Some Unintended Consequences of Political Quotas

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Oct 2011

Abstract: Many countries are considering adopting political quotas for under-represented and disadvantaged minorities, but critics of the policy claim that it undermines political competition. Using evidence from India, I examine the impact of mandated political representation for disadvantaged minorities. Aggregate turnout falls by 9% of the baseline and right-wing parties win 50% more often, but I find no negative impact on electoral competition as measured by the margin of victory or number of candidates. Detailed individual-level data for one state suggests that voter participation falls among women and among minorities. This suggests that restricting candidate identity to minorities may cause some bias in voter participation.

[1]I would like to thank Oriana Bandiera, Guy Michaels and Gerard Padro-i-Miquel for their support and guidance. I would like to thank Sanjay Kumar of the Centre for the Study of Developing Societies, who was extremely generous with data. I would like to thank Joachim Groeger, Michael Best, Iain Long and Barbara Richter and seminar participants at the LSE for helpful comments and discussions. All remaining errors are my own.

1 Introduction:

Many countries have considered measures to increase the representation of minorities and women, either through quotas or through gerrymandering[2]. In India, quotas have been in place for disadvantaged groups since 1951, but the policy's use is widespread. In 2010, more than 30 countries in Asia, Africa, South America and Europe had quotas for women in government.

Proponents of the policy point out that there is reason to believe that nonminority legislators have different policy preferences from legislators from disadvantaged groups. So, in addition to considerations of fairness and equity, empirical evidence suggests that increasing representation for disadvantaged groups may have redistributive effects (Pande 2003), (Chattopadhyay and Duflo 2004).

However, a common assumption made when assessing the impact of legislator identity on policy is that the imposition of political quotas changes legislator identity only, while voter identity is unaffected (see Pande (2003)). This is a strong assumption, and not innocuous. Critics of quotas,moreover, argue that they are discriminatory, distort incentives and by their nature undermine the democratic process: Intervention in order to increase minority representation takes away the right of voters to choose their representatives freely. Artificially restricting the pool of candidates weakens electoral competition. Distorting the candidate pool risks distorting the size and composition of the voting population, as well as potentially disproportionately favouring a particular political party[3].

This paper uses a provision of the Constitution of India to examine the causal impact of the introduction of quotas for disadvantaged minorities on electoral competition and voter participation, at the level of the constituency.

The world's most comprehensive political affirmative action programme takes place in India, in which approximately a quarter of all state and national legislators belong to disadvantaged groups. The representation of members belonging to historically disadvantaged castes (Scheduled Castes or SCs) or tribes (Scheduled Tribes or STs) is determined according to each decennial census, and the representation of these groups in the state legislature is held to be as close as possible to their representation in the population.

[2]Section 5 of the Voting Rights Act of America contains provisions that many conservative politicians see as racial gerrymandering. See also Shaw v. Reno, 113 S.Ct.2816(1993), in which the Supreme Court ruled that the creation of a district in North Carolina in which minorities were in the majority was unconstitutional.

[3]Moreover, there is increasing concern about the ethnicisation of politics. Critics of quotas or partisan gerrymandering suggest that they deepen ethnic divisions. If voters have preferences about the identity of their representatives, there may be a tradeoff between candidate identity and quality (competence, education or honesty).

Reservation is revisited with the publication of each decennial census, but not before. When a constituency is reserved for SCs(STs) only SC(ST) candidates may contest the election, although voters of all identities may vote.

In 2008, after a long hiatus since 1981, a wave of redistricting (Delimitation) was carried out, adjusting the representation of SCs and STs in state and national legislatures according to the 2001 census. Four states (Karnataka, Madhya Pradesh, Rajasthan and Chattisgarh) carried out elections using this adjusted representation. The documentation released laid out the methodology of reservation transparently, enabling me to construct for these states a unique dataset with those constituencies which were reserved for the first time in 2008, as well as demographically and economically comparable constituencies within the same administrative area which narrowly missed the reservation cutoff and remained unreserved. I use a Differences-in-Differences approach to examine the impact of political reservation on turnout, the number of candidates contesting, the margin of victory and the probability of success of right-wing and left-wing parties, as well as those mobilising lower-caste supporters (details in Section 2.4).

I find no impact on the number of candidates contesting and no impact on the margin of victory, so these conventional measures of electoral competition are unaffected by political quotas. However, turnout drops by 6 percentage points relative to a baseline of 69 percentage points, and right-wing parties make up 26% more of winners in reserved constituencies after reservation, compared to a baseline of 53%. Results using individual polling data suggest that women vote 15% less, and minorities vote 9% less, in reserved constituencies after reservation.

There are many possible explanations, but at the very least this evidence suggests that there are unintended consequences to political quotas- although most standard measures of electoral competition are unaffected, voter participation falls, and seemingly among the most vulnerable members of the population.

This is a concern, because for a complete picture of the impact of minority representation on policy it seems reasonable to look at its impact on the size and composition of the voting population. We should be concerned if sections of the population systematically choose to increase participation- or to reduce it. When suffrage is extended to a group, public goods provision to the group improves as well. An increase in the participation of underprivileged voters causes a rise in welfare expenditure (Husted and Kenny 1997) and public health and infrastructure spending (Lizzeri and Persico 2004); better public goods provision (Naidu 2009); better health outcomes (Fujiwara 2010) and better resource targeting (Besley, Pande, and Rao 2005).

This work belongs to several streams of work in the economic and political science

literature. There is of course a large body of work examining the impact of legislator identity on policy, using the Indian experiment I discuss. In addition, the work addresses literature discussing the impact on political competition of gerrymandering, as well as the literature on political participation and ethnic conflict.

There is a large literature on ethnic conflict in developing nations, starting from Donald Horowitz's seminal work (Horowitz 1985) and related to the Indian context by Kanchan Chandra (Chandra 2003). There is also a growing body of work examining the tradeoff between preferences regarding politician type and group identity: Banerjee and Pande (2007), who find that increasing voter ethnicisation in North India adversely affects candidate quality in dominant groups; in contrast, Munshi and Rosenzweig (2008) find that reservation, by creating a dominant group, tends to increase the competence of elected representatives, and resolve the inability of candidates to credibly commit to a platform.

There is little work examining the impact of quotas on the size and composition of the voting population. The political science literature, while considering increased minority representation as a determinant of turnout, focusses on partisan gerrymandering.Discussing the merits of racial gerrymandering, Cameron, Epstein, and O'Halloran (1996), examining majority-minority districts in America, suggest that there may be a tradeoff between "descriptive" representation- i.e. increasing the number of minority officeholders- and "substantive" representation- policies benefitting minorities. See Besley and Case (2003) for a survey; Coate and Knight (2007) for a model of optimal redistricting.

There is no consensus on the impact of majority-minority districts on voter participation: early work suggests that African-American participation might increase, but absent substantive representation, might peter out (See Barreto, Segura, and Woods (2004)for a review of the literature, as well as the argument that other minorities may participate more as a result of redistricting).

The existing work on political quotas tends to mainly examine quotas using the lens of the impact of legislator identity on policy (see Duflo (2005) for a review) with some recent work examining the impact of political reservation on poverty (Chin and Prakash 2009), and the impact of political reservation for women on reports of crimes against women (Iyer, Mani, Mishra, and Topalova 2011).

Previous work on political reservation in India has examined either the state level (Pande 2003) or village council level (Chattopadhyay and Duflo 2004). Measures at both levels are not quite comparable, however. At the village council level, quotas rotate on a predictable basis, so performance incentives are fundamentally different from quotas at state and national level, which are expected to be permanent. I examine permanent quotas

at the level of the constituency, which enables me to look at the impact of restricting candidate identity for a material election at a quite disaggregated level.

Ford and Pande (2011), in a survey of the literature on gender quotas, state that there is limited evidence on the impact of quotas on turnout. Kurosaki and Mori (May 2011) examine the correlation between the probability of minority citizens voting and the incidence of being in a constituency reserved for minorities, but they do not exploit time variation and they cannot directly identify the causal impact of reservation on voting outcomes.

This work makes the following broad contributions: an understanding of the impact of quotas on the voting population and electoral competition, and an analysis of political reservation at the constituency level, which is not only a meaningful unit of consideration for political variables, but examines permanent quotas at a more disaggregated level than the state.

The rest of this paper is organised as follows: Section 2 provides a conceptual framework. Section 3 provides a background of political reservation in India. Section 5 sets out the empirical specification and Section 4 my identification strategy in more detail. Section 5.1 provides some summary statistics and Section 6 results for aggregate turnout and competition. Section 7 describes individual-level data for one state in the sample, along with results. Section 8 concludes, with some ideas for further work.

2 Theoretical Predictions about Turnout, Electoral Competition and Party Bias

In this section, I discuss the extant theory regarding the impact of restricting legislator identity on turnout and electoral competition, and its main predictions.

