parties in electoral districts with high party fragmentation need only to secure a narrow plurality to win, reducing incentives to provide widely accessible public goods. See also Chaudhuri and Dasgupta 2006; Boulding and Brown 2014; Nooruddin and Simmons 2015; and Thachil and Teitelbaum 2015.

Second, electoral quotas increase the extent to which competition revolves around major parties. In electoral districts with quotas, where viable candidates from reserved groups may be in short supply, major parties have an organizational advantage in recruiting viable candidates. Major parties offer candidates a greater likelihood of access to power and can also draw on their more extensive partisan networks to identify viable candidates. Smaller parties should be less capable of recruiting from the reduced pool of viable candidates, and there should be fewer viable candidates who contest as independents. As a result, quotas should increase the extent to which competition revolves around major parties. Further, because quota beneficiaries typically come from disadvantaged or stigmatized groups, voters from outside of those groups should be less likely to focus on candidate qualities, assuming them to be of lower quality. Instead, voters will pay greater attention to party labels, pushing competition to revolve around major parties.

We also contend that these two effects are greatest at lower levels of government, where independent and small-party candidates are better able to parlay their social networks and relatively modest resources into viable candidacies. At higher levels of elected government, where electoral districts are larger, campaign costs are higher, and a candidate's personal following constitutes a much smaller share of the voting population, running a campaign outside of a major party is difficult. Local elections should therefore feature more viable candidates compared to state and national elections, and so the impact of quotas should be greater at the local level and smallest at the national level.

Our study draws on a rich set of qualitative and quantitative data from India, collected through original fieldwork. To examine the impact of electoral quotas on local competition, we gathered municipal electoral data in the north Indian cities of Jaipur and Bhopal, yielding data on nine elections and 664 municipal ward-year observations. Municipal election results require on-

site archival research. As a result, few studies have examined municipal elections in India, despite the fact that 53 Indian cities had, as of 2011, more than a million residents (2011 Census of India). Jaipur and Bhopal are large regional capitals, boasting populations of three million and two million, respectively. At the state and national-levels, we rely on data from nearly all races from 1961 to early 2015, for a total of nearly 55,000 observations. Finally, interviews with party officials bolster our findings by deepening our understanding of the context and mechanisms.

The paper is organized as follows. We first establish a gap in the study of electoral quotas and competition. Next, we detail our theoretical argument for why quotas should matter for competition and identify three distinct hypotheses. We subsequently describe our empirical context and data, followed by our results, which support each of the three hypotheses, and then speculate on why we find stronger evidence in support of our hypotheses for one set of quotas (for Scheduled Castes) than for another (for Scheduled Tribes). We conclude by discussing the implications of our findings for the study of electoral quotas.

2. Research on Electoral Quotas

The literature on electoral quotas consists of four major strands of research—studies that examine the impact of quotas on representation, distributive politics, social order, and attitudes toward quota beneficiary groups. We discuss each strand to situate our study in the literature.⁶

First, studies have investigated the impact of quotas on target group representation in legislatures.⁷ In a foundational cross-national analysis, Tripp and Kang (2008) find that female quotas have increased the proportion of women in national legislatures. Other studies have explored how electoral quotas alter the distribution of policy preferences in decision-making

⁶ On public support for quotas, see Bush 2011 and Barnes and Cordova 2016.

⁷ See Jones 2004; Franceschet and Piscopo 2008; Tripp and Kang 2008.

bodies. For instance, in India, Chattopadhyay and Duflo (2004) find evidence that female representatives exhibit distinct preferences over public spending; they are more likely than men to allocate resources toward goods such as drinking water. Also in India, Pande (2003) finds that quotas for disadvantaged ethnic groups increase these groups' influence over policy making.

Second, a body of research examines the distributive consequences of electoral quotas. Findings are mixed. Some studies uncover little distributive impact. Bardhan et al. (2010) find that political reservations in the Indian state of West Bengal do not improve targeting toward women, Scheduled Castes, and Scheduled Tribes. Dunning and Nilekani (2013) similarly find little impact of quotas on distribution toward those benefiting from quotas. And, in a sweeping study across the Indian states since independence, Jensenius (forthcoming) finds that quotas have not yielded significant gains in literacy among the Scheduled Castes.

Others find an impact of quotas, even if limited. For instance, Ban and Rao (2008) find that the performances of male and female local representatives in southern India do not differ, but female representation is more effective—measured by the extent to which village representatives provide local public goods, as reported by villagers—in areas where local government is stronger and where villages are less dominated by upper castes. Besley et al. (2004) demonstrate that village-level reservations in South India for Scheduled Castes and Scheduled Tribes increase access for members of those groups to public services, particularly with low spillover goods. Finally, Chin and Prakash (2011) uncover a positive relationship between poverty reduction and the share of seats reserved for Scheduled Tribes.

Third, a smaller set of studies looks at the impact of quotas on the maintenance of peace among diverse ethnic groups. Pasquale (2015), for instance, finds evidence from India that quotas for Scheduled Tribes reduce instances of Maoist violence.

Fourth, scholars have examined how electoral quotas change social attitudes toward beneficiary groups. Chauchard (2014) investigates the impact of Scheduled Caste quotas on the attitudes of dominant castes, finding that quotas can spur positive changes even if they do little to undermine negative stereotypes. Evidence from Rwanda shows that quotas improve respect and confidence among groups targeted by quotas (Burnet 2010), and quotas for women in Sweden have increased not only the number of women selected for municipal leadership but also positive assessments of their qualifications (O'Brien and Rickne 2016). Bhavnani (2009) and Beaman et al. (2010) find evidence from Mumbai and West Bengal, respectively, that exposure to women and Scheduled Caste representatives can yield lasting attitudinal effects on voters, allowing the impact of reservations to persist after they are withdrawn.⁸ Gender quotas have also been found to increase female political participation (De Paola et al. 2014; Deininger et al. 2015).⁹

In the expansive literature on electoral quotas, few studies have examined how these interventions affect political competition. Bhavnani (2009) and Beaman et al. (2010) indirectly speak to this by showing that even after quotas are withdrawn target groups are more likely to get elected than they otherwise would. However, the only work of which we are aware that directly investigates quotas' impact on political competition is Jensenius (forthcoming), which examines the effects of quotas for Scheduled Castes in Indian state elections. Jensenius finds that electoral districts with quotas for Scheduled Castes have fewer candidates competing on average, exhibit a lower effective number of candidates, and have higher margins of victory for winning candidates. In this article, we build on and extend Jensenius' findings in several important ways. Theoretically, we build on the insight that quotas reduce the pool of potential candidates;

⁸ See also Barnes and Burchard 2013 on the impact of female descriptive representation on women's political participation.

⁹ Drawing on survey data from Lesotho, Clayton 2015, however, finds that gender quotas reduce female political participation.

however, we identify additional hypotheses about the extent to which competition revolves around major parties and the levels of government at which the effects of quotas should be strongest. Empirically, our study considers several additional and substantively important outcomes of interest, explores quotas for additional social groups beyond the Scheduled Castes, and incorporates elections at all levels of government—local, state, and national.

3. Theoretical Framework: Why Electoral Quotas Matter for Competition

In this section we identify three hypotheses regarding the impact of electoral quotas on political competition. To be clear about our terminology, in India, “reservation” refers to the system of ethnic and gender quotas in which certain seats—whether in legislatures, government offices, or educational institutions—are “reserved” for members of certain groups. In the electoral context, “reserved seats” are those electoral districts in which only members of certain groups—women or historically marginalized ethnic groups—may compete for office. For example, an SC-reserved seat is one in which only members of the Scheduled Castes may compete. We use “reservation” and “electoral quotas” interchangeably. Seats in which any candidate may compete are called “unreserved” or “general” seats. We also use the terms “electoral district” and “constituency” interchangeably, as the latter is the term used in India.

The hypotheses described below all rest on the assumption that voters take candidates into account when voting—that electoral politics does not revolve entirely around parties. This implies that our argument is more likely to hold in places where voters cast their ballots directly for specific candidates, as in single-member district systems using either plurality or double-ballot rules or in open-list proportional representation. Further, this scope condition implies that our argument better applies to contexts where partisanship is relatively weak, politics is

personalized, and electoral volatility is high. In these settings, voters are more likely to take candidates into account and not simply vote on the basis of which parties are on the ballot.

3.1 Hypothesis 1: Electoral Quotas and the Number of Viable Candidates

Our first hypothesis (Hypothesis 1) is that *reserved constituencies should have fewer major competitors than unreserved constituencies*. Intuitively, by restricting who can compete, quotas diminish the pool of potential candidates, which should, on average, diminish the number of candidates compared to seats without reservations.¹⁰ However, the absolute number of candidates in a district is often meaningless as many of these candidates win miniscule vote shares. We therefore focus on the “effective” number of candidates (ENC).¹¹ The ENC places little weight on candidates with negligible vote shares and more on successful candidates.

When formulating expectations about the number of *major* candidates, restrictions on who can compete remain an important part of the story; however, the role of parties adds another layer of complexity. We expect reserved seats, on average, to have fewer major candidates because the number of independently viable candidacies should less frequently exceed the number of major party labels in a constituency. In unreserved seats, the number of independently viable candidacies should more frequently exceed the number of major party labels.

A major-party label confers viability on a candidate. Such candidates benefit from the party’s resources, reputation, and campaign machinery. Beyond signaling policy positions or distributional tendencies, major-party labels are focal points for voters, drawing their attention to the candidates most likely to win. Therefore, major-party candidates typically enjoy advantages

¹⁰ For instance, if one out of every 20,000 voters decides to run for office, restricting the eligible pool of voters from 200,000 (all voters in the constituency) to 60,000 (quota beneficiaries in the constituency) should diminish the expected number of candidates from ten to three.

¹¹ This is equivalent to Laakso and Taagepera’s 1979 “effective” number of parties (ENP).

over candidates who compete on minor-party labels or as independents. However, some candidates are *independently viable*—candidates who can mount a plausible run for office even without a major-party label. These are candidates who tend to have widespread name recognition, substantial wealth, a reputation for being influential or well connected, a history of public work, or some combination of these characteristics.

Often, independently viable candidates will contest on major-party labels. For parties, recruiting independently viable candidates is beneficial since these candidates may provide their own campaign funds or attract voters who might not otherwise vote for the party but find the candidate appealing. For candidates, major parties offer a greater possibility of access to power. If a major party wins an election, it typically occupies the executive post and the majority of ministerial berths. In contrast, small parties may either rarely participate in government or occupy few cabinet berths if they do enter government. Given this mutually beneficial relationship, most candidates from major parties will be independently viable unless there is a shortage of such candidates in the district.

However, not all independently viable candidates can necessarily secure major-party tickets. If, for example, there are five independently viable candidates in a district but only two major parties, then three candidates must decide whether to sit out the election or contest as independents or on a minor-party ticket. When such candidates compete as independents or on minor-party tickets, their presence inflates the number of major candidates, above what one would expect based on the number of major parties.

Because major parties typically confer viability on a candidate—regardless of whether that candidate would be independently viable without the party’s backing—the number of major candidates in a district is not necessarily a function of the number of independently viable

candidates alone. In a party system with four major parties, a district is likely to have four major candidates even if it has only two independently viable candidates. Thus, whether an electoral district has a larger number of major candidates depends on whether the number of independently viable candidates exceeds the number of major party labels. When there are more independently viable candidates than major party labels, then those candidates who can credibly compete as independents or minor-party candidates will inflate the ENC above the baseline associated with the overall number of parties in the party system.

Reservation's impact lies in diminishing the number of independently viable candidates such that the number of independently viable candidates should less frequently exceed the number of major parties than in unreserved seats. This occurs not only because reservation limits the number of eligible candidates, but also because it limits eligibility to groups that are systematically less likely to produce independently viable candidates—groups that are socioeconomically disadvantaged. Groups that are disadvantaged are less likely to have their own economic clout and links to political parties, and to the extent that groups suffer from discrimination, they are less likely to find robust support outside of their own group. Reserved constituencies should therefore less frequently produce more independently viable candidates than major-party labels, meaning that competition frequently revolves around as many candidates as there are major parties. In contrast, in unreserved seats, the number of independently viable candidates is more likely to exceed the number of major parties, thereby increasing the number of major candidates as races feature competitive independent and minor-party candidates.

3.2 Hypothesis 2: Electoral Quotas and the Role of Major Parties

Our second hypothesis (Hypothesis 2) is that *in reserved electoral districts, electoral competition revolves around major parties more than in unreserved seats*. There are two versions of this hypothesis. The “weak” version is that major parties should monopolize a greater share of the vote in reserved districts. This flows directly from Hypothesis 1. If the number of independently viable candidates in a district is equal to or less than the number of major parties in the district, then all independently viable candidates should win major-party nominations, and some parties may even need to field a candidate who would not otherwise be viable without the party. As a result, viable candidates in reserved districts should mostly belong to major parties, and the overwhelming majority of votes should go to these major-party candidates. By contrast, in unreserved seats, where the number of independently viable candidacies should be larger, there are likely to be candidates who either contest as independents or as candidates from minor parties, thereby reducing the vote shares of major party candidates.

The “strong” version of this hypothesis is that electoral outcomes in reserved constituencies should reflect voters’ evaluations of parties to a far greater extent than they reflect voters’ evaluations of candidates—that is, elections in reserved seats should be more party-centered than candidate-centered. This relies on an argument about voter decision-making.

According to the “strong” version of the hypothesis, competition revolves around major parties to a greater extent in reserved districts because voters are systematically less likely to pay attention to candidates and more likely to pay attention to party labels. There are two reasons for this. First, in reserved seats, parties may not always be able to find candidates who are independently viable. They may be forced to field candidates who have little experience or are not well known. Indeed, during interviews in Jaipur and Bhopal, party officials noted having to

sometimes rely on their organizational networks to find candidates from reserved groups.¹² Specifically with regard to women's quotas, one city-level BJP officer stated that if there is not a prominent female party worker in the area, they turn to the wife of a locally known male party worker.¹³ Voters presumably think of such candidates as agents of parties rather than as independent political entities who might influence politics through their own clout and connections. Thus, if voters are not paying attention to the specific candidates in a reserved seat, they are more likely to vote for a major party with an established reputation. And, if in unreserved seats most candidates are independently viable, voters may be more attentive to candidate profiles and willing to vote for independents or minor-party candidates.