There are no clear theoretical predictions regarding the impact of political quotas on turnout, competitiveness or party bias, since the phenomenon has not been explicitly modelled. We can, however, disentangle some of the effects of the imposition of political quotas on turnout, electoral competition and party bias.

Political quotas, or "reservation", in the Indian example, imply restricting the pool of eligible candidates in a single-member jurisdiction to a subset of the population. This has a host of possible effects on the number and type of legislators contesting [4], but here I enumerate what certainly happens:

[4] One obvious one being that minority candidates may well be less educated, on average, than nonminority ones

1. A subset of minorities is guaranteed representation

2. All candidates are now more alike on at least one dimension

What theory there is offers very different predictions, depending on initial conditions.

2.1 Ratio of Candidates to Electors

The impact of reservation on the number of candidates depends crucially on whether reservation induces new minority candidates to contest (generating a new pool) or whether those candidates who would contest elections after reservation did so prior to the policy anyway. In the first case, the impact of the policy would be ambiguous. In the second, trivially the ratio of candidates to electors is lower in reserved constituencies after reservation than in nonreserved constituencies.

2.2 Margin of Victory

The impact of reservation on the margin of victory goes in the same direction as variation within the pool of minority candidates. If the two minority candidates are closer (in quality, for example) than a minority and nonminority candidate, then the margin of victory should reduce. If not, then it should widen.

2.3 Turnout

Voting behaviour has long been a vexed question in the theoretical and empirical literature, exemplified by the "paradox of voting": i.e. with costly voting and large populations (and therefore a small probability of being pivotal) nobody ought to vote (Downs 1957); (Ordeshook and Riker 1968); see Feddersen (2004) for a survey.

Reservation could affect turnout through a large number of mechanisms, which would pull in different directions. Here I enumerate some of these mechanisms, and predictions consistent with these mechanisms.

1. Competition: There is a long tradition in the political science literature that turnout is higher in elections expected to be close. (from Palfrey and Rosenthal (1983), in close elections, the probability of being pivotal increases; from Ferejohn and Fiorina (1975) voters seek to minimise their regret in the event of their preferred candidate losing by a narrow margin; see Geys (2006) for a review). If reservation affects turnout through competition, turnout should go in the same direction as electoral competition, irrespective of the ethnic group of voters.

2. Expressive Voting: The idea of a benefit from voting is an old one in the political science literature, whether it be a desire to do one's democratic duty (Downs 1957) or to assert one's partisanship (Ordeshook and Riker 1968). In this setting, voters derive benefit from voting for candidates sharing their group identity. After reservation, a subset of minorities is guaranteed representation. Nonminority voters and minority voters who are not represented are effectively disenfranchised and lose incentive to vote, and minority voters guaranteed representation have no added incentive to vote, since a candidate from their broad ethnic group is guaranteed to win. If this mechanism were in operation, turnout on average would fall for all groups, particularly for elites and non-represented minorities.

3. Identity as Information: While "expressive voting" explores rational participation, others consider rational abstention. For instance, Feddersen and Pesendorfer (1996) posit that in elections in which candidates have distinct positions and voters are asymmetrically informed and vary in partisanship, it may be rational for uninformed nonpartisan voters to abstain. In the setting I consider, it is possible that voters use a candidate's group identity as a proxy for information about her quality, policy preferences or both. Once all candidates belong to the same ethnic group, a salient source of information is lost. Were this to operate, reservation should depress turnout among uninformed voters.

2.4 Party Bias

In the current setting, I consider parties based on two broad criteria:

1. Redistribution: Does a party have a history of opposing policies (e.g. directed taxation) that redistribute income from the wealthy to the poor?

2. Reservation: Does a party have a history of opposing measures that redistribute resources towards disadvantaged minorities?

Parties that answer "Yes" to both questions are classed as "Right-Wing"[5]. Parties that answer "No" to both questions (or who have a history of favouring redistribution along either dimension) are classed as "Left-Wing" [6]. A third category is "Lower-Caste parties",

[5]In practice, this is most usually the "Bharatiya Janata Party" (or "Indian People's Party"), a party which is socially conservative, in favour of free markets and of whose base upper-caste Hindus make a large fraction.

[6]This group is large, including the Indian National Congress (India's oldest political party) and Communist Party of India, and offshoots thereof.

who direct their appeal specifically towards voters from the bottom of Hinduism's caste hierarchy [7]. What does reservation imply for the success of these groups of parties? Effects operate along two dimensions:

1. Candidates: Does reservation induce changes in the distribution of right-wing, left-wing and lower-caste parties among contesting parties? If so, then in constituencies where right-wing/left-wing/lower-caste parties win disproportionately, we should expect to see these parties make a higher fraction of contesting candidates. If we find no significant difference in distribution of all contesting parties between treated and untreated constituencies, any difference we find is due to the efficiency of these parties in mobilising support from voters (see the "mobilisation" models of Nalebuff and Schachar (1999), for instance, in which group leaders exert social pressure to mobilise their followers).

2. Voters: Does reservation induce changes in the composition of the voting population in order to disproportionately favour a group of political parties? If so, then in constituencies where right-wing/left-wing/lower-caste parties win disproportionately, we should expect to see voters identifying themselves as supporters of right-wing, left-wing and lower-caste parties (respectively) should make a higher fraction of the voting population.

Note further that while the above discussion makes no definitive predictions regarding the distribution of political parties as a result of reservation, it offers some suggestive leads as to the composition of the voting population- in particular, it suggests that uninformed voters may abstain. If a lack of information is also correlated with a lack of education or wealth, then when uninformed voters drop out local elites make a higher fraction of the voting population, which means that if "informed" voters disproportionately favour a political party, reservation will bias victory in favour of that party.

3 Reservation in India

After 1950, the Indian Government enforced mandated representation for traditionally under-represented minorities, the Scheduled Castes (SCs) (who belong to castes at the bottom of Hinduism's caste hierarchy) and Scheduled Tribes (STs) (members of whom belong to tribes living in remote areas, historically cut off from technology, education and healthcare). As near as possible, the representation from each state in State and National Legislative Assemblies would be equal to the proportion of their population in the state,

[7] In practice, this is the "Bahujan Samaj Party" (or "Oppressed People's Party").

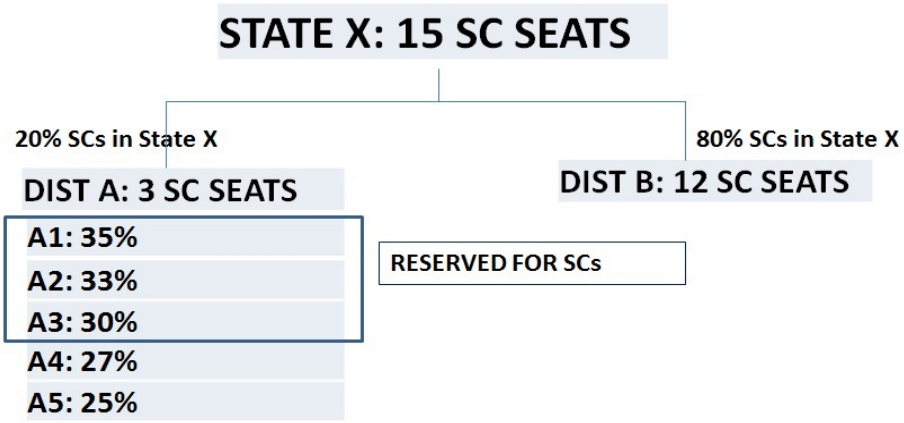

Figure 1: Allocation of SC seats to a district

according to the last decennial census. While the representation of these communities varies continuously, their representation in the legislature varies with a lag in intercensal years. The fraction of reservation has remained fixed since the 1981 census. In 2008 the Delimitation Commission of India conducted a revision according to the 2001 census for elections in or after 2008.

When a seat is reserved for a member of the Scheduled Castes (Tribes), only Scheduled Caste(Tribe) candidates may contest, though all voters on the electoral roll may vote. From 1962, all constituencies are single-member jurisdictions. Elections are conducted on a First-Past-the-Post (FPTP) system: the candidate with the highest number of votes wins and represents the constituency in the state legislative assembly.

One difference between reservation in the state and national assemblies and that at the Panchayat (village council) level is that in the former case reserved seats do not rotate- a seat, once reserved, will remain so as long as it meets the criteria of the Election Commission.

4 Identification Strategy

Quota allocations are determined at three levels: State, District and Constituency.The hierarchy is as follows: directly beneath the state is a district, which comprises many constituencies. A district is allocated SC seats in a proportion roughly equal to how many of the state's SCs live in that district. Constituencies in a district are ranked in descending order of proportion of SCs until the district quota is satisfied.

Figure 1 illustrates the process of allocation of reserved constituencies to a district.

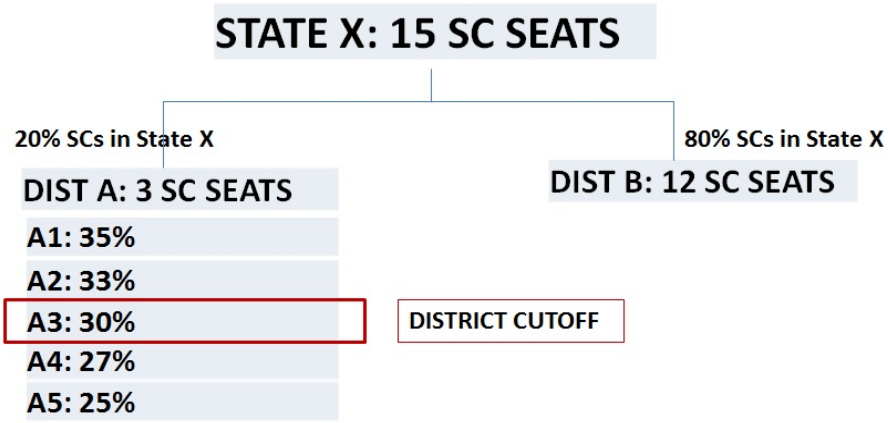

Figure 2: Identification of District Cutoff

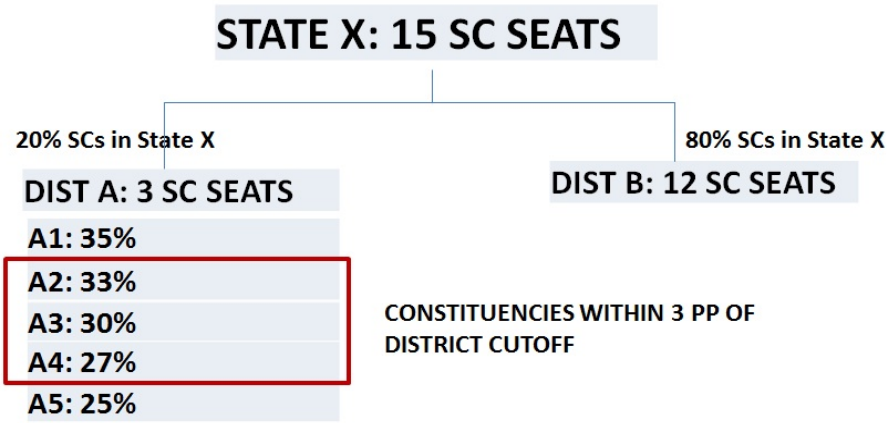

Figure 3: Identification of constituencies close to the threshold

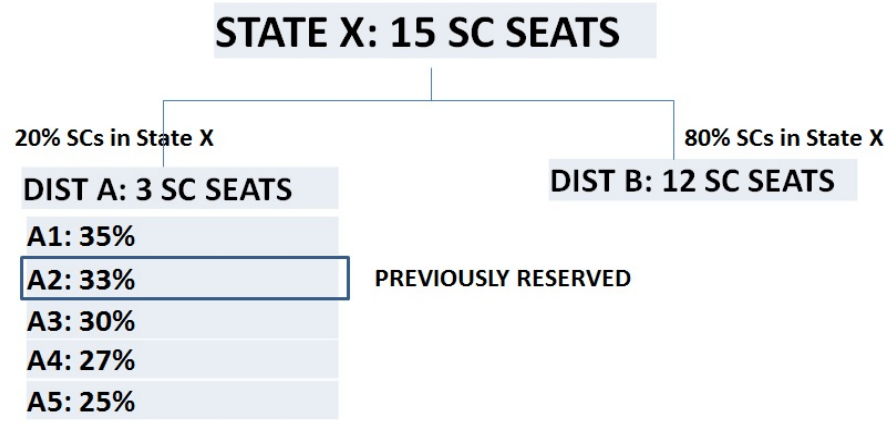

Figure 4: Discarding previously-reserved constituencies

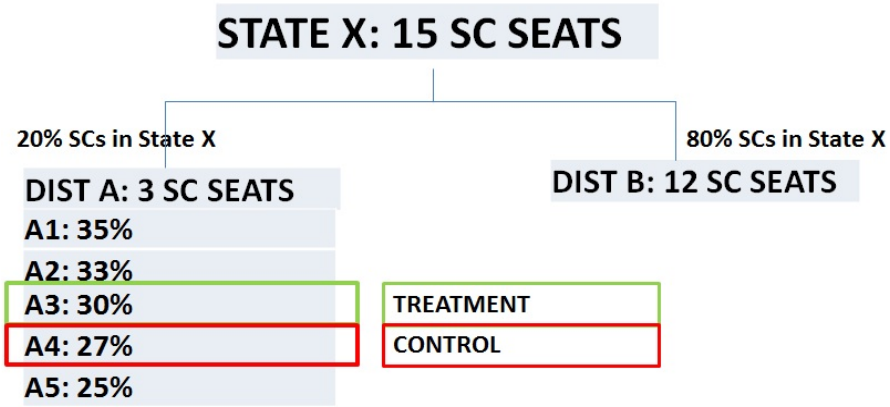

Figure 5: Identification of Treatment and Control Groups

If State X has 15 SC seats and 20% of the state's SCs live in district A, district A gets 3 SC seats. Constituencies are ranked in descending order of SC population until the quota is reached.

Since seats are reserved for minorities based on their representation in the constituency, the identification of reservation on turnout or electoral competition is not straightforward. However, the procedure described suggests a Difference-in-Difference approach [8]:

Construction of Treatment and Control Groups (SC constituencies): For each district, I identify the lowest SC proportion for an SC-reserved constituency. This becomes the cutoff for reserved constituencies in each district.

Figure 2 illustrates the district cutoff in our example. 3 seats were reserved for SCs in district A, and the lowest SC population among reserved seats was 30%.

I then narrow consideration to constituencies with an SC population within 3 percentage points of the district cutoff: in our example, as illustrated by Figure 3, constituencies with an SC population at least equal to 27% and no more than 33%.

I discard constituencies that were previously reserved, since I am interested in the effects of being reserved for the first time in 2008 (see figure4). This leaves me with the following subgroups:

1. Treatment group: Switched for the first time from nonreserved to SC in 2008 AND

[8]Clots-Figueras (2007), examining the impact of female legislators on education expenditure, instruments female presence in administration with females who won elections against men by a narrow majority; Fujiwara (2010) compares the impact of the introduction of Electronic Voting Machines between cities of population at least as high as 100000 and cities just below that population threshold.

with an SC proportion no more than 3 per cent higher than the district cutoff.

2. Control Group: Never reserved AND with an SC proportion no more than 3 per cent lower than the district cutoff.

As in Figure 5, the treatment group would be: first- time - reserved SC constituencies with an SC population no more than 33 per cent. The control group would be never - reserved constituencies with an SC population no lower than 27 per cent.

The process of allocating quotas to STs is different, since this community is more geographically concentrated. The state quota for STs is determined similarly to that for SCs, but constituencies are ranked in descending order of ST population until the state quota is reached. For this reason, using a similar identification strategy leaves very few observations, so from now on I confine my discussion to reservation for SCs.

5 Empirical Specification

I wish to measure the impact of restricting candidate identity on turnout, the ratio of candidates to electors, the margin of victory and the probability of success of right-wing parties. I use a Difference-in-Difference approach, and regress dependent variable Y on the incidence of being in a constituency reserved for the first time in 2008 ($TREAT$), the incidence of being in a year after reservation ($POST$) and that of being in a reserved constituency after reservation ($TREAT{\cdot}POST$), where Y is: the ratio of voters to electors ($TURNOUT$); the ratio of the number of candidates to all electors ($CANDTOELECTORS$), the ratio of difference in voteshare between winner and runner-up ($MARGIN$), the incidence of victory of a candidate from a right-wing party ($RIGHT$), the incidence of victory of a candidate from a left-wing party ($LEFT$)and the incidence of victory of a candidate from a lower-caste party ($CASTE$) in constituency c in year t.

$$Y_{ct} = \beta_0 + TREAT_c\beta_1 + POST_t\beta_2 + TREAT_c \cdot POST_t\beta_3 + u_{ct} \quad (1)$$

β_3 identifies the effect of reservation on turnout, electoral competition and party bias under the identifying assumption of common trends between treatment and control groups. This assumption is tested in Table 7.