Second, and related, voters in reserved districts may be less likely to pay attention to specific candidates because of discrimination toward quota-beneficiary groups. Reservations typically ensure representation for groups that are marginalized. These could be groups subject to considerable social discrimination, such as India's Scheduled Castes. When quota groups are victims of discrimination—whether in general or specific to holding elected office—voters may be averse to voting for a candidate from the group altogether. As result, they may pay little attention to the individual candidates, assuming as a rule that they are not fit for office. Rather, they may instead see candidates as interchangeable party agents and thus view their vote as purely for a party. If so, then this too should point in the direction of vote choices that reflect

¹² Author interviews with BJP City Committee Member in Jaipur on July 4, 2015 and Congress party official in Bhopal on July 31, 2015.

¹³ We are aware of no data on how pervasive this phenomenon is, though both authors have encountered multiple instances of such “proxy” candidates. One state-level Congress official in Jaipur (Author interview, July 4, 2015) estimated that 22 out of 27 female ward councillors were selected because their husbands were prominent in the ward (there are in fact 33 female ward councillors in Jaipur). A Congress party official in Bhopal estimated a similar percentage (80%) of female ward candidates are chosen as proxies (Author interview, July 31, 2015). Regardless, it should be noted that gender quotas have been shown to produce attitudinal shifts among voters, making women more independently competitive in elections (Bhavnani 2009).

evaluations of parties as opposed to candidates. Competition, then, should revolve around major-party candidates in reserved seats to a greater degree than in non-reserved seats.

3.3 Hypothesis 3: Electoral Quotas and the Level of Government

Our third hypothesis (Hypothesis 3) is that *the impact of quotas on electoral competition should be greater at lower levels of government as opposed to higher levels of government*. The number of independently viable candidates should be higher in local elections, where election costs are lower and a candidate's local reputation can more easily translate into an electorally meaningful following even without a major-party label. The introduction of reservations, then, should exert a stronger impact at the local level, as it prevents an even larger number of otherwise independently viable candidates from running. By contrast, at the national level, where campaigns are costly and electoral districts are large, there should be fewer independently viable candidates who can credibly run without major party backing. Therefore, the impact of reservation at the national-level should be less pronounced.

To illustrate, in a small electoral district of, say 30,000 people—the average urban ward population in our two case cities—a candidate's social network may be sufficient to make him or her viable. In electoral districts ranging from 100,000 to a million or more people—the sizes of many state and national constituencies¹⁴—that same network would not make a candidate viable. In a large electoral district, a candidate must invest greater time and resources to be viable. Thus, large electoral districts associated with higher-level elections should have fewer independently viable candidates, as there should be few people who can credibly vie for a seat without a party

¹⁴ In 2014, the number of voters in the median parliamentary constituency was 1,033,783. In the 2013 state elections in Karnataka, Madhya Pradesh, and Rajasthan—large states, but not among the largest in India—the median number of voters was between 138,000 and 154,000.

label. Therefore, we expect to see stronger evidence of Hypotheses 1 and 2 at lower levels of government and more muted evidence at higher levels of government.

4. Context and Data

We test our hypotheses in the context of India, a federal democracy with single-member district plurality (SMDP) rules. Since its first post-independence elections, India has employed quotas in national and state legislatures for historically marginalized ethnic groups, known as the Scheduled Castes (SCs) and Scheduled Tribes (STs). SCs are a collection of castes that were historically treated as “untouchable”—suffering from the worst forms of social exclusion and humiliation associated within the caste system. STs are a collection of groups defined by their historical spatial and social marginalization. These are groups often residing in remote forest and mountain areas. In the early 1990s, India implemented quotas at the local level not only for SCs and STs but also for women.¹⁵ Some local bodies further include reservations for the Other Backward Castes (OBCs), a group of castes that have also been historically disadvantaged relative to upper castes.

Reservations in India set aside a number of single-member districts for particular social groups. Only members of the group can compete in reserved seats, though all residents in the electoral district may vote. In state and national elections, seats are reserved for SCs or STs in proportion to their share of the population in each state. In all SC reserved seats at the national and state levels, SCs are a minority of the voting population.¹⁶ In some ST reserved seats, STs are a majority of the population. In local elections, seats are reserved for SCs, STs, and sometimes OBCs. Local seats can be simultaneously reserved for a caste group and women,

¹⁵ This coincided with constitutional amendments mandating the creation of urban and rural local governments.

¹⁶ For a discussion on India’s history of reservations, see McMillan 2006 and Jensenius 2015a.

meaning that some seats are specifically allocated for SC women, ST women, or OBC women. Alternatively, a seat may be reserved for women but be open to contestants of any caste.

India is an appropriate place to test our argument for several reasons. First, it makes extensive use of quotas for different groups and across different levels of government. The use of reservations in national, state, and local races means that we can explicitly examine their heterogeneous effects across levels of elected government. Second, although we do not have hypotheses about how the effects of reservations might vary across beneficiary groups, our analyses can generate new hypotheses about how the type and size of beneficiary groups matter. Third, India's size and the fact that it has employed reservations for decades mean that we have an abundance of data on which to test our hypotheses. Fourth, India has informed much of the literature on the subject and is thus a crucial case for continued study.

4.1 Independent and Small-Party Candidates in India

The hypotheses described above frequently refer to the importance of independent and small-party candidates. This argument presumes that independents and small-party candidates are potentially viable competitors, which is not an obvious proposition in all contexts.

For one, Duverger's Law contends that SMDP rules, like India's, should tend to produce two-party competition. Thus, one might expect that reserved and non-reserved seats in SMDP rules should not differ because voters will behave strategically and almost always converge on two candidates. Much research has documented the frequent failure of Duverger's Law in India.¹⁷ Only about half of all electoral races in state and national elections in India approximate two-party competition, and many of these occur in states where there are only two major parties

¹⁷ Chhibber and Murali 2006; Diwakar 2007.

or where election alliances ensure that there are only two major-party candidates. Thus, Duverger's Law should not undermine our hypotheses.

Additionally, because few independent candidates win representation in India's lower house of parliament, the Lok Sabha, researchers sometimes assume independents as increasingly irrelevant.¹⁸ However, this obscures the relevance of independent candidates at all levels. In national elections from 1998 through 2014, only 1.1% of elected legislators (29) were independents. However, 4.2% of races (114) featured independent candidates winning at least 10% of the vote, and in 10.5% of districts (284), the vote share for the most successful independent candidate exceeded the margin of victory between the winner and runner-up.

At the state-level, independent candidates are even more important. Figure 1 makes this point graphically. The dashed black line represents the share of legislative seats won by independent candidates. The solid gray line presents the share of seats contested in which a single independent candidate won 10% or more of the vote.¹⁹ According to both measures, independents remain electorally relevant even if their importance has declined. In most years, at least 5% of elected state legislators are independents and 20% or more of seats feature major independent candidates. Furthermore, none of these data speak to smaller parties, which also win sizeable vote shares.²⁰

¹⁸ See Chhibber and Kollman 2004.

¹⁹ Data are from 1961 through 2013 and reflect only the state elections held in that year. We exclude Andhra Pradesh 1983 and Assam 1985 because, in both of these elections, the largest parties (TDP in Andhra Pradesh and AGP in Assam) formally contested as independents. As a result, the prominence of independents in these years is exaggerated.

²⁰ For instance, in April and May 2016, state elections took place in four major states. Parties winning less than 2% of the vote combined to win 10% of the vote in Kerala, 8% in Tamil Nadu, and 6% in West Bengal. Only in Assam (where independents won the largest vote share: 11%) did small parties fare poorly, winning only 2% of the vote. These vote shares are calculated excluding the "None of the Above" option and are based on provisional vote shares from the Election Commission of India.

[FIGURE 1 ABOUT HERE]

At the municipal level, independent candidates prove even more competitive. In municipal elections in Jaipur and Bhopal, 49% of seats had at least one independent candidate winning more than 10% of the vote, and nearly 15% had two or more.²¹ In India's most populous state, Uttar Pradesh, 558 of 980 total seats for municipal ward councilors across 12 major cities were won by independents in 2012.²² As we move further down India's three-tiered federal democracy, independent candidates are increasingly competitive.

Interviews in Jaipur and Bhopal revealed that many local independent candidates *wanted* a party ticket prior to an election and decided to run as independents only after having failed to do so. While winning outright is, of course, the principal aspiration, candidates sometimes run as independents to signal the strength of their local following, hoping this will improve their chances of securing a party ticket in the next election. One party official in Bhopal estimated that at least half of independent candidates wanted party tickets, while another official put it at 80 percent.²³ Independent candidates, therefore, are key actors in the drama of municipal politics in India, and can powerfully influence electoral outcomes by commanding sizable vote shares, even if they do not win. By restricting the entry of some viable candidates, reservations alter the jostling for party tickets prior to elections, as well as the extent to which independents can instrumentally chip away at the vote shares of party-based candidates during elections.

²¹ This excludes Jaipur's 1994 elections because Congress fielded candidates as independents.

²² See http://sec.up.nic.in/site/fonts/WIN_MEM_NN.pdf. These cities are Meerut, Ghaziabad, Moradabad, Bareilly, Aligarh, Agra, Kanpur, Jhansi, Allahabad, Lucknow, Gorakhpur, and Varanasi. It should be noted that two of the largest parties in Uttar Pradesh, the Bahujan Samaj Party and Samajwadi Party, did not officially contest municipal elections. Some of the winning independents were backed by one of the two parties. Nevertheless, it is noteworthy that in a partisan election, so many candidates with no official partisan label did so well.

²³ Author interviews with two INC party officials, Bhopal, July 31, 2015.

4.2 Data

We use three datasets in this study. The first dataset includes all municipal-level elections for the north Indian cities of Jaipur and Bhopal since decentralization in the early 1990s, with the exception of the 1994 elections in Bhopal for which the municipality no longer has returns. Municipal-level election data are not digitized and publicly available. Therefore, data collection required research in government archives in both cities. At the local level in India, local governments randomly select at least one third of seats for women, allowing a straightforward assessment of their causal effects.²⁴ Reservations for SCs, STs, and OBCs at this level are not randomly selected. Instead, governments consult census figures and choose a number of wards with relatively high percentages of the groups. The total number of reserved seats for these groups is in rough proportion to their overall share of the population in the city.

The second source of data is Bhavnani's 2014 dataset of state-level elections in India from 1977 through early 2012. We supplement this with data from the Election Commission of India on elections from 1961 through 1976 and from late 2012 through early 2015.²⁵ This includes information on more than 47,000 state election races. The third dataset also comes from Bhavnani 2014 and consists of national-level election results in India from 1977 through 2009, which we supplement to include national elections from 1962 through 1971 as well as 2014.

5. Models and Results

We arrange the discussion of results by hypothesis. Our discussion of each hypothesis, therefore, moves between multiple data sources and levels of government.

²⁴ See Bhavnani 2009.

²⁵ We exclude elections prior to 1961 because most reserved districts were double-member. For state elections, the data from 1961 through 1976 exclude India's minor states, which together account for less than 5% of India's population. The appendix lists the state elections included.

5.1 Hypothesis 1: Electoral Quotas and the Number of Viable Candidates

We begin by testing our most straightforward hypothesis, that electoral quotas produce a smaller effective number of candidates (Table 1). The unit of analysis is the electoral district, and our key independent variables are indicators of whether the district is reserved (1) or not (0). We expect negative coefficients on variables indicating that a district is reserved. Models 1 and 2 examine local elections from Jaipur and Bhopal. In these two models we include controls for ward population and the percentage of SCs and STs, based on the most recent census figures for each election. We also include dummies for election year and city. In Model 1, the main variable of interest is *Reserved*, a dummy variable indicating whether the constituency is reserved or not. As expected, we observe a large negative coefficient. Reservation is associated with a drop of 0.95 “effective” candidates—equivalent to 77% of a standard deviation in the dependent variable. Model 2 disaggregates reservation into its component types. Because gender and ethnic quotas can overlap, some districts are “doubly” reserved, yielding seven types of reservation: SC, ST, OBC, female, female SC, female ST, and female OBC.²⁶ The coefficients on all of the reservation variables are negative and statistically significant, associated with a drop in the effective number of candidates of between 0.62 (OBC) and 1.44 (female OBC).

[TABLE 1 ABOUT HERE]

To test Hypothesis 1 in cities outside of Rajasthan and Madhya Pradesh—in particular, in a state with more than two competitive parties—we draw on the 2012 municipal elections from Uttar Pradesh’s million-plus cities—Agra, Allahabad, Ghaziabad, Lucknow, Meerut, and

²⁶ Female reserved wards are those where women of any caste can compete but men cannot. An SC, ST, or OBC seat is one that is reserved for SCs, STs, or OBCs, but open to men and women.

Varanasi.²⁷ Consistent with the findings from Jaipur and Bhopal, *Reserved* is statistically significant and associated with a 1.06 drop in the effective number of candidates—explaining one third of a standard deviation in the dependent variable.²⁸ When disaggregating *Reserved* into its five component parts (there are no ST reservations in these cities), coefficients for all of the reservation types are negative and statistically significant at the 0.05 level, with the exception of OBC, which is negative but not statistically significant at conventional levels.

Models 3 and 4 turn to state-level elections from 1961 through 2015.²⁹ The models include dummies for election years and states, since party systems vary by state. Model 3 includes a dummy variable, *Reserved*, for whether the constituency is reserved for any group. We find a negative, statistically significant coefficient of 0.13, which is about 13% of a standard deviation in the effective number of candidates. Model 4 then disaggregates the *Reserved* variable into *SC* and *ST*, the two types of reserved constituencies at the state and national levels. The coefficient on *SC* is even larger, while the coefficient on *ST* is smaller and imprecisely estimated. The results in Model 4 are indicative of a pattern throughout our results: ST reserved seats appear little different than unreserved constituencies. We return to this finding below.

Models 5 and 6 replicate Models 3 and 4 using national-level data. In Model 5, we find the expected negative coefficient on *Reservation*, but it falls short of conventional levels of statistical significance. When we disaggregate the reservation categories, however, we find that this is because the *SC* and *ST* coefficients point in opposite directions. There is a statistically significant negative association between *SC* reservation and the effective number of candidates

²⁷ See Table A4 in the appendix. Data for Kanpur were not available.