5.1 Summary Statistics

Four states in India carried out elections using the new rules in 2008: Chhatisgarh, Madhya Pradesh, Karnataka and Rajasthan. Applying the rule described above leaves

me with 107 constituencies for SC constituencies. The four states in the sample carried out elections in 2003 and 2004. Delimitation in line with the 2001 Census was announced in 2006, so I discount bias owing to prior anticipation of treatment at least within the sample. The Delimitation Commission of India released detailed documents along with the 2008 announcement, from which I can reconstruct the reservation of each constituency. This process is not as transparent for previous rounds of reservation, so I restrict myself to one year before and after reservation. Further details on construction of the treatment and control group are provided in Appendix A.

Table 1 presents baseline village averages for treated and untreated constituencies, from the 2001 Census of India. There are, on average, 10 villages in each constituency. As Table 2 makes clear, constituencies in the treatment and control groups do not differ significantly across a battery of characteristics including population, literacy, employment or fraction of young. Treated constituencies had an SC population of 21% in 2001 as opposed to 19 % in untreated constituencies. Illiteracy in to-be-reserved constituencies was 53% in 2001 in both treated and never-reserved constituencies. Unemployment was 47% in to-be-reserved constituencies and 48% in never-reserved constituencies.

Panel A of Table 2 presents baseline constituency-level electoral characteristics for treated and untreated constituencies. To-be-reserved constituencies had fewer candidates from right-wing or centre and centre-left parties among all candidates contesting the election, but did not differ significantly in the victory rates of left-wing or right-wing parties[9]. There are also no significant differences in gender representation:5% of all candidates (and 3% of all winners) in to-be-reserved constituencies in 2003 and 2004 were female, versus 6% of all candidates (and 3% of winners) in untreated constituencies. [10]

Panel B of Table 2 presents constituency-level electoral characteristics after treatment for treated and untreated characteristics. In 2008, to-be-reserved constituencies had fewer candidates from right-wing or left/centre-left parties, but 23% more winning candidates came from right-wing parties in treated constituencies, and (unsurprisingly enough) 20% fewer of the winning candidates came from left-wing parties.

[9] In addition to the Communist Party of India and splinter groups, I class India's oldest political party (The Indian National Congress) and its offshoots as Left/Centre-Left."Lower-Caste" parties are those whose manifestoes or rhetoric are directed towards those at the bottom of the caste hierarchy. In practice, this is effectively one party: the Bahujan Samaj Party, or the Party of the Oppressed Majority.

[10]It is possible that to-be-reserved constituencies would have significantly more or fewer minority candidates. Unfortunately, the SC/ST status of candidates in unreserved constituencies only appears in the data from 2004. The state of Karnataka has caste data for candidates from 2004 onwards. 9% of candidates in to-be-reserved constituencies were SCs, versus 5% in never-reserved constituencies. The difference is not significantly different from zero.

Table 3 presents constituency-level averages of the dependent variables for to-be-reserved and never-reserved constituencies. There are no significant differences between the treatment and control groups prior to reservation over any of the dependent variables. Turnout in 2008 was seven percentage points lower in reserved constituencies compared to never-reserved constituencies. Right-wing candidates made 63% of winners in constituencies reserved in 2008, versus 41% in never-reserved constituencies. The bottom panel presents differences in differences for the four dependent variables. The change in turnout was six percentage points lower in reserved constituencies. The share of right-wing winners rose by 11% in reserved constituencies, and fell by 16% in never-reserved constituencies.

We might be concerned that the differences-in-differences that we observe with the victory of right-wing candidates are driven entirely by changes coming from the control group, rather than the treatment group. However, right-wing candidates made up 2% fewer of winning candidates in all SC constituencies moving from 2003 or 2004 to 2008; 26% fewer of all winning candidates in ST constituencies, and 5% fewer of all winning candidates in all nonreserved constituencies. Right-wing parties, therefore, were less successful in 2008 than in 2003 or 2004 everywhere but in to-be-reserved constituencies.

6 Results: Aggregate

6.1 Turnout, Electoral Competition and Margin of Victory

In Table 4 I present the results from estimating equation 1. From Panel A of column 3 of Table 4, turnout in reserved constituencies after treatment drops by 6 percentage points relative to a baseline of 69 percentage points i.e. turnout falls by 9%.This result is robust to district fixed effects and a set of controls including average female literacy in 2001 and average 2001 unemployment. Turnout is positively correlated with the POST dummy i.e. being in a year after treatment, but the effect is small and the partial effect of reservation is still large, negative and significant.

As we see from columns 3 and 4 of Panel B of Table 4, being in a reserved constituency after treatment has a positive correlation with the ratio of candidates to electors: being in a reserved constituency after reservation causes the ratio of candidates to electors to rise by 7%. The effect is not precisely estimated, but reservation has no discernible negative impact on this measure of electoral competition.From Panel C of Table 4, being in a treated constituency after reservation is positively correlated with the margin of victory: the point estimate is 2 percentage points relative to a baseline of ten percentage points.

However, the effect is imprecisely estimated.

6.2 Party Bias

As we see from Panel A of Table 5, the probability that the winning candidate is from a right-wing party is 26% higher in a reserved constituency after reservation. Suggestively, the probability of victory of "lower-caste" parties is lower in the treated sample after treatment (as we see in Panel C), but the effect cannot be disentangled from mean reversion.

6.3 Moving from Reserved to Unreserved

There is also the question of exit: to argue that reservation causes turnout to drop, we ought also to consider the reverse: whether turnout rises when a constituency always reserved for SCs gets unreserved. Table 6 considers constituencies unreserved (with control group identified as in Section 4), and shows that turnout rises by 4 percentage points relative to a baseline of 67 percentage points. The ratio of candidates to electors rises 45% (whereas in constituencies newly reserved for SCs, the impact on this measure of electoral competition is not different from zero), while, as with constituencies newly SC-reserved, dereservation is not associated with a significant change in the margin of victory.

The bottom panel considers the fraction of winning candidates coming from right-wing, left-wing and lower-caste parties in constituencies newly reserved and newly-unreserved. While right-wing candidates make up a significantly higher fraction of winners in newly-reserved constituencies, no group seems to win significantly more often in newly-unreserved constituencies.

6.4 Robustness Checks

Quite a few of my specifications and restrictions may seem arbitrary. Constituencies are categorized as treated or untreated if their SC population is within 3 percentage points above or below the district cutoff described in Section 4; the choice of specification leaves room for the possibility that some districts will have only treated or untreated constituencies. Further, there are concerns endemic to work using Difference-in-Difference specifications: serial correlation of standard errors , prior trends and possible endogeneity of treatment (Bertrand, Duflo, and Mullainathan 2004). The dependent variables that I examine (turnout, electoral competition and the probability of success of right-wing parties) are quite likely highly subject to serial correlation. However, in my data at present the time-series dimension is less likely to be an issue: for each constituency, I

consider the election period prior to reservation, and the election year after reservation. The method of selection of control groups also indicates that endogeneity of treatment is less likely to be a concern. Furthermore, work examining Delimitation indicates that constituency boundaries, where redrawn, were done so solely in order to ensure equal electorate sizes, with no evident bias, partisan or otherwise (Iyer and Shivakumar 2009). This leaves the matter of prior trends.

Table 7 presents results for turnout, the ratio of candidates to electors and the margin of victory for the sample, but as though reservation were carried out in 1998 rather than 2008. Since for 5 constituencies no analogue exists prior to 2001, I present my main results with and without these constituencies (columns 1 and 2 respectively). Column 3 runs a placebo for the main specification and illustrates that being in a treated constituency after 1998 has no significant impact on turnout or electoral competition. This may go some way toward allaying concerns of prior trends.

Table 8 indicates that the results suggesting that right-wing parties win disproportionately often in newly-reserved constituencies is not echoed in the sample constituencies with a placebo treatment carried out one decade prior to reservation.

The results in Table 4 are also robust to widening the sample to include hitherto-unreserved constituencies with an SC population within 5 percentage points of the district cutoff. I am left with very few observations if I tighten the sample to only those constituencies within 1 percentage point of the district cutoff. However, the magnitude of effect is very similar (see 11). I can restrict the sample to only districts which have both treated and untreated constituencies. This constraint, perhaps unsurprisingly, is hard on the data: almost half the observations are lost, leaving 120 observations. The main results are left unaffected, however: turnout falls by 5% in reserved constituencies after reservation, and the ratio of candidates to electors is positively correlated with being in a reserved constituency after reservation. So, too, is the margin of victory, but the point estimate is small and the impact is not significantly different from zero(see 12).