²⁸ The average ENC across the six cities was a 5.86 with one standard deviation of 3.01.

²⁹ Here we do not include shares of the SC and ST population. Such data are usually calculated at the level of administrative units, not electoral units, and are therefore not readily available. We address this limitation below.

and a somewhat smaller and less precisely estimated *positive* association with ST reservation. In short, our findings for SC reserved seats strongly confirm our first hypothesis.³⁰ Across multiple levels of government, SC reserved seats consistently feature a smaller effective number of candidates. The results are less consistent for STs, which we discuss below.

5.2 Hypothesis 2: Electoral Quotas and the Role of Major Parties

Our second hypothesis is that elections in reserved seats should be more centered on major parties. We test this hypothesis in two ways. The first tests the “weaker” version of this hypothesis, which is that a greater share of the vote goes to major parties in reserved seats as opposed to non-reserved seats. Table 2 presents the results for two dependent variables. The first, *Independent vote*, is the share of the constituency-level vote won by independent candidates. The second, *10% party vote*, is the share of the vote won by parties winning 10% or more of the statewide vote. This dependent variable captures the share of the vote won by major parties.

[TABLE 2 ABOUT HERE]

Models 1 through 3 focus on *Independent vote*. At all three levels of government, SC reservation is associated with significantly lower vote shares for independent candidates. In the case of local elections, the size of the coefficient is quite large. Indeed, in the local elections all forms of reservation are associated with lower vote shares for independent candidates. However, at the state and national levels, we find no statistically significant association between ST reservation and independent vote shares. The coefficients are negative but imprecisely estimated.

Models 4 and 5 then look at *10% party vote*. Because our local election results come from two states (Rajasthan and Madhya Pradesh) where there are only two main parties, we do not include the local-level analysis. As expected, at both the state and national levels, the vote

³⁰ We reach similar findings using the absolute number of candidates.

share for large parties (defined as those winning more than 10% of the state-wide vote) is larger in SC reserved constituencies than in non-reserved constituencies. The coefficient on ST reservation is negative in both models but imprecisely estimated. Our results are similar if, instead of a 10% threshold for classifying parties as major, we use 5% or 20% instead.³¹

The “stronger” version of our second hypothesis is that electoral outcomes are determined to a greater extent by voters’ evaluations of parties, rather than candidates. We would find evidence consistent with this prediction at the aggregate level if we saw in reserved constituencies that a candidate’s party label was a stronger predictor of her vote share than in non-reserved constituencies. If each candidate’s own vote share tracks closely with the overall party’s vote share, this suggests that voters are focused primarily on the party label; whereas if a candidate’s vote share is much higher or lower than what we would expect based on her party label, this would indicate that voters paid greater attention to specifics of the candidate herself.

To test this, we can examine the correlation between a candidate’s own vote share and the vote share we would expect the candidate to win thanks to her party label. Our expectation is that there is a correlation between a candidate’s vote share and the vote share won by the party as a whole. However, if Hypothesis 2 is correct, then this relationship should be even stronger in reserved constituencies where voters are, according to our logic, voting more on the basis of the candidates’ party labels than their individual characteristics.

In Table 3, the dependent variable is *Candidate vote*, a candidate’s vote share. The models in Table 3 include all of the same independent variables as in Table 2; however, they also include *Party vote*, which is a measure of the average vote share won by a candidate’s co-partisan candidates. For each observation, *Party vote* is the average share of the constituency-

³¹ See Table A5 in the appendix.

level vote won by the candidate's party, but excluding her own electoral district. So, for a Congress candidate in Bihar, it is the constituency-level average vote share won by all other candidates in Bihar from Congress. Naturally, we expect a strong correlation between a party's vote in a state and the vote share each of its candidates. For both the state and national data, *Party vote* is calculated at the state level.

[TABLE 3 ABOUT HERE]

However, we further expect, following Hypothesis 2, that this correlation between a party's vote and a candidate's vote should be stronger in reserved constituencies, where voters are more likely to see candidates as agents of their party rather than as independently viable candidates. Thus, our independent variables of interest in Table 3 are the interactions between *Party vote* and the indicators for the various types of reserved constituencies. These interactions indicate whether the correlations between *Party vote* and *Candidate vote* are stronger or weaker in reserved constituencies as opposed to non-reserved constituencies.

Of the coefficients on the seven interactions for the local elections, all but one (Female SC) are in the expected direction. The coefficients are large and precisely estimated for women's reserved and women's OBC reserved seats. The local results ultimately provide modest evidence in support of our hypothesis. One potential reason for the absence of stronger evidence is that the effects of partisanship may be relatively weak at the local level, as evidenced by the large number of competitive independents. In such settings, detecting differences between reserved and non-reserved seats may be difficult. Turning to the state and national-level results, the coefficients for *Party vote X SC* are smaller but very precisely estimated. In other words, for candidates in SC seats, their party's overall vote is an even stronger predictor of their vote than

for candidates in general seats. For ST seats, the coefficients are in the unexpected direction and precisely estimated.³²

The results in Table 3 are limited in two ways. First, they do not take account of the fact that parties' support bases vary within a state. Ideally, measures would focus on smaller areas within each state to account for geographic variation in party support. Second, the "strong" prediction from Hypothesis 2 is that if voters in reserved seats think of candidates more as party agents, then candidates' individual characteristics should be weaker predictors of candidate performance. Table 3 says nothing about candidates' characteristics. To address these concerns, we conduct a robustness check using Ziegfeld's 2015 data on the Indian state of Haryana, as these data include information on individual characteristics.

Our analysis of this additional dataset corroborates our findings. First, we construct different versions of *Party vote* that average a party's candidate-level vote shares across smaller geographic areas. Using various constructions of *Party vote*, our results from Table 3 hold. Second, we test whether a candidate's own characteristics are less strongly correlated with vote shares in reserved seats. Ziegfeld (2015) shows that certain candidate characteristics are, indeed, correlated with a candidate's vote share. Using principal components analysis, we create several variables based on these characteristics. We then interact these variables with *SC*, an indicator for whether a constituency is reserved for SCs.³³ For the variables most strongly associated with candidate vote shares we find that the interaction between these variables and *SC* is negative. The candidate's characteristics are a weaker predictor of the candidate's vote share in reserved seats. For the other variables that are less strongly associated with vote share, the results are

³² Figures A1 and A2 in appendix graphical present the effects of these interactions.

³³ There are no ST seats in Haryana.

mixed. In general, however, this analysis supports our second hypothesis that elections are more party-focused in reserved seats. The results of these analyses are in the appendix.

5.3 Hypothesis 3: Electoral Quotas and the Level of Government

Finally, our third hypothesis is that the effects of reservation should vary across levels of government. At lower levels of government reservation should have a greater negative effect on the ENC. Returning to Table 1 and the coefficients on *SC*, we see that the sizes of the coefficients decline as we move from local to state to national elections. In all models, the dependent variable is the same, and across our three datasets, a standard deviation from the mean ENC is fairly similar (around one). Therefore, the much larger coefficient in Model 2 is meaningful. In Table 2, we similarly see coefficients that decrease in size as we move from local to national elections, in this case with respect to independent vote shares and vote shares for major party candidates. We also see in Table 3 that as we move from local to national elections, the coefficients on the interaction between *Party vote* and *SC* get much smaller.

[TABLE 4 ABOUT HERE]

Since the coefficients for the national and state-level analysis are similar and the data for both are from elections across the country, we formally test whether the association between reservation and the outcomes of interest are, in fact, different. To do so, in Models 1 through 3 of Table 4, we replicate the analysis in Tables 1 and 2 with a pooled dataset including election results from state and national level elections. We estimate models that are identical except that they include a dummy variable, *Vidhan Sabha*, for state elections and interactions between *Vidhan Sabha* and the dummy variables for SC and ST reservation.

Model 1 indicates that the association between ENC and SC reservation is more strongly negative in state-level elections as compared to national elections, as expected. The coefficient is

of a similar magnitude for ST seats but falls short of statistical significance. We see similar results for the independent vote share. For the share of the vote for major parties, we expect a positive coefficient, which we observe for both SCs and STs. In the appendix, we also replicate these results using electorate size instead of a dummy for state-level elections. We find that as electorates get larger, reserved and non-reserved constituencies look increasingly similar. In short, we find strong evidence that the impact of reservation on political competition increases at lower levels of government.

Finally, in Model 4 we replicate the analysis in Table 3, focusing on the difference between state and national elections. Here the emphasis is on the triple interactions, *Party Vote X VS X SC (ST)*. We expect this triple interaction to be positive, which is precisely what we find for the SC seats. The appendix includes a graphical presentation of the results of the triple interaction, illustrating that the difference between the effect of *Party Vote* in general versus reserved seats is greater in state elections than in national elections. Put another way, in national elections, the effect of *Party Vote* is only slightly greater in SC seats than in general seats; but, in state elections, the effect in SC seats is noticeably greater. For STs, the coefficient on the triple interaction is also positive though not statistically significant. Thus, although not all of the evidence is equally strong, the models in Table 4 all point in the expected directions. Focusing on SC reserved seats, the effects that we observe are stronger in state elections than in national elections, as hypothesized. As we move from lower to higher-level elections, the impact of quotas on electoral competition diminishes, particularly in SC seats.

5.4 Accounting for Selection Effects

One concern with the state and national results is that, unlike for local elections, we cannot control for the share of SCs and STs. Since constituencies are reserved based on these

criteria, the key way in which reserved and general seats differ is in their share of SCs and STs.³⁴ It is possible that systematic differences in SC and ST populations across constituencies could partially drive our results. We are confident that this is not the case for three reasons.

First, our results at the local level do not suffer from this weakness. For one, women's reservation is randomly assigned, and we find evidence on women's reservation in Table 1 that is consistent with the ethnic quotas. Additionally, for the local results we can directly control for the SC/ST populations—the same demographic information used in allocating reserved seats.

Second, in Jensenius's examination of SC quotas in state elections, similar results are derived at the state level with respect to the effective number of candidates using a matching identification strategy to identify non-reserved seats similar to SC reserved seats.

Third, in 2008, the Election Commission of India redrew the country's state- and national-level constituencies and determined anew which seats would be reserved. The resulting publication lists the share of the population in each state-level constituency that belongs to SCs and STs based on the 2001 census. State constituencies are nested with national constituencies, and so this state-level data can be aggregated to the national level. Thus, for elections from mid-2008 onward, we can control for SC and ST populations. The appendix replicates Tables 1 and 2 for elections from 2008 to 2015. Our results are virtually identical; particularly the results for SC reserved seats. Interestingly, when controlling for the ST population, the results for ST seats are *more* consistent with our main hypotheses though still weaker than for the SC reserved seats.

6. Discussion: The Difference between SC and ST Reserved Seats

³⁴ Based on the 2001 census, SC-reserved assembly constituencies have an average SC population of 26.4% as compared to 14.1% for non-SC reserved seats. The figures for ST seats are even more extreme: 60.5% for ST-reserved seats and 4.2% for non-ST-reserved seats.

Our results tell a remarkably consistent story about how ethnic quotas shape competition. Political competition in reserved seats tends to feature a smaller number of viable candidates and revolve to a far greater extent around major parties. The differences between reserved and non-reserved seats are particularly pronounced at lower levels of government. In short, quotas in India shape political competition in important ways. The consistency of our results applies to seats reserved for SCs. We cannot test whether the same patterns hold in districts reserved for women and OBCs because reservation for these groups applies only to local elections. However, for STs, these patterns are less evident. Outside of local elections, where we rely on a sample with very few STs seats, our results are weaker.

Why are SC and ST seats different? We point to two important differences between SCs and STs: demography and stigma. First, SCs and STs differ in their geographic concentration. There are no SC-majority legislative seats at the state or national levels. Indeed, a seat with nearly 30% SCs is high. By contrast, ST-majority seats in state and national-level elections are not uncommon. Because SCs are a relatively small share of a constituency's population, SC reservation excludes a larger share of the electoral district's population than in most ST seats, potentially heightening the effects of reservation. Furthermore, the demographic weight of STs in many constituencies may mean that parties work harder to recruit STs within their ranks. If parties recruit more politicians from beneficiary groups when these groups constitute larger shares of the population, then competition in ST seats should resemble competition in open seats.

Second, SCs may face greater stigma than STs. Classification as SC is based on whether specific caste groups were historically treated as “untouchable”—suffering from the worst forms of caste discrimination.³⁵ STs, by comparison, are classified as such based on historic patterns of

³⁵ See Mendelsohn and Vicziany 1998, Guru 2009, and Chauchard 2014 on caste discrimination.

isolation and marginalization. The disadvantage associated with STs may be arguably less, and much of their marginalization is, in comparison to SCs, bound up in their socio-economic deprivation and less in stigma. To the extent that a difference in stigma between SCs and STs exists, we would expect this to further mute differences between ST reserved and open seats.

We have limited data with which to test these two hypotheses. However, using the post-2008 delimitation data, we can test the demographic explanation. We present the results in the appendix. In short, we find no evidence in support of the demographic hypothesis. At the state-level our results do not vary based on the share of the ST population in the constituency, and at the national-level, we actually find the opposite pattern from what we expect. ST seats with *larger* ST populations more closely resemble SCs, not the other way around, as we would expect based on a demographic explanation. One challenge is that there are very few ST reserved seats whose percentage of STs approximates the share of SCs in most SC reserved seats. Such a problem cannot be overcome with state and national level data from India. We therefore leave further testing of the demographic and stigma hypotheses for future research, noting that the question of how beneficiary group characteristics shape the impact of quotas constitutes an especially interesting area of inquiry.

7. Conclusion

This paper has examined the impact of reservations on political competition in India, a crucial case in the study of electoral quotas. Despite being a political intervention, the electoral implications of quotas have been largely overlooked. In this article, we argued that reservations diminish the number of viable competitors in reserved constituencies and increase the extent to which competition revolves around parties. Further, we argued these effects should be more

pronounced in local elections, where candidates require fewer resources and can credibly run without party tickets, relying instead on their personal networks.

We find substantial evidence that in reserved constituencies, the effective number of candidates is lower, the vote share for independent candidates is lower, and the vote shares for major parties are higher. We also find some evidence that candidate vote shares in reserved districts are more strongly correlated with a party's overall vote share than in non-reserved districts. These associations are most pronounced in local elections and smallest in national elections. Our evidence in support of these claims is, for SCs, unambiguous. However, as discussed in the previous section, the results are weaker for STs at the state and national levels, plausibly for reasons of geographic concentration and social stigma.