There is another minority to consider- Scheduled Tribes (STs) are on average more economically deprived than Scheduled Caste (SC) persons, and usually not as politically organised[11]. As I outlined earlier, owing to their concentration, the sample of constituencies that are narrowly reserved or left unreserved for STs is very small, so the presence or absence of effects is difficult to argue. However, while widening the cutoff to 5 or 10 per-

[11]There is some precedent for considering that the term "minority" ought to be disaggregated, particularly considering impacts on welfare or poverty: recent work (e.g. Chin and Prakash (2009)) suggests that only quotas for the most disadvantaged minorities have any poverty-reducing effects, while quotas for wealthier and better-organised minorities may not be as effective.

centage points has no large impact on the size of the effect of SC reservation on turnout, the point estimates of the difference-in-difference in ST constituencies is consistently small and not significantly different from zero.

7 Individual Voting Data

In this section I present individual post-poll survey data for 15 constituencies in one state in the sample. In 2008, an organisation called Lokniti carried out surveys for a random selection of constituencies after the 2008 State Legislative Assembly Elections, on behalf of the Centre for the Study of Developing Societies (CSDS). Respondents were asked whether they voted in the most recent legislative assembly elections (in 2008), whether they voted in the prior elections (in 2004), as well as about current literacy, asset ownership, gender and ethnic group (religion, subcaste and classification into SC, ST or otherwise). Karnataka has 224 constituencies in the state legislative assembly, of which Lokniti polls 75. Within these constituencies, I look for those meeting the criteria specified in 4. This leaves me with 15 constituencies, of which 6 were reserved for the first time in 2008, and 9 remain unreserved. I regress the probability of voting (VOT) for individual i in constituency c in year y on the incidence of being in a constituency reserved in 2008 (RE) after reservation ($POST$) and their interaction; and the effect of being female and/or a minority and being in a reserved constituency after treatment ($ID{\cdot}RE{\cdot}POST$). I estimate the following equations (in spirit very similar to the previous specification):

$$VOT_{icy} = \hat{\alpha}_0 + RE_c\hat{\alpha}_1 + POST_y\hat{\alpha}_2 + RE_c \cdot POST_y\hat{\alpha}_3 + e_{cy} \quad (2)$$

$$\begin{aligned} VOT_{icy} = {} & \hat{\beta}_0 + RE_c\hat{\beta}_1 + POST_y\hat{\beta}_2 + RE_c \cdot POST_y\hat{\beta}_3 + ID_{ic}\hat{\beta}_4 + \\ & ID_{ic} \cdot RE_c\hat{\beta}_5 + ID_{ic} \cdot POST_y\hat{\beta}_6 + ID_{ic} \cdot RE_c \cdot POST_y\hat{\beta}_7 + u_{cy} \end{aligned} \quad (3)$$

7.1 Summary Statistics for Lokniti Constituencies: Respondent Characteristics in 2008

While balancing the cross-section, I filter out respondents who cannot remember whether they voted in 2008 or 2004, as well as respondents who were too young (or otherwise ineligible) to vote in 2004 or 2008. This leaves me with 405 respondents from treated constituencies, and 497 from untreated constituencies. As we see from Table 9, untreated and treated constituencies do not vary significantly across a range of respondent characteristics: the fraction of SC respondents in treated constituencies is 16% and 15% in untreated

constituencies; the fraction of all sizable minorities (SC/ST/Muslim/Christian) is 29% in treated constituencies versus 30% in untreated. Women make up 49% of respondents in treated constituencies versus 42% in untreated constituencies (not significantly different at 10%). Literacy, monthly income and assets ownership too did not vary significantly across treated and untreated constituencies. One-fifth of those polled responded "Never" to the questions "How often do you read the newspaper?";"How often do you listen to the news on radio?" and "How often do you watch the news on television?", but the difference between treated and untreated constituencies was small.

Since we are left with 6 reserved and 9 unreserved constituencies, it is difficult to argue that there are or are not systematic differences between the treated and control group. However, village-level averages from the 2001 Census indicate that to-be-reserved constituencies have an SC population of 25% as opposed to 21% in untreated constituencies, and an ST population of 6% versus 8% in untreated constituencies, but the difference is not significant. The only characteristic which varies significantly across treatment and control groups is the female population, and even there the difference is small: 50% in treated versus 49% in untreated constituencies. Similarly, since the number of candidates is small for this reduced sample (52 candidates in constituencies reserved in 2008, 59 for those remaining unreserved), it is difficult to confidently argue that the groups are or are not identical. It should be noted, though, that 7 candidates out of 52 in to-be-reserved constituencies were SC, versus 3 out of 59 in never-reserved constituencies. The fraction of candidates from various party types does not vary considerably across treatment and control groups.

7.2 Results:Females and Minorities

Table 10 presents results for the Linear Probability Model and Probit estimates of equation 2 to 3. From column 2 , it appears that the probability of voting falls in reserved constituencies after reservation relative to the baseline, by about 4% on average, although the effect is imprecisely estimated. From columns 4 and 5, we see that female voters are 13% (in the Probit specification) to 15% (in the LPM specification) less likely to vote in reserved constituencies after treatment relative to the baseline. Columns 6 to 9 each have different definitions of the term "minority". Columns 6 and 7 examine the impact of being an SC or another minority and interacting that with the incidence of being in a reserved constituency after reservation, and columns 8 and 9 lump together any individual who is not an upper-caste Hindu. Minorities are between 9%(as in columns 8 and 9) and 20% (as in columns 6 and 7) less likely to vote in reserved constituencies after treatment, with the baseline group of local elites showing no significant change in voter

participation.Columns 10 to 13 discuss the effects of controlling both for being female and in a reserved constituency after treatment, and belonging to a minority group and being in a reserved constituency after treatment. The base group (of male elites) shows no significant difference in voter participation, while being female reduces voter participation by about 15% relative to the baseline, and belonging to a minority community reduces voter participation between 10% (as in columns 12 and 13) and 20% (as in columns 10 and 11).

7.3 Results: Literacy

The data used is taken from a survey in 2008 asking only one retrospective question. This is not so much a concern for intrinsic characteristics such as gender or ethnic group, but controls such as monthly income, asset ownership and years of education do vary over time. However, it seems reasonable to assume that a respondent who was illiterate in 2008 was similarly so in 2004. Columns 14 and 15 of table 10 suggest that illiterate respondents in treated constituencies in 2008 were 5 % less likely to vote. The effect, however, is imprecisely estimated.

7.4 Results: Uninformed Voters

Columns 16 and 17 of table 10 suggest that uninformed respondents (who responded "never" to how often they consumed news in various media) in treated constituencies in 2008 were not significantly less likely to vote than informed counterparts. However, respondents were asked about their information acquisition in 2008 only.

7.5 Magnitude of Effects

The coefficients presented in Table 10 are compared to the baseline of male elites in unreserved constituencies before reservation. I now discuss the impact of being female or a minority in a reserved constituency after reservation, or vice versa.

Back-of-the-envelope calculations suggest that in columns 4 and 5, the base group of males does not change participation as a result of reservation, whereas being female reduces participation by 13% in reserved constituencies after reservation. In columns 6 through 9, being in an SC constituency immediately after reservation does not affect the participation of the base group of elites, while being a minority lowers participation by between 10% and 11%. These magnitudes are similar in the Probit specifications. For females, being in a treated constituency after reservation leads to a drop in participa-

tion of 12%; for minority voters being in a reserved constituency after treatment leads participation to drop by between 11% and 21%.

Controlling for belonging to a minority community, being female reduces voter participation by between 22% (as in column 13) and 40% (as in column 11) relative to the baseline, and, controlling for being female, belonging to a minority community reduces participation by between 19% (as in column 13) and 40% (as in column 11).

7.6 Interpretation

I consider possible interpretations of the results in Table 10.

1. Turnout goes the same way as competition: Since electoral competition (as measured by the margin of victory or ratio of candidates to electors) did not significantly alter as a result of reservation, this does not seem the best explanation.

2. Voters vote expressively, deriving benefit from shared group identity: Were this to be the explanation, we would see participation drop across all ethnic groups, including those of local elites. Represented minorities, however, show no significant change in voting behaviour, and neither do nonminority voters, the latter result ruling out at least a simple disenfranchisement explanation.

3. Uninformed voters stop voting once candidates all share the same ethnic group: Although respondents who were "uninformed" in 2008 did not vote significantly less as a result of reservation, it is still suggestive that women and minorities are significantly likelier to respond that they never get the news (through any medium). 28% of female voters (as opposed to 10% of male voters) were "uninformed" i.e., in 2008, responded that they never read newspapers, listened to the news on the radio, or watched it on TV. Respondents who were female, or belonged to a minority, were uninformed by this definition 26% of the time, whereas male nonminority respondents were only uninformed 12% of the time, the difference statistically significant. If candidate ethnic group is a proxy for information about candidate characteristics,it is quite possible that if all candidates share the same broad ethnic group, a major source of information is lost.

8 Conclusion

This paper joins the debate on the merits of political reservation with a note on its impact on political participation and electoral competition, and does not support claims

that mandated minority representation reduces competition. However, voter participation drops in constituencies with restricted candidate identity.Evidence from a subsample indicates that mandated minority representation may reduce participation for women and for minority groups.