Our findings have several important implications. First, they contribute to broader conversations about compensatory discrimination policies. For their optimal design, compensatory discrimination policies must be crafted with an awareness of both their intended and unintended consequences. Our findings suggest two important implications of electoral quotas. On the one hand, our findings point to a potential normative concern about some forms of quotas that limit electoral competition. The use of quotas not only prevents certain people from competing, but it also affects the nature of competition, preventing those who are locally popular and would otherwise be viable candidates from competing. From a normative standpoint, such policies may be problematic if we believe that there is an intrinsic value in democratic competition. Moreover, the downstream effects of political competition on public spending and political order expand the reasons to carefully assess the electoral consequences of quotas.

On the other hand, our findings suggest an unintended consequence that may be normatively positive: a greater emphasis on parties. By decreasing the likelihood that

competition will feature popular minor-party or independent candidates, quotas enhance the likelihood that major parties dominate political competition. Admittedly, strongly party-based competition does not necessarily create programmatic, coherent parties; however, elections in which candidates depend on their party brand to win are potentially a move toward a more highly institutionalized party system. Quotas thus may have an important positive, if unintended, effect on political competition.

Second, with respect to the design of compensatory discrimination policies, our divergent findings for SCs and STs suggest that these policies do not necessarily work the same way for all groups. Understanding how the characteristics of beneficiary groups shape the ways in which compensatory discrimination policies work remains a fruitful area for future research.³⁶ Indeed, India's local politics offers further opportunities to advance this research agenda through a closer examination of reservations for women and OBCs.

Third, and finally, our findings suggest that scholars of Indian politics need to take independent and small-party candidates seriously, particularly at the local level where they command significant vote shares. As India urbanizes, and as municipalities increasingly have access to more resources under decentralization, independent candidates will become even more important for both electoral and distributive politics.

³⁶ On quotas, social diversity, and intersectionality, see Hughes 2011.

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TABLES AND FIGURES

Figure 1: Independent Candidates in Indian State Elections

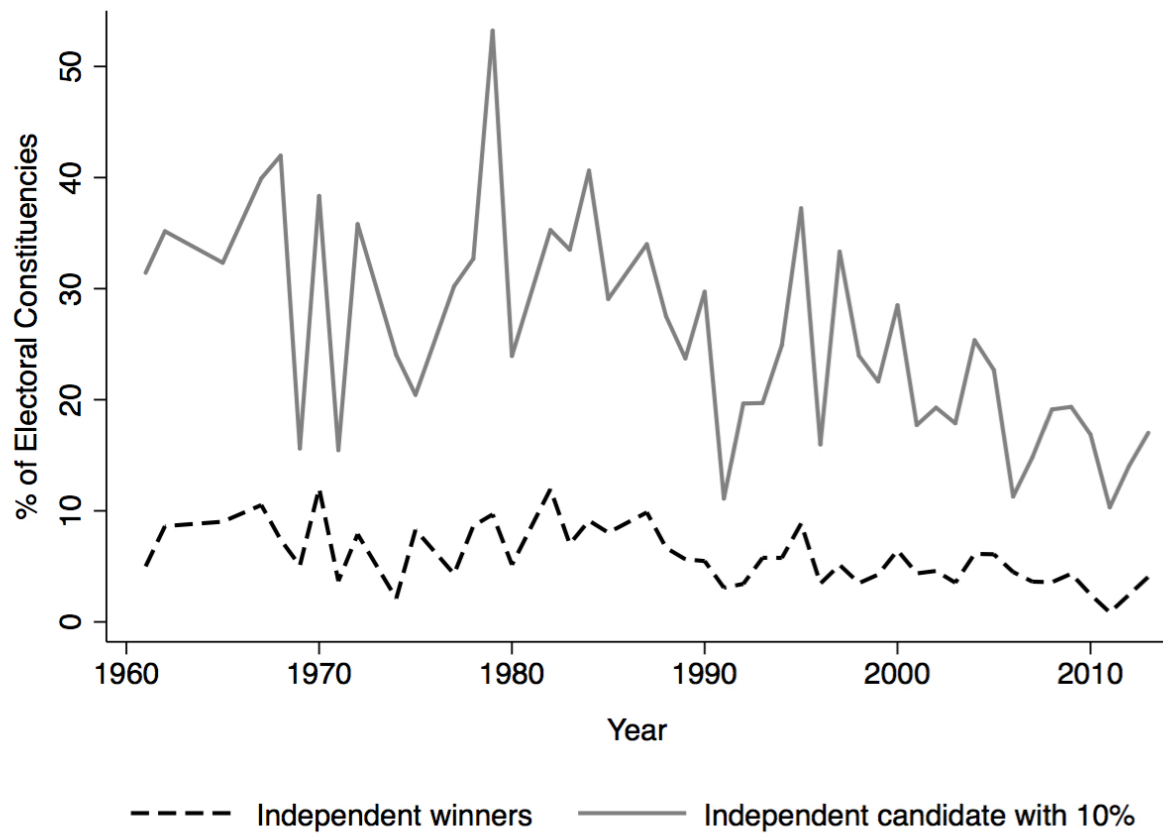


Table 1: How Quotas Impact the Number of Competitive Candidates

<i>Dependent Variable: Effective Number of Candidates</i>						
	1	2	3	4	5	6
	Local	Local	State	State	National	National
Reserved	-0.941*** (0.128)		-0.132*** (0.042)		-0.045* (0.025)	
SC		-0.958*** (0.209)		-0.176*** (0.050)		-0.082** (0.039)
ST		-0.645** (0.315)		-0.044 (0.062)		0.046 (0.041)
OBC		-0.621*** (0.168)				
Female		-0.908*** (0.138)				
Female SC		-1.226*** (0.233)				
Female ST		-1.207*** (0.446)				
Female OBC		-1.446*** (0.147)				
% SC	0.029*** (0.008)	0.031*** (0.009)				
% ST	-0.008 (0.020)	-0.009 (0.022)				
Electorate	0.000* (0.000)	0.000** (0.000)	-0.069 (0.093)	-0.058 (0.089)	-0.031 (0.030)	-0.028 (0.029)
Year dummies	Y	Y	Y	Y	Y	Y
State/city dummies	Y	Y	Y	Y	Y	Y
Constant	4.041*** (0.256)	3.981*** (0.259)	2.365*** (0.068)	2.365*** (0.068)	2.488*** (0.098)	2.496*** (0.094)
R^2	0.23	0.25	0.27	0.27	0.35	0.35
N	484	484	47,211	47,211	7,466	7,466

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Robust standard errors in parentheses. Standard errors are clustered by state in Models 3-6. 2014 electoral data excluded in Models 1 and 2 because current demographic data on percent SC and percent ST are not available. The Electorate variable in Models 1 and 2 is the population of municipal wards, while it is the total number of valid votes cast in Models 3-6.

Table 2: Quotas and Vote Shares for Independents and Major Parties

<i>Dependent Variable</i>	<i>Independent Vote</i>	<i>Independent Vote</i>	<i>Independent Vote</i>	<i>10%+ Party Vote</i>	<i>10%+ Party Vote</i>
	1	2	3	4	5
	Local	State	National	State	National
Reservation					
SC	-0.087** (0.044)	-0.036*** (0.005)	-0.020*** (0.005)	0.046*** (0.007)	0.029** (0.014)
ST	-0.144** (0.063)	-0.003 (0.010)	0.000 (0.012)	-0.004 (0.017)	-0.033 (0.026)
OBC	-0.066** (0.026)				
Female	-0.099*** (0.024)				
Female SC	-0.151*** (0.037)				
Female ST	-0.094* (0.056)				
Female OBC	-0.183*** (0.026)				
% SC	-0.000 (0.001)				
% ST	0.005 (0.004)				
Electorate	0.000 (0.000)	-0.005 (0.017)	-0.002 (0.003)	0.056*** (0.020)	0.011** (0.005)
Year dummies	Y	Y	Y	Y	Y
State/city dummies	Y	Y	Y	Y	Y
Constant	0.259*** (0.032)	0.192*** (0.009)	0.161*** (0.015)	0.682*** (0.017)	0.802*** (0.034)
R^2	0.13	0.13	0.15	0.16	0.16
N	415	47,211	7,466	47,211	7,466

* $p < 0.10$, ** $p < 0.05$, *** $p < .01$

Note: Robust standard errors in parentheses. Standard errors are clustered by state in models 2-5. 2014 electoral data excluded in Model 1 because current demographic data on percent SC and percent ST are not available. Jaipur's 1994 elections are excluded in Model 1 because Congress did not field candidates on its party label, inflating the presence of independent candidates. The Electorate variable in Model 1 is the population of municipal wards, while it is the total number of valid votes cast in Models 2-5.

Table 3: Quotas and Party-Based Competition

	<i>Dependent Variable: Candidate Vote</i>		
	Local	State	National
	Model 1	Model 2	Model 3
Reservation			
SC	0.026 (0.020)	0.000 (0.001)	0.001 (0.002)
ST	0.042 (0.038)	0.024*** (0.002)	0.024*** (0.003)
OBC	0.018 (0.018)		
Female	-0.003 (0.015)		
Female SC	0.085*** (0.026)		
Female ST	0.002 (0.078)		
Female OBC	0.012 (0.026)		
Party Vote	0.832*** (0.027)	0.922*** (0.002)	0.956*** (0.004)
Party Vote X SC	0.080 (0.064)	0.056*** (0.005)	0.030*** (0.009)
Party Vote X ST	0.055 (0.119)	-0.071*** (0.006)	-0.090*** (0.012)
Party Vote X OBC	0.054 (0.059)		
Party Vote X Female	0.170*** (0.048)		
Party Vote X Female SC	-0.036 (0.083)		
Party Vote X Female ST	0.216 (0.224)		
Party Vote X Female OBC	0.272*** (0.079)		
Ward % SC	-0.001* (0.001)		
Ward % ST	-0.002 (0.001)		
Electorate	-0.000 (0.000)	-0.008*** (0.001)	-0.001 (0.001)
State/city dummies	Y	Y	Y
Year dummies	Y	Y	Y
Constant	0.063 (0.038)	0.101*** (0.007)	0.093*** (0.004)
R^2	0.70	0.62	0.72
N	1,297	206,701	36,195

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Note: Robust standard errors in parentheses. Standard errors are clustered by state in Models 2 and 3. The Electorate variable is the population of municipal wards in Model 1 and the total number of valid votes cast in Models 2 and 3.

Table 4: The Variable Impact of Quotas at State and National Levels

Dependent Variable	ENC	Ind. Vote	10% Party	Candidate Vote
	Model 1	Model 2	Model 3	Model 4
Reservation				
SC	-0.080* (0.040)	-0.019*** (0.005)	0.024 (0.015)	0.002 (0.002)
ST	0.058 (0.058)	0.007 (0.012)	-0.043 (0.026)	0.023*** (0.003)
Vidhan Sabha	0.275*** (0.051)	0.042*** (0.007)	-0.060*** (0.013)	0.002* (0.001)
Vidhan Sabha X SC	-0.091*** (0.023)	-0.017*** (0.004)	0.020* (0.012)	-0.001 (0.003)
Vidhan Sabha X ST	-0.090 (0.069)	-0.011 (0.009)	0.033* (0.016)	0.002 (0.004)
Party Vote				0.958*** (0.004)
Party Vote X VS				-0.036*** (0.005)
Party Vote X SC				0.030*** (0.011)
Party Vote X VS X SC				0.027** (0.012)
Party Vote X ST				-0.092*** (0.014)
Party Vote X VS X ST				0.022 (0.015)
State dummies	Y	Y	Y	Y
Year dummies	Y	Y	Y	Y
Constant	2.323*** (0.042)	0.165*** (0.005)	0.821*** (0.007)	0.096*** (0.007)
R2	0.27	0.14	0.16	0.63
N	54,677	54,677	54,677	242,896

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Note: Robust standard errors clustered by state in parentheses.

SUPPLEMENT

Below is a list of figures and tables in the appendix. They are listed in the order in which they are referenced in the main text.

Table A1: Descriptive Statistics for Municipal-Level Variables

Table A2: Descriptive Statistics of State- and National-Level Variables

Table A3: States Included in State-level Analysis

Table A4: How Quotas Impact the Number of Competitive Candidates in Uttar Pradesh

Table A5: Replication of Table 2 with Different Thresholds for Major Parties

Figure A1: Graphical Representation of Results in Table 3 (Model 1)

Figure A2: Graphical Representation of Results in Table 3 (Models 2 and 3)

Table A6: Replication of Table 3 for Haryana Elections and Different Versions of *Party Vote*

Table A7: Factor Loadings for Candidate Characteristics from Haryana State Elections

Table A8: Replication of Table 3 for Haryana Elections with Candidate Variables

Figure A3: Graphical Representation of Results in Table A8

Figure A4: Graphical Representation of Results in Table 4 (Models 1-3)

Figure A5: Graphical Representation of Results in Table 4 (Model 4)

Table A9: Replication of Table 4 with Constituency Size Instead of Vidhan Sabha Dummy

Figure A6: Graphical Representation of Table A9 (Models 1-3)

Figure A7: Graphical Representation of Table A9 (Model 4)

Table A10: Replication of Tables 1 and 2 National-Level Analysis with SC/ST % (2008-15)

Table A11: Replication of Tables 1 and 2 State-Level Analysis with SC/ST% (2008-15)

Table A12: ST Population Size and ST Reservation at the National Level (2008-15)

Figure A8: Graphical Representation of Table A12

Table A13: ST Population Size and ST Reservation at the State Level (2008-15)

Figure A9: Graphical Representation of Table A13

Figure A10: Distribution of SCs (STs) in SC (ST) Reserved Seats

Table A1: Descriptive Statistics for Municipal-Level Variables

Variable	Average	SD	Min	Max
Number of Candidates	6.82	4.00	1	30
Effective Number of Candidates	3.11	1.23	1.51	10.24
Proportion Independent Vote Share	0.20	0.18	0	0.96
2001 Ward Population	27614.1	14136.34	10270	90497
2011 Ward Population	32952.95	15672.9	6921	93724
2001 Ward Percent SC	11.81	8.21	0.23	39.34
2011 Ward Percent SC	12.67	8.55	0.30	44.47
2001 Ward Percent ST	3.09	2.98	0.02	20.87
2011 Ward Percent ST	2.90	2.70	0.07	17.16

Note: *Number of Candidates* and *Effective Number of Candidates* draw on all 663 ward-years. *Proportion Independent Vote Share* removes Jaipur's 1994 elections, in which Congress did not field candidates on its party label.