Further work will consider sample extension, since five other states carried out elections in 2011. Four of these states are the populous Assam, Tamil Nadu, Kerala and West Bengal. The wider sample (once released) may enable us to observe the impact of reservation of constituencies for Scheduled Tribes, a task so far rendered impossible by the limitations of the existing sample. In addition, the most recent round of delimitation took place in 2008, so I can only observe constituencies immediately after treatment, and for one election year immediately prior to treatment. Further work would examine whether the impact on turnout that I observe continues. Lastly, a theoretical extension might look at the impact of electoral systems: How does FPTP affect this outcome, as opposed to Proportional Representation?

In sum, it appears to be the case that mandated political representation for minorities, while having no effect on electoral competition, leads to some bias in voter participation, and some bias in the success rates of right-wing parties.

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A Data Appendix

I use three chief sources to arrive at descriptive statistics or controls in the main regressions:
The Primary Census Abstracts from the 2001 Census of India.
Constituency-level electoral data for the State Legislative Assembly Elections from the Election Commission of India (Chhatisgarh, Madhya Pradesh and Rajasthan: 2003 and 2008; Karnataka:2004 and 2008)
Individual voting data from the 2008 Karnataka Post-Poll Survey, released by Lokniti and the Centre for the Study of Developing Societies.

To arrive at constituency controls, I match each village or town in a district to a constituency (Concordance available on request). The 2008 round of delimitation stated explicitly that every constituency would be wholly contained in one district. The Delimitation guidelines set out the extent of each constituency. I match every unit (village, town, ward or other administrative unit) to its corresponding constituency, and then assigned it to its "2008" district. This might be of some concern if new districts are created by merging parts of others together, or other substantial redrawing of boundaries. For the most part, however (and certainly within my sample), new districts are created by splitting an existing district into two or three, so each district in 2008 has exactly one analogue in previous years. I am taking the extent of each constituency as laid out in the 2008 Delimitation document. I do not find evidence of any other substantial redefinition of constituency limits. I assume that gerrymandering, where it exists, is either limited or not biased towards either reserved or unreserved constituencies.

In the individual-level voting data from Lokniti, I remove missing observations: those who were too young to vote in 2004 or 2008, or do not remember whether they voted in either year. Further, in some polling stations, Scheduled Caste and Scheduled Tribe voters are over-represented in to-be-treated constituencies. I drop polling stations where minority voters are disproportionately represented in the treatment group, and proceed.

B Tables

Table 1: Constituency Averages: Chhatisgarh, Karnataka, Madhya Pradesh and Rajasthan 2001

	Treated	Untreated	Difference
Observations	38	69	
Total Population	32729	45679	-12950
	(12417)	(10558)	(16276)
Fraction of Scheduled Castes (SC)	0.21	0.20	0.01
	(0.01)	(0.01)	(0.01)
Fraction of Scheduled Tribes (ST)	0.11	0.09	0.02
	(0.02)	(0.01)	(0.02)
Fraction of Females	0.48	0.48	-0.001
	(0.002)	(0.001)	(0.003)
Fraction of Illiterates	0.53	0.53	-0.003
	(0.01)	(0.01)	(0.02)
Employed as a Fraction of Total Population	0.47	0.48	-0.01
	(0.01)	(0.01)	(0.01)

Notes: top row: Averages at constituency level. Standard error clustered at constituency level in parentheses. All data taken from the 2001 Census data for Chhatisgarh, Madhya Pradesh, Karnataka and Rajasthan.

Table 2: Constituency Electoral Characteristics

	Treated	Untreated	Difference
Observations	38	69	
Panel A: Constituency Electoral Characteristics at Baseline: 2003 and 2004			
Electors	168060	165826	2234
	(3475)	(2740)	(4419)
Female candidates	0.05	0.06	-0.01
	(0.01)	(0.01)	(0.02)
Candidates from Right-wing Parties	0.11	0.14	-0.03
	(0.01)	(0.01)	(0.01)
Candidates from Left/Centre-Left Parties	0.16	0.19	-0.03
	(0.01)	(0.01)	(0.01)
Candidates from Lower-Caste Parties	0.14	0.10	0.03
	(0.01)	(0.01)	(0.02)
Female candidates winning	0.03	0.03	0.00
	(0.03)	(0.02)	(0.03)
Candidates from Right-wing Parties winning	0.53	0.57	-0.04
	(0.08)	(0.06)	(0.10)
Candidates from Left/Centre-Left Parties winning	0.18	0.33	-0.15
	(0.06)	(0.06)	(0.09)
Candidates from Lower-Caste Parties winning	0.03	0.01	0.01
	(0.03)	(0.01)	(0.03)
Panel B: Constituency Electoral Characteristics in 2008			
Electors	170311	172300	-1990
	(3682)	(2510)	(4447)
Female candidates	0.08	0.06	0.02
	(0.02)	(0.01)	(0.02)
Candidates from Right-wing Parties	0.09	0.11	-0.01
	(0.01)	(0.004)	(0.01)
Candidates from Left/Centre-Left Parties	0.11	0.14	-0.02
	(0.01)	(0.01)	(0.01)
Candidates from Lower-Caste Parties	0.13	0.13	-0.003
	(0.01)	(0.01)	(0.01)
Female candidates winning	0.18	0.14	0.04
	(0.06)	(0.04)	(0.08)
Candidates from Right-wing Parties winning	0.63	0.41	0.23
	(0.08)	(0.06)	(0.10)
Candidates from Left/Centre-Left Parties winning	0.26	0.46	-0.20
	(0.07)	(0.06)	(0.09)
Candidates from Lower-Caste Parties winning	0.03	0.01	0.01
	(0.03)	(0.01)	(0.03)

Notes: Standard error of mean in parentheses. All data taken from the 2003 and 2004 Election Commission of India State Legislative Assembly Results for Chhatisgarh, Madhya Pradesh, Rajasthan and Karnataka."Left" parties are: the Communist Party of India (and offshoots) and the Indian National Congress; "Right" parties: the Bharatiya Janata Party (BJP); "Lower-caste" parties: the Bahujan Samaj Party (BSP).

Table 3: Averages of Dependent Variables

	Pre	Post	Difference
Turnout			
Treated	0.69	0.63	-0.05
	(0.01)	(0.01)	(0.01)
Untreated	0.70	0.70	0.00
	(0.01	(0.01)	(0.00)
Difference	-0.01	-0.07	-0.06
	(0.01)	(0.01)	(0.01)
Log (Candidates/Electors)			
Treated	3.94	4.23	0.30
	(0.06)	(0.07)	(0.07)
Untreated	3.86	4.07	0.22
	(0.05)	(0.05)	(0.05)
Difference	0.08	0.16	0.08
	(0.07)	(0.09)	(0.08)
Margin of Victory			
Treated	0.11	0.11	0.00
	(0.01)	(0.01)	(0.02)
Untreated	0.12	0.09	-0.03
	(0.01)	(0.01)	(0.01)
Difference	0.00	0.02	0.03
	(0.02)	(0.02)	(0.02)
Right-wing candidates winning			
Treated	0.53	0.63	0.11
	(0.08)	(0.08)	(0.11)
Untreated	0.57	0.41	-0.16
	(0.06)	(0.06)	(0.08)
Difference	-0.04	0.23	0.26
	(0.10)	(0.10)	(0.13)
Centre/Centre-Left candidates winning			
Treated	0.18	0.26	0.08
	(0.06)	(0.07)	(0.10)
Untreated	0.33	0.46	0.13
	(0.06)	(0.06)	(0.08)
Difference	-0.15	-0.20	-0.05
	(0.09)	(0.09)	(0.13)
Lower-Caste party candidates winning			
Treated	0.03	0.03	0.00
	(0.03)	(0.03)	(0.04)
Untreated	0.01	0.01	0.00
	(0.01)	(0.01)	(0.02)
Difference	0.01	0.01	0.00
	(0.03)	(0.03)	(0.04)

Notes: Number of Treated Constituencies: 38. Number of Untreated Constituencies: 69. Standard error of mean in parentheses. All data taken from the 2003, 2004 and 2008 Election Commission of India State Legislative Assembly Results for Chhatisgarh, Madhya Pradesh, Rajasthan and Karnataka."Right" parties: the Bharatiya Janata Party (BJP). Candidates/Electors multiplied everywhere by 1000000.