Table A2: Descriptive Statistics of State- and National-Level Variables

Variable	Average	SD	Min	Max	N
<i>State</i>					
Effective Number of Candidates	2.90	0.99	1	11.89	47211
Proportion Independent Vote Share	0.12	0.17	0	1	47211
Proportion Vote for Parties Winning 10%+	0.71	0.24	0	1	47211
Number of Voters (in 100,000s)	0.76	0.45	0	8.51	47211
<i>National</i>					
Effective Number of Candidates	2.70	0.76	1	9.25	7466
Proportion Independent Vote Share	0.66	0.12	0	1	7466
Proportion Vote for Parties Winning 10%+	0.79	0.21	0	1	7466
Number of Voters (in 100,000s)	5.42	2.57	0	16.20	7466

Note: Figures for state elections are based on the elections listed in Table A3, below. Figures for national elections are based on all seats in national elections from 1962 through 2014.

Table A3. States Included in State-level Analysis

State	Elections included
Andhra Pradesh	1962, 1967, 1972, 1978, 1983*, 1985, 1989, 1994, 1999, 2004, 2009, 2014
Arunachal Pradesh	1978^, 1980, 1984, 1990, 1995, 1999, 2004, 2009, 2014
Assam	1962, 1967, 1972, 1978, 1983, 1985*, 1991, 1996, 2001, 2006, 2011
Bihar	1962, 1967, 1979, 1972, 1977, 1980, 1985, 1990, 1995, 2000, 2005 (Feb), 2005 (Oct), 2010
Chhattisgarh	2003^, 2008, 2013
Delhi	1977**, 1983, 1993, 1998, 2003, 2008, 2013, 2015
Goa	1977**, 1980, 1984, 1989, 1994, 1999, 2002, 2007, 2012
Gujarat	1962, 1967, 1972, 1975, 1980, 1985, 1990, 1995, 1998, 2002, 2007, 2012
Haryana	1967^, 1968, 1972, 1977, 1982, 1987, 1991, 1996, 2000, 2005, 2009, 2014
Himachal Pradesh	1977**, 1982, 1985, 1990, 1993, 1998, 2003, 2007, 2012
Jammu & Kashmir	1977**, 1983, 1987, 1996, 2002, 2008, 2014
Jharkhand	2005^, 2009, 2014
Karnataka	1962, 1967, 1972, 1978, 1983, 1985, 1989, 1994, 1999, 2004, 2008, 2013
Kerala	1965, 1967, 1970, 1977, 1980, 1982, 1987, 1991, 1996, 2001, 2006, 2011
Madhya Pradesh	1962, 1967, 1972, 1977, 1980, 1985, 1990, 1993, 1998, 2003, 2008, 2013
Maharashtra	1962, 1967, 1972, 1978, 1980, 1985, 1990, 1995, 1999, 2004, 2009, 2014
Manipur	1980**, 1984, 1990, 1995, 2000, 2002, 2007, 2012
Meghalaya	1978**, 1983, 1988, 1993, 1998, 2003, 2008, 2013
Mizoram	1978**, 1979, 1984, 1987, 1989, 1993, 1998, 2008, 2013
Nagaland	1977**, 1982, 1987, 1989, 1993, 1998, 2008, 2013
Odisha	1961, 1967, 1971, 1974, 1977, 1980, 1985, 1990, 1995, 2000, 2004, 2009, 2014
Puducherry	1977**, 1980, 1985, 1990, 1991, 1996, 2001, 2006, 2011
Punjab	1962, 1967, 1969, 1972, 1977, 1980, 1985, 1992, 1997, 2002, 2007, 2012
Rajasthan	1962, 1967, 1972, 1977, 1980, 1985, 1990, 1993, 1998, 2003, 2008, 2013
Sikkim	1979^, 1985, 1989, 1994, 1999, 2004, 2009, 2014
Tamil Nadu	1962, 1967, 1971, 1977, 1980, 1984, 1989, 1991, 1996, 2001, 2006, 2011
Tripura	1977**, 1983, 1988, 1993, 1998, 2003, 2008, 2013
Uttarakhand	2007**, 2012
Uttar Pradesh	1962, 1967, 1969, 1974, 1977, 1980, 1985, 1989, 1991, 1993, 1996, 2002, 2007, 2012
West Bengal	1962, 1967, 1969, 1970, 1971, 1977, 1982, 1987, 1991, 1996, 2001, 2006, 2011

*Excluded from some analyses because a major party fielded candidates as independents.

**Prior elections were held but are not included in the analyses.

^State was formed after the 1961-66 election cycle; this was the first election held after the state was formed.

Table A4: How Quotas Impact the Number of Competitive Candidates in Uttar Pradesh*Dependent variable: Effective number of candidates*

	Model 1	Model 2
Reserved	-1.061*** (0.262)	
SC		-1.216*** (0.343)
OBC		-0.552 (0.426)
Female		-1.315*** (0.309)
Female SC		-1.024** (0.449)
Female OBC		-1.114** (0.454)
City Dummies		
Allahabad	1.676*** (0.433)	1.652*** (0.431)
Ghaziabad	-0.116 (0.361)	-0.146 (0.359)
Lucknow	1.057** (0.490)	1.031** (0.493)
Meerut	0.629 (0.393)	0.578 (0.396)
Varanasi	-0.0203 (0.367)	-0.0693 (0.367)
Ward Population	0.000113*** (0.0000278)	0.000113*** (0.0000281)
Ward Percent SC	0.0430*** (0.0103)	0.0422*** (0.0103)
Constant	3.270*** (0.496)	3.308*** (0.498)
R^2	0.231	0.236
N	529	529

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Robust standard errors in parentheses. Data for Kanpur were not available. The reference category for the city dummies is Agra.

Discussion: Table A4 demonstrates that the local-level analysis in Table 1 is not limited to Jaipur and Bhopal. This table replicates the local-level analysis from Table 1 using municipal-level election results from six cities in the state of Uttar Pradesh with more than one million inhabitants. Uttar Pradesh has a multi-party system, characterized by four main parties. In the 2012 municipal elections, two of those parties—Bahujan Samaj Party and Samajwadi Party—did not field candidates using their party labels. However, these two parties backed a number of independents. Although the party system in Uttar Pradesh's cities is different from the party systems in Bhopal and Jaipur, the results in Table A4 are very similar to the results in Table 1, Models 1 and 2. The coefficients on all of the reservation variables in Table A4 are negative, as expected, and all but one (OBC) are statistically significant.

Table A5: Replication of Table 2 with Different Thresholds for Major Parties

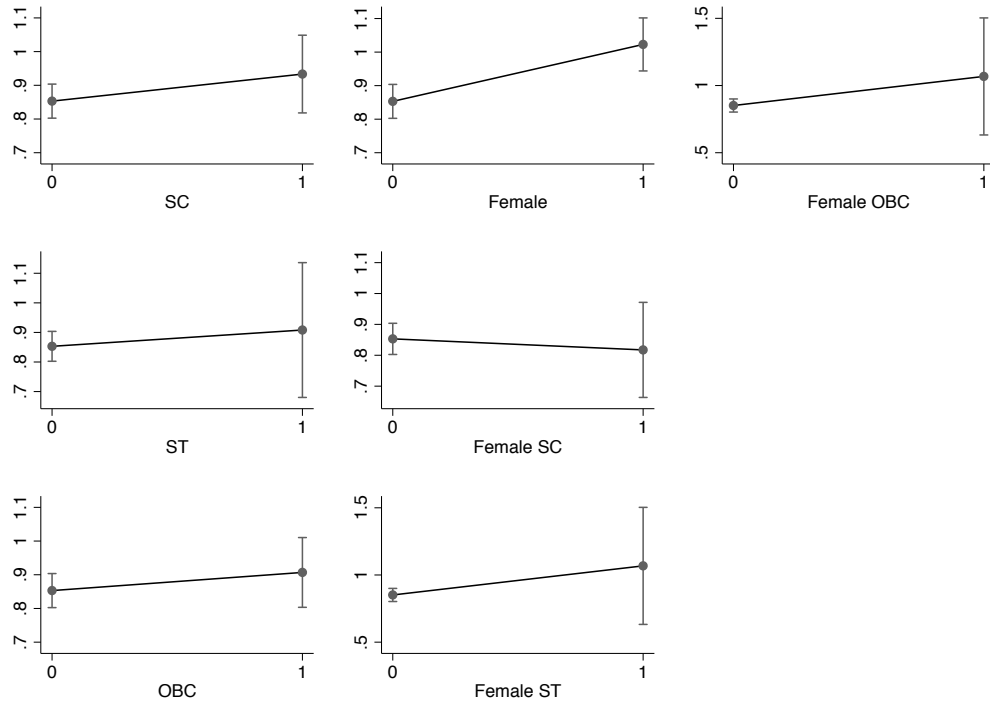
<i>Dependent Variable</i>	<i>5%+ Party Vote</i>	<i>10%+ Party Vote</i>	<i>20%+ Party Vote</i>	<i>5%+ Party Vote</i>	<i>10%+ Party Vote</i>	<i>20% +Party Vote</i>
	1	2	3	4	5	6
	State	State	State	National	National	National
Reservation						
SC	0.040*** (0.008)	0.046*** (0.007)	0.037*** (0.006)	0.023* (0.012)	0.029** (0.014)	0.030* (0.016)
ST	-0.022 (0.018)	-0.004 (0.017)	-0.015 (0.018)	-0.042 (0.028)	-0.033 (0.026)	-0.011 (0.022)
Electorate	0.025 (0.021)	0.056*** (0.020)	0.007 (0.033)	0.008* (0.004)	0.011** (0.005)	0.012** (0.006)
Year dummies	Y	Y	Y	Y	Y	Y
State dummies	Y	Y	Y	Y	Y	Y
Constant	0.770*** (0.017)	0.682*** (0.017)	0.669*** (0.017)	0.819*** (0.021)	0.802*** (0.034)	0.664*** (0.048)
R^2	0.09	0.16	0.28	0.10	0.16	0.26
N	47,211	47,211	47,211	7,466	7,466	7,466

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Robust standard errors in parentheses.

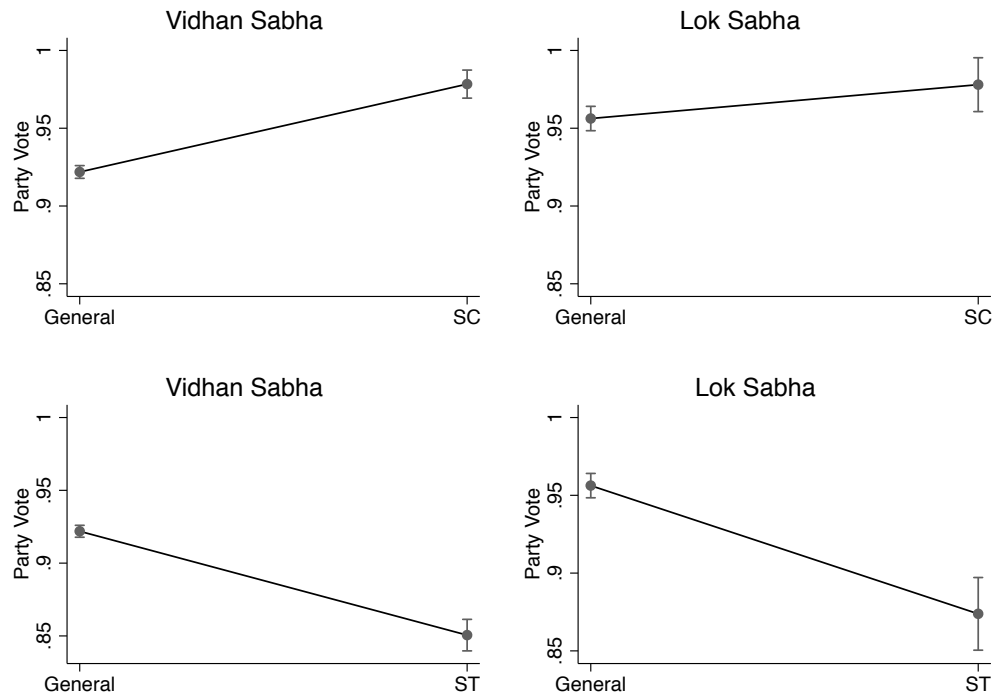
Discussion: This table shows that the results in Table 2 (models 4 and 5) do not hinge on the 10% threshold. In models 1 and 4 the dependent variable is the share of the vote won by parties winning more than 5% of the vote (as opposed to 10%) in state and national elections. Models 3 and 6 count parties as major only if they win 20% or more of the vote. Although the 10% threshold produces slightly larger coefficients than in some of the other models, the results are generally the same regardless of the threshold. The coefficients on *SC* are all positive and statistically significant at least at the 90% level. Consistent with Table 2, the results for *ST* in Table A5 are small, negative, and imprecisely estimated.

Figure A1: Graphical Representation of Results in Table 3 (Model 1)



Discussion: This figure graphically presents the results from Table 3, Model 1 in the main text. Each sub-graph presents the average marginal effect of *Party vote* for different types of local-level reservation. The label at the bottom of each sub-graph indicates the type of reservation being considered. A 0 on the x-axis indicates the average marginal effect of *Party vote* in a general constituency, whereas a 1 on the x-axis indicates the average marginal effect of *Party vote* in a reserved constituency of the type indicated in the sub-graph. The expectation for this figure is that the marginal effect of *Party vote* should be greater in reserved seats. In other words, *Party vote* should have greater predictive power in reserved seats. As expected, in all sub-graphs except one (Female SC), the slope of the line is positive, indicating that the estimate of the average marginal effect of *Party vote* is greater in reserved seats than in the non-reserved seats. However, these differences are relatively small. The differences are only substantively meaningful in women's reserved seats (that is, reserved only for women, with no caste reservation). In this sub-graph, the 95% confidence intervals do not overlap. Note that because of the very large 95% confidence intervals in the panels for Female ST and Female OBC, the scale of the vertical axes differ from those in the other panels.

Figure A2: Graphical Representation of Results in Table 3 (Model 2 and 3)



Discussion: This figure graphically presents the results from Table 3, Models 2 and 3 in the main text. Each sub-graph presents the average marginal effect of *Party vote* for different types of reservation in state and national elections. The top row presents the average marginal effect of *Party Vote* in General and SC constituencies in state elections (upper left, titled “Vidhan Sabha”) and in national elections (upper right, titled “Lok Sabha”). The bottom row compares General constituencies and ST constituencies for state elections (bottom left) and national elections (bottom right). Consistent with Hypothesis 2, the average marginal effect of *Party Vote* is greater in SC reserved seats as compared to general seats, though the difference is much more noticeable in state elections as compared to national elections. Unexpectedly, the average marginal effect of *Party Vote* is smaller in ST seats as compared to general seats.

Table A6: Replication of Table 3 for Haryana Elections and Different Versions of *Party Vote*

	1	2	3
<i>Dependent variable: Candidate vote</i>	State	Large Districts (7)	Small Districts (21)
Party Vote (various versions)	0.925*** (0.026)	0.877*** (0.023)	0.766*** (0.022)
SC Reservation	-0.034*** (0.011)	-0.032*** (0.009)	-0.030*** (0.011)
SC Reservation X Party Vote	0.234*** (0.057)	0.233*** (0.048)	0.237*** (0.050)
Constant	0.018*** (0.005)	0.027*** (0.004)	0.053*** (0.005)
R^2	0.54	0.55	0.53
N	1,680	1,680	1,680

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Standard errors are clustered by district-year.

Discussion: Table A6 replicates Table 3, Model 2 for candidates from state elections in the state of Haryana included in the Ziegfeld (2015) dataset. The analysis excludes independents and those from very minor parties. Model 1 in Table A6 essentially replicates the analysis in Table 3, model 2, in the main text, examining the correlation between a candidate's own vote (*Candidate Vote*) and her party's statewide vote, excluding her own electoral district (*Party Vote*). In the main text, *Party Vote* is the average vote won by the other candidates from a candidate's party. Models 2 and 3 calculate *Party Vote* using smaller geographical areas, since parties may have different levels of electoral support within a state. Model 2 calculates *Party Vote* using the seven administrative districts used in Haryana when the state was created in 1966. Thus, if an electoral district is located in what was the old administrative district of Ambala, then *Party Vote* is the average vote won by the candidate's fellow party members' constituencies in Ambala. Model 3 then calculates *Party Vote* using the 21 administrative districts in use today. The coefficients on *Party Vote* become somewhat smaller as one moves from model 1 to model 3, but broadly speaking the results do not change much across the models. Thus, we have confidence that our findings in Table 3 of the main text are not dependent on how we calculate *Party Vote*. There are no ST districts in Haryana; hence the analysis only includes a dummy for SC reservation.

Table A7: Factor Loadings for Candidate Characteristics from Haryana State Elections

	<i>Factor 1</i>	<i>Factor 2</i>	<i>Factor 3</i>	<i>Factor 4</i>	<i>Factor 5</i>	<i>Factor 6</i>	<i>Factor 7</i>	<i>Uniqueness</i>
Large caste	0.0664	0.0832	-0.0047	0.0922	0.0120	-0.0156	0.8625	0.2358
Native of:								
Electoral district	-0.0527	0.8281	0.0266	-0.1431	0.0126	-0.0129	0.0257	0.2893
Administrative district	-0.0414	0.8321	0.0159	0.0602	-0.0741	-0.0021	0.0566	0.2934
Previously held office:								
Local	0.0841	0.1376	0.0376	-0.2555	0.4803	0.2321	0.1358	0.6043
MLA/MP	0.8761	-0.0419	0.0553	0.0366	-0.0470	0.0005	0.0442	0.2221
Minister	0.7133	-0.0280	-0.0066	0.2133	-0.0450	-0.0943	0.0856	0.4266
Chief minister	0.2034	0.0230	-0.0516	0.7160	0.0106	0.0225	0.0202	0.4418
Incumbent MLA	0.8235	-0.0348	-0.0101	-0.0218	0.0235	0.0252	-0.0041	0.3189
Family:								
Local politics	0.0180	-0.1268	0.0208	-0.1493	-0.1299	0.6885	0.3882	0.3192
State/national politics	0.0694	-0.0679	0.0209	-0.1673	-0.0215	-0.7042	0.3422	0.3487
Haryana dynasty	0.0049	-0.1003	0.0186	0.7829	0.0142	0.0147	0.0822	0.3695
Occupation								
Business	-0.0080	0.0212	-0.8760	0.0357	0.3506	0.0065	0.0222	0.1074
Agriculture	0.0341	0.0595	0.8517	0.0199	0.3855	0.0006	0.0252	0.1202
Professions	0.0633	0.0763	0.0186	-0.0416	-0.8781	0.0709	0.0252	0.2114
Male	0.0179	0.2946	-0.0771	0.1253	0.1346	0.3607	-0.1984	0.7037

Note: Table A7 presents the rotated factor loadings from a principal components factor analysis for the various dichotomous variables available in the dataset described by Ziegfeld (2015).

Table A8: Replication of Table 3 for Haryana Elections with Candidate Variables

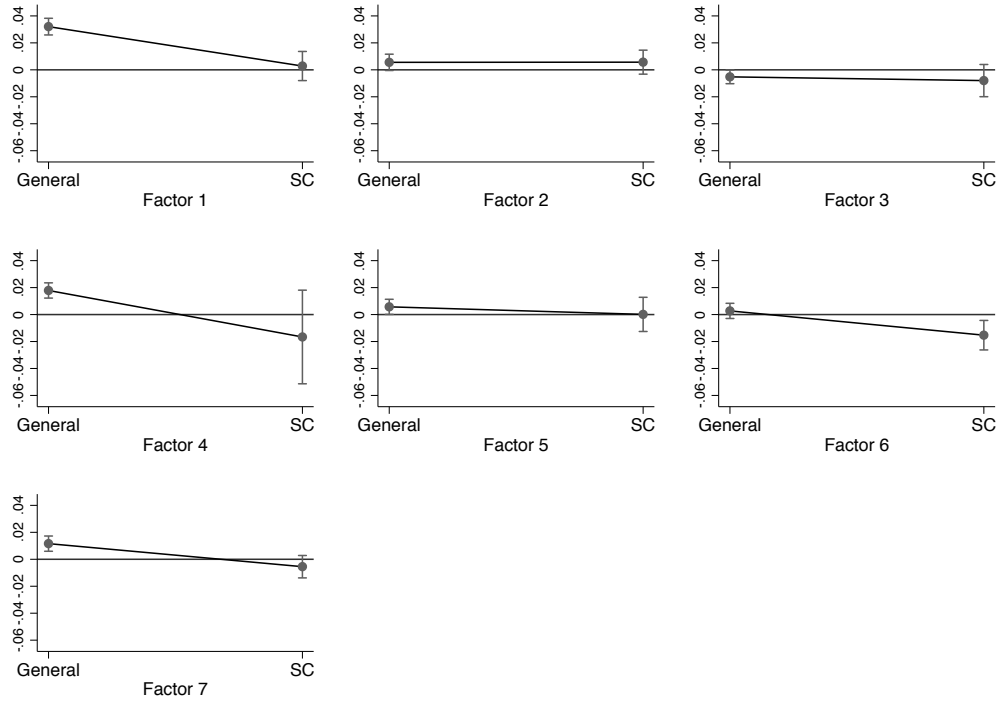
	State	Large Districts	Small Districts
Party Vote (various versions)	0.813*** (0.027)	0.772*** (0.024)	0.664*** (0.023)
SC Reservation	-0.055*** (0.012)	-0.052*** (0.010)	-0.052*** (0.012)
SC Reservation X Party Vote	0.328*** (0.062)	0.305*** (0.054)	0.324*** (0.055)
Factor 1 (State-level office)	0.032*** (0.003)	0.032*** (0.003)	0.032*** (0.003)
Factor 2 (Native)	0.006* (0.003)	0.003 (0.003)	0.001 (0.003)
Factor 3 (Agriculture)	-0.005** (0.003)	-0.006** (0.003)	-0.004 (0.003)
Factor 4 (Haryana dynasty)	0.018*** (0.003)	0.016*** (0.003)	0.013*** (0.003)
Factor 5 (Local business & agriculture)	0.006** (0.003)	0.006** (0.003)	0.006** (0.003)
Factor 6 (Local political family)	0.003 (0.003)	0.001 (0.003)	-0.001 (0.003)
Factor 7 (Large caste)	0.012*** (0.003)	0.011*** (0.003)	0.013*** (0.003)
SC Reservation X Factor 1	-0.029*** (0.006)	-0.024*** (0.006)	-0.029*** (0.006)
SC Reservation X Factor 2	0.000 (0.005)	0.002 (0.006)	0.002 (0.006)
SC Reservation X Factor 3	-0.003 (0.007)	-0.002 (0.007)	-0.002 (0.006)
SC Reservation X Factor 4	-0.034* (0.018)	-0.040** (0.017)	-0.029 (0.018)
SC Reservation X Factor 5	-0.006 (0.007)	-0.004 (0.008)	-0.002 (0.007)
SC Reservation X Factor 6	-0.018*** (0.006)	-0.018*** (0.007)	-0.007 (0.007)
SC Reservation X Factor 7	-0.017*** (0.005)	-0.018*** (0.005)	-0.023*** (0.006)
Constant	0.039*** (0.005)	0.046*** (0.005)	0.071*** (0.005)
R^2	0.59	0.61	0.58
N	1,680	1,680	1,680

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Standard errors are clustered by district-year.

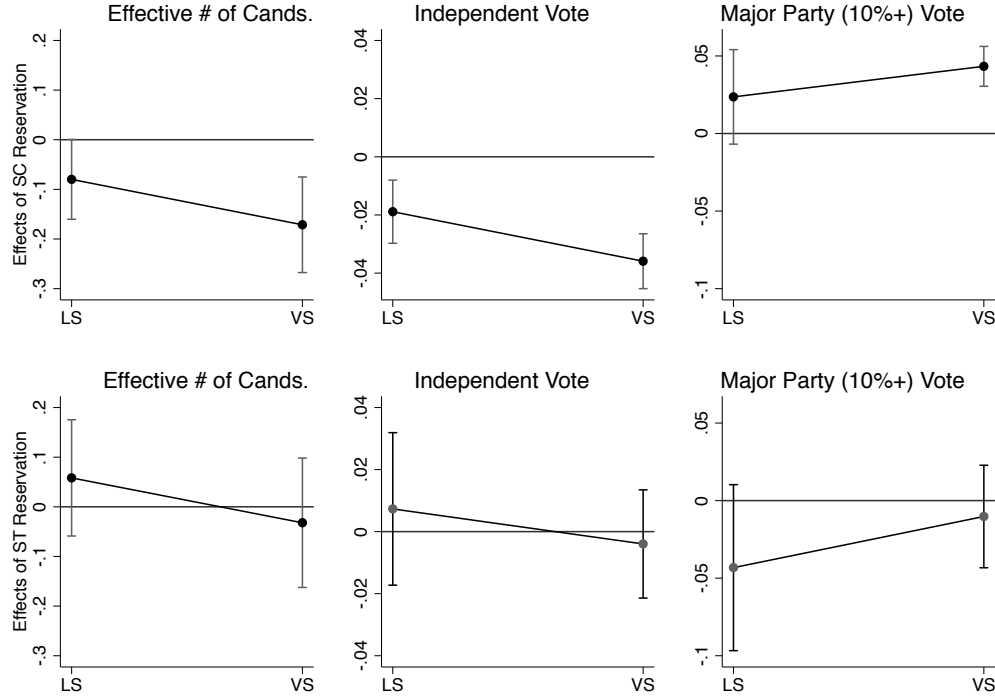
Discussion: Table A8 replicates Table 3 from the main text using Ziegfeld’s (2015) data on Haryana. Like Table A6, it presents in the three different columns three different constructions of *Party Vote* (see Table A6 above). The corollary to the “strong” version of Hypothesis 2 in the main text—that voters’ evaluations of parties should matter more in reserved seats than unreserved seats—is that individual characteristics that voters prefer in a candidates should matter less to voters in reserved seats. To test this, Table A8 includes variables derived from principal components factor analysis. As expected, based on Ziegfeld (2015), nearly all of these variables are positively associated with a candidate’s vote, suggesting that candidates with a particular set of characteristics tend to do better than those without them. By including interactions with *SC Reservation*, Table A8 tests whether these characteristics are less strongly correlated with a candidate’s performance in SC reserved districts, as we would expect based on Hypothesis 2. Figure A3 below graphically presents the results of these interactions.