Table 4: Effect of reservation for Scheduled Castes (SCs) in 2008 (Elections from 2001-2008)

	(1)	(2)	(3)	(4)
		Panel A: Turnout		
Reserved Constituency		-0.04***	-0.01	0.001
		(0.01)	(0.01)	(0.01)
Post Reservation		-0.02***	0.00	0.004
		(0.01)	(0.01)	(0.01)
Reserved Constituency Post Reservation			-0.06***	-0.06***
			(0.01)	(0.01)
Constant	0.69***	0.71***	0.70***	
	(0.01)	(0.01)	(0.01)	
District FE				Y
Observations	214	214	214	214
R-squared	0.00	0.09	0.13	0.73
		Panel B: Log (Candidates/Electors)		
Reserved Constituency		0.12*	0.08	0.03
		(0.07)	(0.08)	(0.08)
Post Reservation		0.24***	0.22***	0.22***
		(0.04)	(0.05)	(0.06)
Reserved Constituency Post Reservation			0.08	0.08
			(0.08)	(0.10)
Constant	-9.81***	-9.97***	-9.96***	
	(0.03)	(0.05)	(0.05)	
District FE				Y
Observations	214	214	214	214
R-squared	0.00	0.10	0.10	0.56
		Panel C: Margin of Victory		
Reserved Constituency		0.01	-0.005	-0.02
		(0.01)	(0.02)	(0.02)
Post Reservation		-0.02	-0.03*	-0.03*
		(0.01)	(0.01)	(0.02)
Reserved Constituency Post Reservation			0.03	0.03
			(0.02)	(0.03)
Constant	0.10***	0.11***	0.12***	
	(0.01)	(0.01)	(0.01)	
District FE				Y
Observations	214	214	214	214
R-squared	0.00	0.01	0.02	0.36

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

Notes: Standard errors clustered by constituency. I define constituencies as eligible for reservation if they have a fraction of SCs no higher than 3 percentage points more than the minimum fraction of SCs in SC-reserved constituencies within a district. Candidates/Electors multiplied everywhere by 1000000.

Table 5: Effect of reservation for Scheduled Castes (SCs) in 2008 (Elections from 2001-2008) on Incidence of Victory of Party Categories

	(1)	(2)	(3)	(4)
	Panel A: Right-Wing			
Reserved Constituency		-0.04	0.08	-0.10
		(0.10)	(0.11)	(0.26)
Post Reservation		-0.16*	-0.16*	-0.40*
		(0.08)	(0.10)	(0.21)
Reserved Constituency Post Reservation		0.26**	0.26*	0.67**
		(0.13)	(0.15)	(0.34)
Constant	0.52***	0.57***		0.16
	(0.04)	(0.06)		(0.15)
Specification	OLS	OLS	OLS	PROBIT
District FE			Y	
Observations	214	214	214	99
R-squared	0.00	0.03	0.34	0.02
	Panel B: Centre/Centre-Left			
Reserved Constituency		-0.15*	-0.21**	-0.47*
		(0.09)	(0.10)	(0.28)
Post Reservation		0.13	0.13	0.34
		(0.08)	(0.09)	(0.21)
Reserved Constituency Post Reservation		-0.05	-0.05	-0.07
		(0.13)	(0.15)	(0.40)
Constant	0.34***	0.33***		-0.51***
	(0.03)	(0.06)		(0.16)
Specification	OLS	OLS	OLS	PROBIT
District FE			Y	
Observations	214	214	214	99
R-squared	0.00	0.05	0.33	0.043
	Panel C: Lower-Caste Parties			
Reserved Constituency		0.01	-0.02	0.25
		(0.03)	(0.03)	(0.58)
Post Reservation		-0.00	0.00	-0.00
		(0.02)	(0.02)	(0.56)
Reserved Constituency Post Reservation		0.00	-0.00	0.00
		(0.04)	(0.05)	(0.83)
Constant	0.02**	0.01		-2.18***
	(0.01)	(0.01)		(0.39)
Specification	OLS	OLS	OLS	PROBIT
District FE			Y	
Observations	214	214	214	99
R-squared	0.00	0.06	0.37	0.01

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

Notes: Standard errors clustered by constituency. I define constituencies as eligible for reservation if they have a fraction of SCs no higher than 3 percentage points more than the minimum fraction of SCs in SC-reserved constituencies within a district.

Table 6: Effect of dereservation for Scheduled Castes (SCs) in 2008 (Elections from 2001-2008)

	(1)	(2)	(3)	(4)	(5)	(6)
	Turnout		Log(Candidates/Electors)		Margin of Victory	
Reserved Constituency	0.00		0.03		-0.02	
	(0.01)		(0.08)		(0.02)	
Post Reservation	0.00	0.01	0.22***	0.18	-0.03*	-0.06
	(0.01)	(0.01)	(0.06)	(0.12)	(0.02)	(0.04)
Reserved Constituency Post Reservation	-0.06***		0.08		0.02	
	(0.01)		(0.10)		(0.03)	
Dereserved Constituency		0.06***		-0.02		-0.02
		(0.02)		(0.21)		(0.03)
Dereserved Constituency Post Dereservation		0.04**		0.43**		0.03
		(0.02)		(0.18)		(0.05)
Observations	214	99	214	99	214	99
R-squared	0.73	0.87	0.56	0.68	0.3	0.38
	Right-Wing		Centre/Centre-Left		Lower-Caste Parties	
Reserved Constituency	0.08		-0.21		-0.02	
	(0.11)		(0.10)		(0.03)	
Post Reservation	-0.16*	-0.24	0.13	0.29	0.00	0.00
	(0.1)	(0.20)	(0.09)	(0.20)	(0.02)	(0.00)
Reserved Constituency Post Reservation	0.26*		-0.05		-0.00	
	(0.16)		(0.15)		(0.05)	
Dereserved Constituency		-0.07		0.04		-0.04
		(0.22)		(0.22)		(0.03)
Dereserved Constituency Post Dereservation		0.09		-0.22		0.07
		(0.27)		(0.27)		(0.07)
Observations	214	99	214	99	214	99
R-squared	0.35	0.44	0.33	0.39	0.36	0.53

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

Notes: Standard errors clustered by constituency. I define constituencies as eligible for reservation if they have a fraction of SCs no higher than 3 percentage points more than the minimum fraction of SCs in SC-reserved constituencies within a district. All regressions have district and year fixed effects. Standard errors are clustered by constituency. Candidates/Electors multiplied everywhere by 1000000.

Table 7: Effect of reservation for Scheduled Castes (SCs) in 2008 (Elections from 1993-1999)

	(1)	(2)	(3)
Panel A: Turnout			
Reserved Constituency	0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)
Post Reservation	0.00	0.00	0.01***
	(0.01)	(0.01)	(0.01)
Reserved Constituency Post Reservation	-0.06***	-0.06***	-0.00
	(0.01)	(0.01)	(0.01)
Period: 2003-2008	Y	Y	
Sample: Constituencies with Available Data for 1993-1999		Y	Y
Period: 1993-199			Y
Observations	214	204	204
R-squared	0.73	0.72	0.75
Panel B: Log (Number of Candidates/Electors)			
Reserved Constituency	0.03	0.04	-0.07
	(0.08)	(0.08)	(0.08)
Post Reservation	0.22***	0.22***	-0.73***
	(0.05)	(0.06)	(0.05)
Reserved Constituency Post Reservation	0.08	0.10	0.17
	(0.10)	(0.09)	(0.12)
Period: 2003-2008	Y	Y	
Sample: Constituencies with Available Data for 1993-1999		Y	Y
Period: 1993-199			Y
Observations	214	204	204
R-squared	0.56	0.56	0.69
Panel C: Margin of Victory			
Reserved Constituency	-0.02	-0.02	-0.02
	(0.02)	(0.02)	(0.03)
Post Reservation	-0.03*	-0.03*	0.01
	(0.02)	(0.02)	(0.02)
Reserved Constituency Post Reservation	0.03	0.03	0.00
	(0.03)	(0.03)	(0.04)
Period: 2003-2008	Y	Y	
Sample: Constituencies with available data for 1993-1999		Y	Y
Period: 1993-1999			Y
Observations	214	204	204
R-squared	0.36	0.37	0.33

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

Notes: Standard errors clustered by constituency. I define constituencies as eligible for reservation if they have a fraction of SCs no higher than 3 percentage points more than the minimum fraction of SCs in SC-reserved constituencies within a district. All regressions have district fixed effects. Candidates/Electors multiplied everywhere by 1000000.

Table 8: Effect of reservation for Scheduled Castes (SCs) in 2008 on success of political parties (Elections from 1993-1999)

	(1)	(2)	(3)
Panel A: Right-wing Parties			
Reserved Constituency	0.08	0.07	-0.12
	(0.11)	(0.12)	(0.09)
Post Reservation	-0.16*	-0.17*	-0.12
	(0.09)	(0.10)	(0.08)
Reserved Constituency Post Reservation	0.26*	0.31*	0.15
	(0.15)	(0.16)	(0.14)
Period: 2003-2008	Y	Y	
Sample: Constituencies with Available Data for 1993-1999		Y	Y
Period: 1993-199			Y
Observations	214	204	204
R-squared	0.34	0.34	0.40
Panel B: Left/Centre-Left Parties			
Reserved Constituency	-0.21**	-0.22**	0.00
	(0.10)	(0.10)	(0.10)
Post Reservation	0.13	0.14	0.21**
	(0.09)	(0.09)	(0.09)
Reserved Constituency Post Reservation	-0.05	-0.05	0.01
	(0.15)	(0.15)	(0.16)
Period: 2003-2008	Y	Y	
Sample: Constituencies with Available Data for 1993-1999		Y	Y
Period: 1993-199			Y
Observations	214	204	204
R-squared	0.33	0.33	0.40
Panel C: Lower-Caste Parties			
Reserved Constituency	-0.02	-0.01	0.00
	(0.03)	(0.02)	(0.02)
Post Reservation	0.00	0.00	0.00
	(0.02)	(0.02)	(0.00)
Reserved Constituency Post Reservation	-0.00	0.03	-0.00
	(0.05)	(0.04)	(0.05)
Period: 2003-2008	Y	Y	
Sample: Constituencies with available data for 1993-1999		Y	Y
Period: 1993-1999			Y
Observations	214	204	204
R-squared	0.36	0.33	0.50

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

Notes: Standard errors clustered by constituency. I define constituencies as eligible for reservation if they have a fraction of SCs no higher than 3 percentage points more than the minimum fraction of SCs in SC-reserved constituencies within a district. All regressions have district fixed effects. Candidates/Electors multiplied everywhere by 1000000.

Table 9: Respondent Characteristics: Lokniti Constituencies, Karnataka Post-Poll

	Treated	Untreated	Difference
Number of respondents	405	497	
Fraction of SC respondents	0.16	0.15	0.01
	(0.04)	(0.03)	(0.05)
Fraction of ST respondents	0.02	0.03	-0.01
	(0.01)	(0.01)	(0.02)
Fraction of Minority respondents	0.29	0.33	-0.04
	(0.06)	(0.04)	(0.07)
Fraction of Upper-caste Hindu respondents	0.71	0.67	0.04
	(0.06)	(0.04)	(0.07)
Fraction of Female respondents	0.49	0.42	0.06
	(0.03)	(0.02)	(0.03)
Fraction of Illiterate respondents	0.25	0.32	-0.07
	(0.06)	(0.05)	(0.08)
Number of Cows/buffaloes	2.06	1.92	0.14
	(0.28)	(0.36)	(0.44)
Monthly Household Income (INR)	2329.02	2920.52	-591.50
	(221.99)	(665.46)	(682.84)
Age of respondent	41.63	42.23	-0.59
	(0.78)	(1.04)	(1.25)
Number of children in household	2.42	2.36	0.06
	(0.22)	(0.17)	(0.26)
Right supporters	0.31	0.26	0.05
	(0.07)	(0.07)	(0.09)
Voted in 2004	0.94	0.87	0.07
	(0.01)	(0.03)	(0.03)
Uninformed voters	.16	0.20	-0.04
	(.06)	(0.05)	(0.07)

Standard errors clustered at constituency level in parentheses. All data taken from the Lokniti 2008 Post-Poll Survey in Karnataka. Constituencies were chosen among those which were close to the district cutoff for reservation. These are: Hungund, Aurad, Kanakagiri, Koppal, Ron, Hanagal, Hadagalli, Sira, Gowribidanur, Sidlaghatta,Mulbagal,Hosakote,Kanakapura,Sakleshpur and Nanjangud."Uninformed" refers to respondents who said that they never read newspapers, watched news on TV or listened to news on radio

Table 10: Individual Voter Participation: Lokniti Karnataka 2008 Post-Poll

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
RE*POST		-0.04	-0.04	0.02	0.15	-0.01	-0.09	-0.01	-0.09	0.05	0.41	0.05	0.41	-0.03	-0.19	-0.04	-0.31
		(0.05)	(0.05)	(0.06)	(0.34)	(0.06)	(0.41)	(0.06)	(0.41)	(0.07)	(0.41)	(0.07)	(0.40)	(0.08)	(0.45)	(0.06)	(0.40)
Female				-0.05*	-0.27**					-0.6	-0.30**	-0.05*	-0.28**				
				(0.03)	(0.12)					(0.03)	(0.14)	(0.03)	(0.13)				
Female*RE*POST				-0.15**	-1.08***					-0.15**	-1.11***	-0.15**	-1.12***				
				(0.06)	(0.40)					(0.06)	(0.42)	(0.06)	(0.40)				
SC						-0.03	-0.18			-0.02	-0.16						
						(0.04)	(0.24)			(0.05)	(0.24)						
SC*RE*POST						-0.08	-0.70			-0.07	-0.68						
						(0.08)	(0.48)			(0.08)	(0.47)						
ST/Other Minority						-0.08	-0.38*			-0.08	-0.42**						
						(0.05)	(0.20)			(0.05)	(0.21)						
ST/Other Minority*RE*POST						-0.11*	-0.71**			-0.13*	-0.85**						
						(0.06)	(0.36)			(0.07)	(0.39)						
Any Minority								-0.05	-0.29**			-0.05	-0.30**				
								(0.03)	(0.14)			(0.03)	(0.14)				
Any Minority*RE*POST								-0.09*	-0.65**			-0.10*	-0.71**				
								(0.05)	(0.29)			(0.05)	(0.28)				
Illiterate														0.002	0.04		
														(0.06)	(0.27)		
Illiterate*RE*POST														-0.05	-0.42		
														(0.10)	(0.48)		
Uninformed																0.02	0.08
																(0.04)	(0.28)
Uninformed*RE*POST																0.01	-0.01
																(0.08)	(0.65)
Constant	0.91***	0.87***	0.92***														
	(0.02)	(0.03)	(0.02)														
Observations	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804
Constituency FE			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Specification	LPM	LPM	LPM	LPM	PRO	LPM	PRO	LPM	PRO	LPM	PRO	LPM	PRO	LPM	PRO	LPM	PRO

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

Notes: Standard errors in parentheses. Standard errors clustered at constituency level. All data taken from the Lokniti 2008 Post-Poll Survey in Karnataka. Constituencies were chosen among those which were close to the district cutoff for reservation. These are: Hungund, Aurad, Kanakagiri, Koppal, Ron, Hanagal, Hadagalli, Sira, Gowribidanur, Sidlaghatta,Mulbagal,Hosakote,Kanakapura,Sakleshpur and Nanjangud.

C Robustness Checks

Table 11: Effect of reservation for Scheduled Castes (SCs) in 2008 (Elections from 2001-2008): 5% cutoff

VARIABLES	(1) Turnout	(2) Log (Candidates/Electors)	(3) Margin of Victory
Reserved Constituency	-0.01	0.04	0.01
	(0.01)	(0.06)	(0.01)
Post Reservation	0.01**	0.26***	-0.01
	(0.003)	(0.03)	(0.01)
Reserved Constituency Post Reservation	-0.06***	0.04	0.003
	(0.01)	(0.08)	(0.02)
Constant	0.70***	3.90***	0.10***
	(0.005)	(0.03)	(0.01)
Observations	357	357	357
R-squared	0.09	0.1	0.01

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

Notes: Constituency Dummy=1 for constituencies that were reserved for SCs in 2008 conditional on being eligible for reservation, 0 for eligible constituencies that were not reserved. Year Dummy=1 for years on or after 2008, 0 before. I define constituencies as eligible for reservation if they have a fraction of SCs no higher than 5 percentage points more than the minimum fraction of SCs in SC-reserved constituencies within a district.

Table 12: Effect of reservation for Scheduled Castes (SCs) in 2008 (Elections from 2001-2008): districts with both treated and untreated constituencies

VARIABLES	(1) Turnout	(2) Log (Candidates/Electors)	(3) Margin of Victory
Reserved Constituency	-0.002	0.03	-0.003
	(0.02)	(0.09)	(0.02)
Post Reservation	-0.004	0.18***	-0.01
	(0.01)	(0.05)	(0.02)
Reserved Constituency Post Reservation	-0.05***	0.15	0.01
	(0.01)	(0.11)	(0.03)
Constant	0.69***	3.90***	0.10***
	(0.01)	(0.06)	(0.02)
Observations	120	120	120
R-squared	0.09	0.10	0.002

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

Notes: Standard errors clustered by constituency. I define constituencies as eligible for reservation if they have a fraction of SCs no higher than 3 percentage points more than the minimum fraction of SCs in SC-reserved constituencies within a district. I restrict the sample to districts which have both treated and untreated constituencies. Candidates/Electors multiplied everywhere by 1000000.