Figure A3: Graphical Representation of Results in Table A8



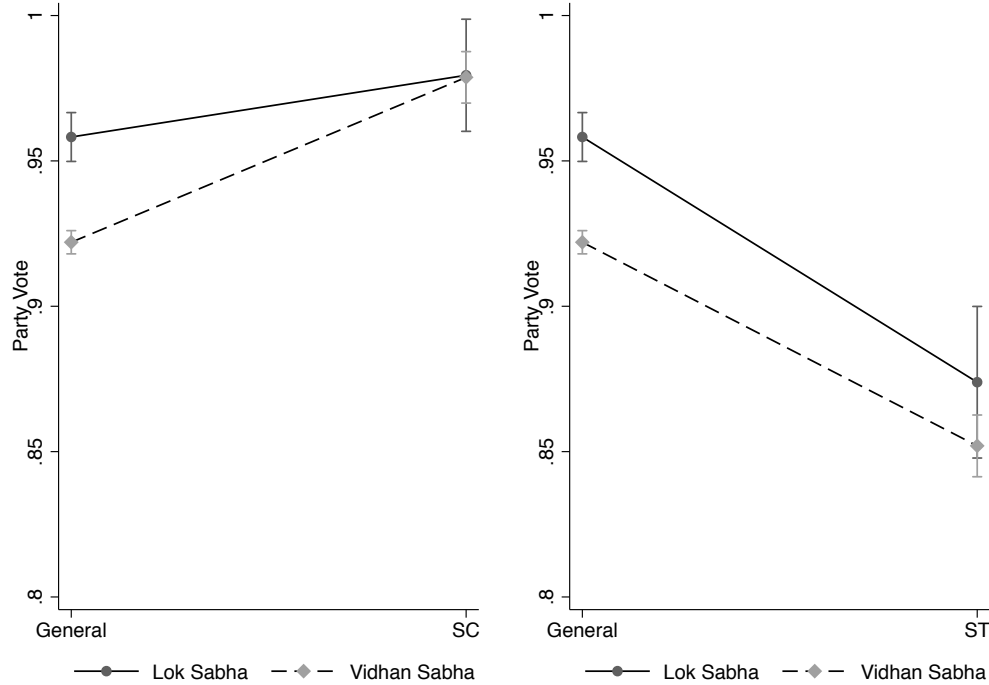
Discussion: Figure A3 presents the average marginal effects of the various factor variables in both general constituencies (on the left of each sub-graph) and SC constituencies (on the right) from Table A8. Each sub-graph refers to one of the seven factor variables derived from the principal components factor analysis. For Factor 1, Factor 4, Factor 5, and Factor 7, the average marginal effect of the variable on the dependent variable, *Candidate Vote*, is positive and distinguishable from zero in general constituencies but smaller and indistinguishable from zero in SC constituencies. In other words, for four of the seven variables, we observe exactly what we expect. Candidate characteristics are correlated with a candidate's vote share in unreserved districts, but not in reserved ones. These findings are consistent with the hypothesis that voters pay more attention to individual candidates in unreserved seats, while they pay greater attention to party labels in reserved seats. For Factor 2 and Factor 3, there is effectively no difference between the unreserved and reserved seats. It is also worth noting that these factors are among those most weakly correlated with *Candidate Vote*. Finally, Factor 6 is somewhat inconsistent with expectations. The average marginal effect of the variable is effectively zero in unreserved seats but negative in SC reserved seats. Thus, although not all of the results from Table A8 are consistent with expectations, the findings broadly support Hypothesis 2. Those variables correlated most strongly with *Candidate vote* are the ones for which we observe findings most consistent with expectations.

Figure A4: Graphical Representation of Results in Table 4 (Models 1-3)



Discussion: This figure graphically presents the results from Table 4, Models 1-3. Each sub-graph presents the average marginal effect of reservation for national-level elections (LS, for “Lok Sabha”, on the left of the figure) and state-level elections (VS, for “Vidhan Sabha” on the right of the figure). The upper row plots the average marginal effect of SC reservation, relative to general seats, while the lower row plots the average marginal effect of ST reservation. The three columns refer to the dependent variables in Models 1-3, respectively, in Table 4. All of the results in the upper row are as expected. For the effective number of candidates (ENC) and the independent vote, we expect the effect of SC reservation should be negative and more strongly negative in state elections (on the right) than in national elections (on the left). For the major party vote, we expect the effect of SC reservation to be positive and more strongly positive in state elections (on the right) than in national elections (on the left). In all cases in the top row, for SC reservation, the 95% confidence interval for the state elections does not cross 0. For the ST reservation (lower row), for each of the three dependent variables, the slopes of the lines are the same as in the upper row (for SC reservation); however, all of the 95% confidence intervals in the lower row cross 0. Moreover, some of the estimates of the marginal effect are in the wrong direction. For example, for the analysis of the effective number of candidates, the marginal effect in national elections is positive, when the expectation is that the marginal effect should be negative, albeit less so than for state elections.

Figure A5: Graphical Representation of Results in Table 4 (Model 4)



Discussion: This figure graphically presents the results from Table 4, model 4, focusing on the triple interactions between *Party Vote*, *VS* (the state-level election dummy), and *SC* or *ST*. The expectations from Hypothesis 3 are that the difference between general and reserved constituencies in terms of the association between *Party Vote* and *Candidate Vote* should be greater in state elections than in national elections. This is precisely what we see in the left panel of Figure A5. The figure presents the average marginal effect of *Party Vote* on *Candidate Vote*, comparing general seats (on the left) with reserved seats (on the right). The left panel presents results for SC reserved seats, while the right panel presents results for ST reserved seats. In the left panel, we see a modest increase in the average marginal effect of *Party Vote* when moving from general to SC reserved seats in national elections. However, that increase is much steeper in state elections. In other words, as expected, reservation makes a bigger impact on the association between *Candidate Vote* and *Party Vote* in state elections as compared to national elections. In the right panel, for ST reservation, the results are quite different. For one, the slopes of the lines are negative, meaning that *Candidate Vote* and *Party Vote* are less strongly correlated in ST reserved seats than in general seats, which runs against expectations. The lines are of roughly similar slopes; however, running against expectations, the slope of the line is slightly steeper in national elections. Thus, in keeping with several other findings, the evidence from SC seats is strongly supportive of Hypothesis 4, while the evidence from ST seats is not.

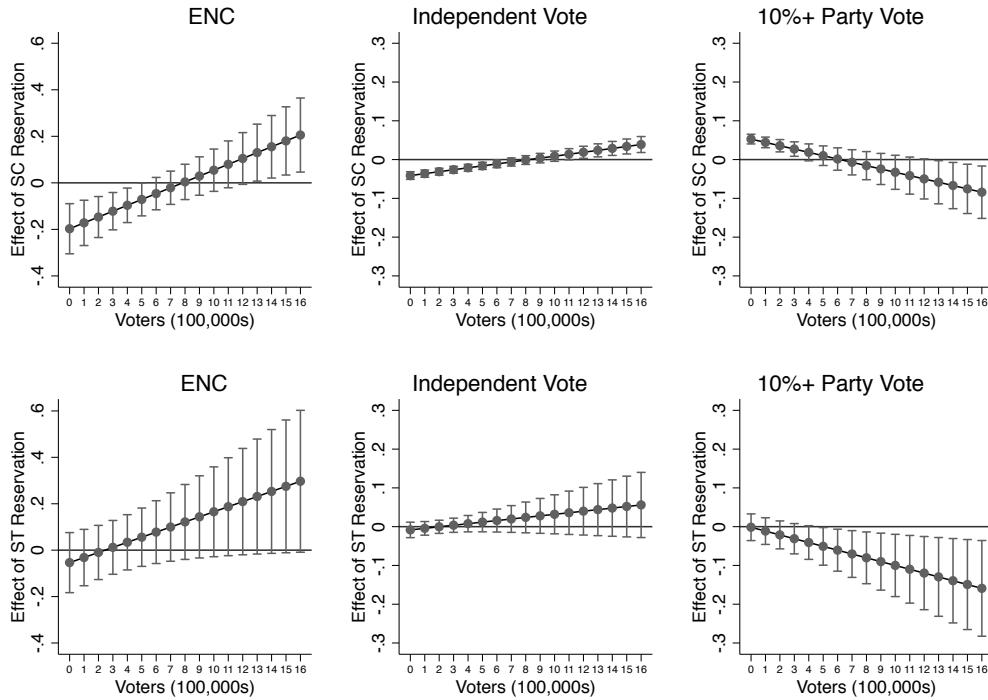
Table A9: Replication of Table 4 with Constituency Size

	ENC	Ind. Vote	10% Party Vote	Candidate Vote
	Model 1	Model 2	Model 3	Model 4
Reservation				
SC	-0.197*** (0.053)	-0.041*** (0.005)	0.053*** (0.006)	-0.000 (0.001)
ST	-0.054 (0.064)	-0.008 (0.010)	-0.002 (0.017)	0.024*** (0.002)
Electorate	-0.049*** (0.013)	-0.007*** (0.001)	0.011*** (0.002)	-0.002*** (0.000)
Electorate X SC	0.025*** (0.007)	0.005*** (0.001)	-0.009*** (0.002)	0.001* (0.000)
Electorate X ST	0.022** (0.010)	0.004 (0.003)	-0.010** (0.004)	-0.001 (0.001)
Party Vote				0.893*** (0.002)
Party Vote X Electorate				0.021*** (0.001)
Party Vote X SC				0.067*** (0.006)
Party Vote X SC X Electorate				-0.010*** (0.002)
Party Vote X ST				-0.056*** (0.006)
Party Vote X ST X Electorate				-0.009*** (0.003)
State dummies	Y	Y	Y	Y
Year dummies	Y	Y	Y	Y
Constant	2.363*** (0.043)	0.172*** (0.005)	0.811*** (0.007)	0.104*** (0.007)
R^2	0.27	0.14	0.16	0.63
N	54,677	54,677	54,677	242,896

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

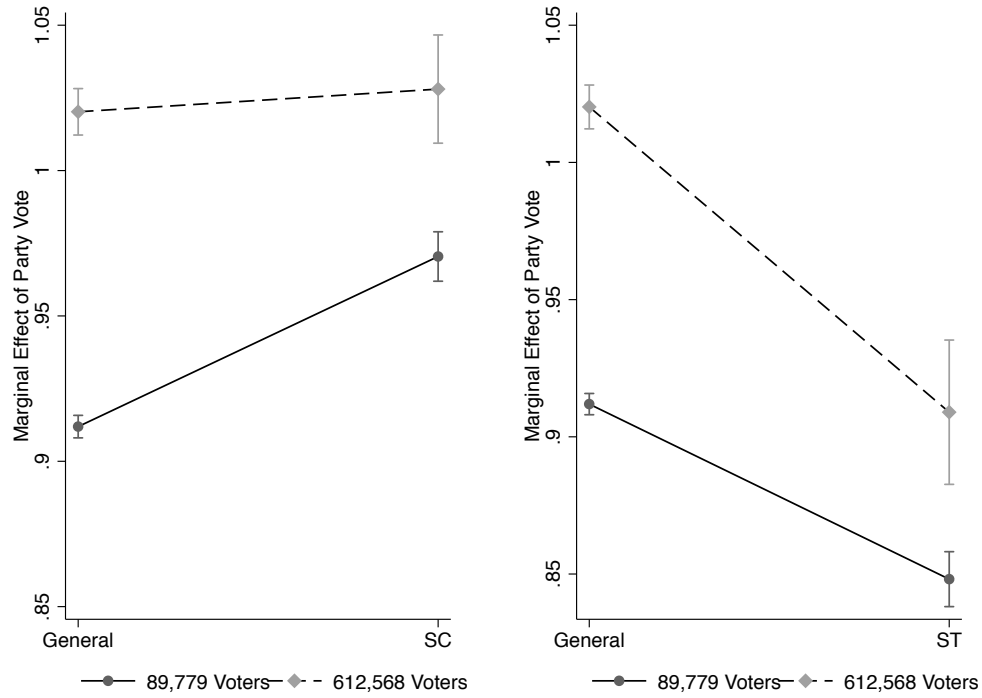
Discussion: Table A9 replicated Table 4 in the main text. However, instead of *Vidhan Sabha* (a dummy variable for state elections), the models include *Electorate*, which is the number of voters in each constituency. Hypothesis 3 suggests that reservation should have a greater impact in lower-level elections—hence the *Vidhan Sabha* dummy. But, another way to test this same argument is to exploit variation in the size of election constituencies, since there is considerable variation even within the state and national levels. Thus, we interact *Electorate* with reservation dummies in models 1-3 and with reservation variable and *Party Vote* in model 4. Evidence in support of Hypothesis 3, in this table, means coefficients running in the opposite direct from those we expect to see in Table 4. Indeed, this is exactly what we find: positive coefficients in models 1 and 2 on the interaction terms and negative coefficients in model 3. We also find negative coefficients on the triple interaction term in model 4.

Figure A6: Graphical Representation of Table A9 (Models 1-3)



Discussion: Figure A6 presents the results from Table A9, models 1-3. Each column represents a different dependent variable. Each sub-figure presents the average marginal effect of reservation (SC reservation in the top row and ST reservation in the bottom row) on the specific dependent variable as the size of the constituency (in terms of voters) increases. The results in the top row are as predicted. In small constituencies, the reservation is associated with a lower ENC, smaller independent vote, and a greater vote share for major parties. As constituency size increases, these effects approach zero. In very large constituencies (of which there are relatively few), the average marginal effect of reservation ends up in the opposite direction of what is predicted. The results for the ST seats look fairly similar—positive slopes in the sub-figures for ENC and Independent Vote and a negative slope in the 10%+ Party Vote sub-figure—except that the 95% confidence intervals for the average marginal effects typically include zero. Thus, as with much of our other analysis, we find strong support for Hypothesis 3 in SC seats but not ST seats.

Figure A7: Graphical Representation of Table A9 (Model 4)



Discussion: Figure A7 graphically presents the results from Table A9, model 4. This figure effectively replicates Figure A5, but in place of lines depicting the Lok Sabha and Vidhan Sabha, this figure uses the number of voters. The two figures are the mean number of voters in state and national level elections in our data. Not surprisingly, this figure closely resembles Figure A5. We see that in smaller electoral districts, the average marginal effect of *Party Vote* on *Candidate Vote* changes quite considerably when moving from general to SC reserved seats. The effect changes very little in large districts. And, just as in Figure A5, we see unexpected patterns with ST seats.

Table A10: Replication of Tables 1 and 2 National-Level Analysis with SC/ST % (2008-15)

	ENC	ENC	Ind. Vote	Ind. Vote	10% Party Vote	10% Party Vote
SC reserved	-0.090*** (0.030)	-0.137*** (0.040)	-0.010* (0.005)	-0.018** (0.007)	-0.003 (0.017)	0.000 (0.028)
ST reserved	0.119 (0.107)	-0.187* (0.108)	0.013 (0.013)	0.025 (0.023)	-0.046** (0.020)	-0.029 (0.035)
SC pop. %		0.643 (0.453)		0.108** (0.048)		-0.042 (0.171)
ST pop. %		0.963*** (0.297)		-0.024 (0.037)		-0.053 (0.076)
Electorate	0.002 (0.023)	0.003 (0.021)	-0.001 (0.003)	-0.002 (0.003)	0.002 (0.005)	0.002 (0.006)
State dummies	Y	Y	Y	Y	Y	Y
Year dummies	Y	Y	Y	Y	Y	Y
Constant	3.098*** (0.434)	2.935*** (0.395)	0.063 (0.055)	0.056 (0.053)	0.767*** (0.099)	0.777*** (0.093)
R^2	0.40	0.41	0.18	0.18	0.23	0.23
N	1,026	1,026	1,026	1,026	1,026	1,026

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Discussion: Table A10 replicates analyses in Tables 1 and 2 for national-level elections, but only including the period from 2008 through 2015 for which we can include controls for the constituency-level SC and ST populations. For each dependent variable, the left column exactly replicates the analysis found in the main text. The next column includes controls for the SC and ST shares of the population. Two patterns stand out. First, the point estimates for *SC reserved* for the *ENC* and *Independent Vote* dependent variables are larger once the demographic controls are include. For *10% Party Vote*, there is effectively no difference in the coefficients. Second, the ST results for the *ENC* and *10% Party Vote* analyses look much more like the SC results once controls are included. In the case of *10% Party Vote*, we expect a positive coefficient, so the fact that the coefficient is closer to zero and statistically insignificant when controls are added actually makes it closer to our expectation. In short, Table A10 indicates that our results are not an artifact of our inability to control for the SC and ST shares of the population in the main analysis. If anything, our results for SC seats are conservative, and the results for the ST analysis may be more supportive of our hypotheses than the results in the main text suggest.

Table A11: Replication of Tables 1 and 2 State-Level Analysis with SC/ST% (2008-15)

	ENC	ENC	Ind. Vote	Ind. Vote	10% Party Vote	10% Party Vote
SC reserved	-0.115* (0.060)	-0.212*** (0.069)	-0.024*** (0.006)	-0.030*** (0.006)	0.028** (0.011)	0.034** (0.012)
ST reserved	0.109 (0.140)	-0.197** (0.080)	0.000 (0.006)	-0.019* (0.010)	-0.005 (0.020)	0.045** (0.022)
SC pop. %		0.010* (0.005)		0.001 (0.000)		-0.001 (0.001)
ST pop. %		0.009** (0.003)		0.001** (0.000)		-0.001*** (0.000)
Electorate	-0.373*** (0.127)	-0.436*** (0.142)	-0.013 (0.015)	-0.017 (0.014)	0.120*** (0.031)	0.125*** (0.030)
State dummies	Y	Y	Y	Y	Y	Y
Year dummies	Y	Y	Y	Y	Y	Y
Constant	3.485*** (0.288)	3.403*** (0.265)	0.041 (0.034)	0.035 (0.035)	0.684*** (0.059)	0.689*** (0.060)
R^2	0.33	0.34	0.14	0.14	0.21	0.21
N	5,599	5,599	5,599	5,599	5,599	5,599

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Discussion: Table A11 replicates analyses in Tables 1 and 2 for state-level elections, but only including the period from 2008 through 2015 for which we can include controls for the constituency-level SC and ST populations. For each dependent variable, the left column exactly replicates the analysis found in the main text. The next column includes controls for the SC and ST shares of the population. Two patterns stand out, even more prominently than in Table A10. First, the point estimates for *SC reserved* are somewhat larger once the demographic controls are included. Second, the coefficients on *ST reserved* look much more like the coefficients for the SC seats when the controls are included. In other words, once we control for the SC and ST shares of the population in an electoral district, the results for ST seats are broadly supportive of our hypotheses.

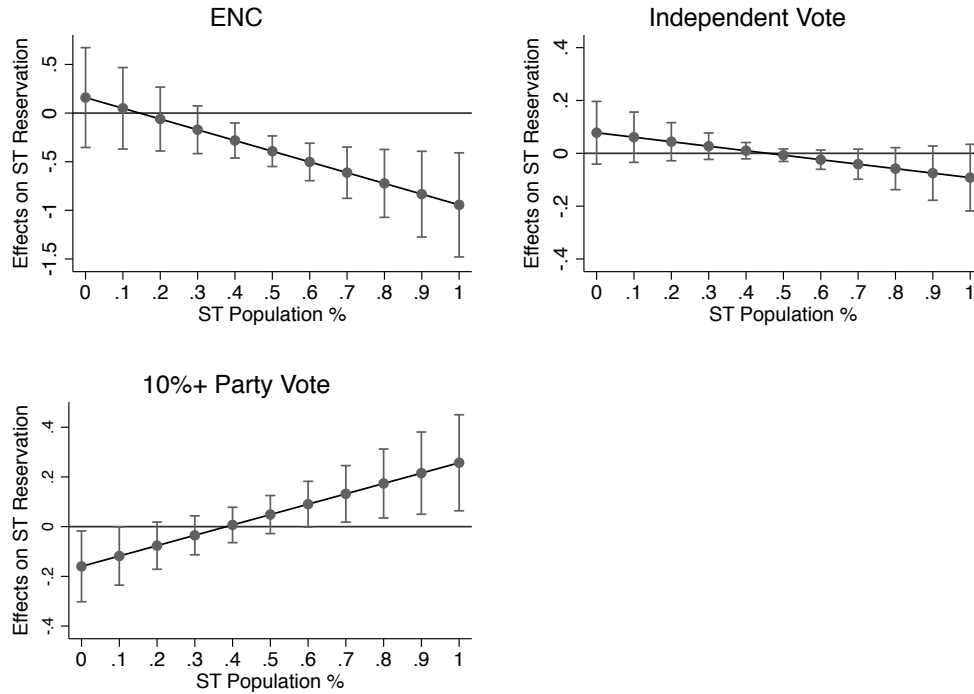
Table A12: ST Population Size and ST Reservation at the National Level (2008-15)

	ENC	Ind. Vote	10% Party Vote
SC reserved	-0.123*** (0.043)	-0.016*** (0.006)	-0.005 (0.028)
ST reserved	0.159 (0.249)	0.078 (0.057)	-0.160** (0.069)
SC population %	0.494 (0.489)	0.085** (0.041)	0.014 (0.170)
ST population %	1.379*** (0.263)	0.040 (0.030)	-0.211** (0.092)
ST reserved X ST population %	-1.103** (0.485)	-0.170 (0.116)	0.417*** (0.147)
Electorate	0.006 (0.021)	-0.001 (0.003)	0.001 (0.006)
State dummies	Y	Y	Y
Year dummies	Y	Y	Y
Constant	2.889*** (0.397)	0.049 (0.048)	0.794*** (0.089)
R^2	0.42	0.19	0.24
N	1,026	1,026	1,026

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Discussion: One reason why the results for ST seats may differ from those for SC seats is that ST seats frequently have very large ST populations, unlike SC reserved seats. One hypothesis, therefore, is that ST seats with lower ST populations may exhibit patterns more like SC seats. Table A12 tests this idea by examining national-level elections and interacting *ST reserved* and *ST population %* to see if the effects of *ST reserved* vary as the size of the ST population changes. The results of the interaction terms are presented graphically in Figure A8.

Figure A8: Graphical Representation of Table A12



Discussion: Based on the analysis in Table A12, Figure A8 presents the average marginal effect of ST reservation on a variety of dependent variables. The coefficients on the interaction terms in Table A13 are very close to zero. Recall that Table A12 was intended to test the idea that the effect of ST reservation would be more like the effect of SC reservation in constituencies where the ST population is lower and, therefore, more like the share of SCs in SC reserved seats. In fact, we see the opposite. In SC reserved seats, reservation is associated with a lower ENC, lower share of the vote for independents, and a higher share of the vote for major parties. In fact, we observe these trends in ST seats where the ST population is larger. Thus, the effect of ST reservation looks similar to that of SCs when STs constitute the overwhelming majority of the population.

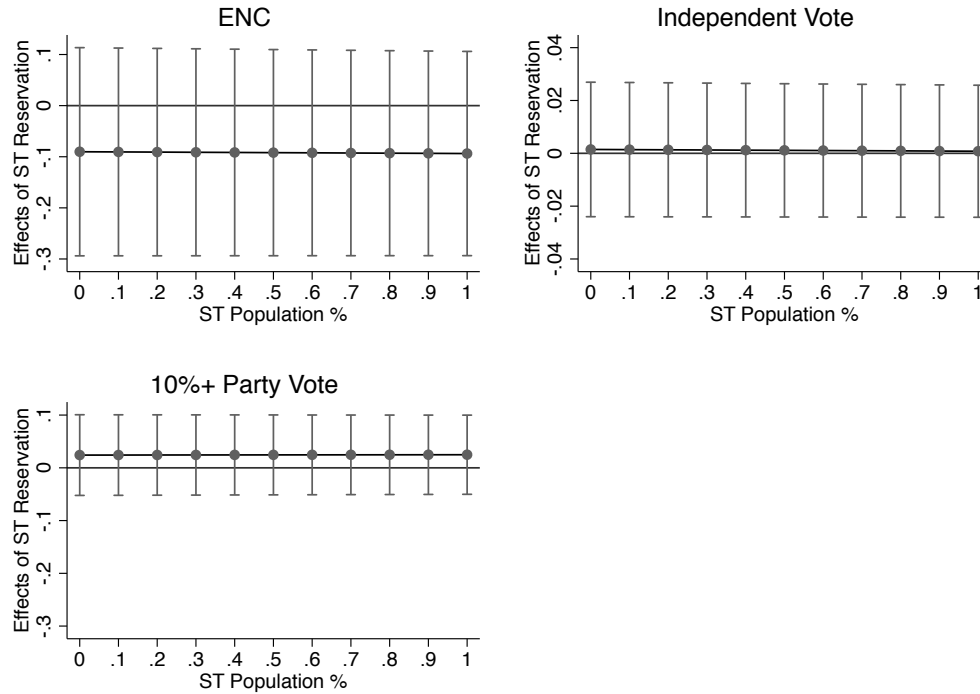
Table A13: ST Population Size and ST Reservation at the State Level (2008-15)

	ENC	Ind. Vote	10% Party Vote
SC reserved	-0.210*** (0.069)	-0.029*** (0.006)	0.033** (0.012)
ST reserved	-0.090 (0.099)	0.001 (0.012)	0.024 (0.037)
SC population %	0.010* (0.005)	0.001 (0.000)	-0.001 (0.001)
ST population %	0.010** (0.004)	0.001** (0.000)	-0.002*** (0.001)
ST reserved X ST population %	-0.003 (0.003)	-0.001* (0.000)	0.001 (0.001)
Electorate	-0.438*** (0.143)	-0.018 (0.014)	0.126*** (0.030)
State dummies	Y	Y	Y
Year dummies	Y	Y	Y
Constant	3.400*** (0.265)	0.035 (0.035)	0.689*** (0.060)
R^2	0.34	0.14	0.21
N	5,599	5,599	5,599

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

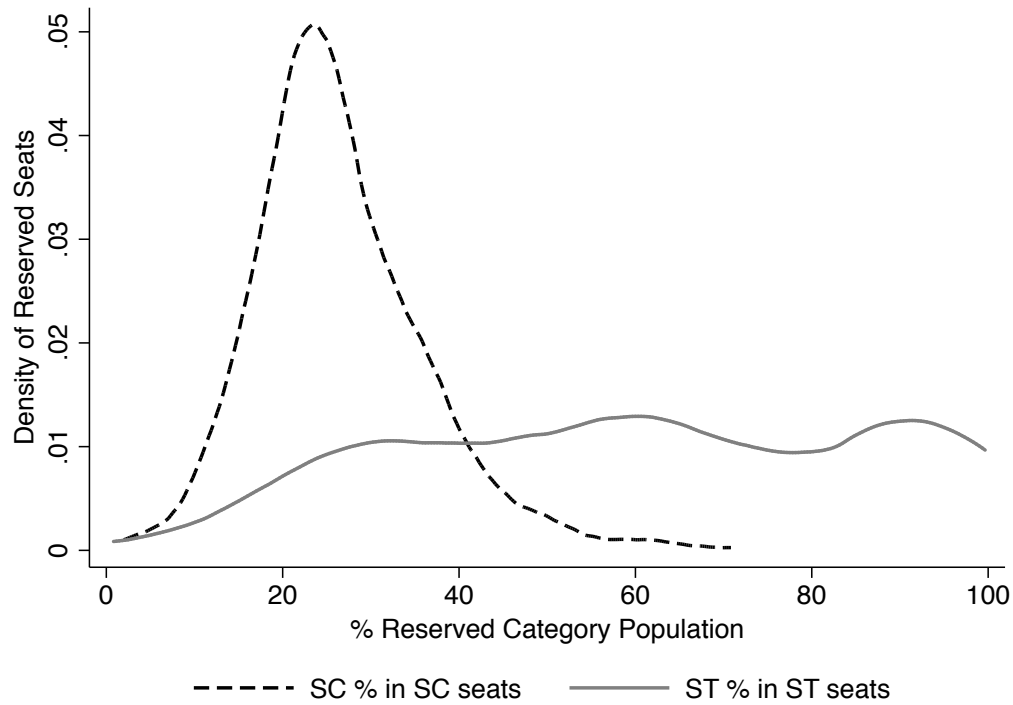
Discussion: One reason why the results for ST seats may differ from those for SC seats is that ST seats frequently have very large ST populations, unlike SC reserved seats. One hypothesis, therefore, is that ST seats with lower ST populations may exhibit patterns more like SC seats. Table A13 tests this idea by examining state-level elections and interacting *ST reserved* and *ST population %* to see if the effects of *ST reserved* vary as the size of the ST population changes. The results of the interaction terms are presented graphically in Figure A9.

Figure A9: Graphical Representation of Table A13



Discussion: Based on the analysis in Table A13, Figure A9 presents the average marginal effect of ST reservation on a variety of dependent variables. The coefficients on the interaction terms in Table A13 are very close to zero. Therefore, not surprisingly, there is almost no indication that the average marginal effect of ST reservation changes as the ST population increases. Furthermore, the 95% confidence intervals cross 0 in all three sub-graphs and at all levels of ST population share. Thus, there is no indication that the effect of ST reservation differs when the ST population is similar to the SC population in SC reserved seats.

Figure A10: Distribution of SCs (STs) in SC (ST) Reserved Seats



Discussion: We noted in the main text that there are relatively few ST seats with shares of STs comparable to the share of SCs in SC seats. The above figure uses kernel density estimation to plot the distribution of the SC (ST) population in SC (ST) reserved seats in assembly elections. The figure shows that the vast majority of SC reserved seats have populations that are less than 40% SC, while the vast majority of ST reserved seats have more than 40% ST. The mean SC% in SC-reserved seats is 26.4% (s.d. 9.7%), while the comparable figure is 60.5% (s.d. 26.0%) for STs.