

# Don't Touch My Road.

## Evidence from India on Affirmative Action and Everyday Discrimination

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### Abstract

This article investigates whether affirmative action, in the form of electoral quotas, affects group-based discrimination. The redistributive effect of quotas is subject to debate, and their ultimate target is discrimination. To identify the effect of electoral quotas, I take advantage of their rotation across space and over time in India. To proxy discrimination, I use a measure of caste-based exclusion from a public infrastructure (namely, streets). I document that ongoing quotas sharply decrease caste-based exclusion for members of the marginalized castes labeled Scheduled Castes. However, the effect does not last. From a policy-maker's perspective, these results are mixed. These results are consistent with a temporary change in the behavior of members of the dominant castes after a one-shot electoral quota. These results are inconsistent with either a change in the stereotypes of members of the dominant castes, or a change in the aspirations of members of the lower castes.

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JEL D63, D74, J15, O12, O53

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# 1 Introduction

Discrimination prevents equality of opportunity, and evidence abounds on the persistence of discrimination (Bertrand and Duflo, 2016). In this context, affirmative action is frequently used to fight discrimination, and ultimately target equal opportunities. Affirmative action is particularly appealing to governments because it allows them to immediately and visibly change outcomes of interest, for example, the racial composition of university students. However, affirmative action is also controversial: people outside its target can feel discriminated against.<sup>1</sup> On this ground, the US Supreme Court has banned explicit racial quotas in 1978 (subtler forms of affirmative action are still legal, and challenged, for example in the case of *Fisher v. University of Texas at Austin*, 2016). Quotas, in particular electoral quotas, nonetheless remain widespread. More than 100 countries have electoral quotas for women, and 38 countries have electoral quotas for minority groups (Krook, 2009; Reynolds, 2005, respectively). Proponents of quotas advocate them as transitory tools. The objective is to repeal quotas, once they have allowed the society to reach a non-discriminatory equilibrium. This article stems from the idea that electoral quotas are more likely to have long lasting effects if they change the way that people interact with each other. Otherwise, the risk is to go back to a pre-quota (discriminatory) equilibrium once quotas are repealed. This question is all the more important now that the redistributive effect of electoral quotas is subject to debate.<sup>2</sup>

I investigate whether affirmative action, in the form of electoral quotas, affects caste-based discrimination in India. Scheduled castes (henceforth, SCs), and other groups, benefit from quotas in the form of seat reservations in local political assemblies (the Gram Panchayats). To measure discrimination, I exploit a survey question asking households whether they were excluded from some streets because of their caste (i) at the moment of the survey and (ii) 10 years before. In the Hindi Belt, the heartland of India, 44.5% households members of the SCs declared in 2006 that some streets were off-limits due to their caste. Yet the practices of untouchability and caste-based discrimination have been anti-constitutional since 1949. The startling figure of street exclusion confirms the persistence of caste-based discrimination and calls for more research on how to achieve equality of opportunities.

While discrimination is notoriously difficult to measure, declarations of exclusion from public goods such as streets provide a good starting point. First, from a methodological perspective, a declaration of street exclusion is an original proxy of discrimination. Even if the variable of exclusion is unlikely to disclose the absolute level of caste-based discrimination, changes in the variable allow me to study changes in caste-based discrimination. This strategy is in line with Bertrand and Duflo's idea that imperfect measures of absolute discrimination can provide interesting outcomes with which to evaluate

anti-discriminatory interventions (Bertrand and Duflo, 2016). Second, from the perspective of positive economics, street exclusion proxies the form of discrimination which is costly to society. Streets are a public good, and street exclusion means that discriminatory agents are willing to pay to ensure that other agents are excluded. This willingness to pay is the reason why taste-based discrimination induces an economic loss for the society (Becker, 1957). Last but not least, from an ethical, perspective, street exclusion is a blatant negation of equality of opportunity.<sup>3</sup> Street exclusion implies a difficulty or impossibility, for members of some castes, to access some areas of their village. Mechanically, such exclusions limit access to the public goods or jobs that are in these areas.

My identification strategy relies on the way that quotas are allocated and on the assumption that caste quotas have heterogeneous effects on households from different castes. The states' local administrations allocate quotas within each state and the allocation rule is state-specific. It can be random or depend upon village-level characteristics. I identify the effect of electoral quotas on street exclusions through within-village and within-caste variations over time. Village year fixed-effects allow me to control for time-varying village-level characteristics (including any characteristic that administrations can use to allocate quotas). The panel dimension of the data allows me to account for caste-specific trends and time-invariant unobservables at the household level.

I document a large and significant effect of electoral quotas on low-caste members' access to streets. SC quotas decrease street exclusions by about 10 percentage points for the households of the SCs. However, the effect does not last after the end of the quota. These results are robust. In particular, they are independent of the share of SCs in the village (some administrations use caste shares to allocate quotas), and are robust to the omission of the 1996 variable of exclusion (which comes from a recall question).

My research question is most closely related to the investigation by Chauchard (2014) of the impact of electoral quotas on the beliefs and intentions of members of dominant groups. I complement Chauchard (2014) in two respects. First, his data design prevents him from assessing the effect of quotas over time. Indeed, he uses cross-sectional data that he collected in either never reserved or first time reserved Rajasthani villages. Second, his analysis relies on what members of dominant castes stated to be their feelings and action plans towards low castes. He convincingly makes sure – both in the design of his questionnaire and the interpretation of his results – that statements are not strategically biased. However, as underlined by LaPiere's seminal work, actions may differ from statements (LaPiere, 1934). I complement Chauchard's work with a study of discrimination from the perspective of members of the low castes, and with data covering three electoral terms (and any quota occurring during these terms).

More broadly, my results feed the literature on the link between electoral representation and people's actions – meaning the actions of constituents rather than leaders. Almost all the articles in this literature

focus on political representation for females, and few of them address directly the question of discrimination. However, this rich literature underlines different channels through which electoral representation may affect discrimination. Let me present the channels according to whom they underline as the key actors: the political leader (who comes from the minority group), the members of the minority group, or the majority. A minority leader can improve access to public goods for her peers. For example, the tremendous increase in crimes registered against females in the 1990s in India is, at least partly, due to the fact that police officers have been more responsive to female complaints since the implementation of electoral quotas (Iyer et al., 2012). A minority leader can also directly increase the opportunities for her peers by exploiting her network to help them (Gille, 2014). As for the minority members, quotas can affect either the probability that they will voice their concerns, or their within-group solidarity, aspirations, or feelings of legitimacy. First, quotas provide a leader for the members of the minority, a leader who can help them to coordinate (Hirschman, 1970). Second, quotas underline the distinction between the minority and the majority groups, which can increase the solidarity of the minority group (Dunning, 2010). Third, quotas provide members of the minority with a role model. Such a model can shape aspirations, for example those to do with educational achievements or entrepreneurship (respectively Beaman et al., 2012; Ghani et al., 2014, although in the later, changes in aspirations cannot be disentangled from changes in entrepreneurship costs). A role model can also shape the feelings of legitimacy of members of the minority (Iyer et al., 2012). Turning to members of the majority, exposition to a political leader from the minority can affect either their stereotypes or their perception of norms of interactions. Indeed, in line with Allport's contact theory, the election of a female leader reduces both voters' stereotypes on gender roles, and parties' biases against women candidates (respectively Allport, 1954; Beaman et al., 2009; Bhalotra et al., 2013). Alternatively, Chauchard (2014) documents that, even if stereotypes remain unchanged, quotas can change the stated – social and legal – norms of members of the majority.

Building upon the above literature and auxiliary results, I suggest two channels that are consistent with the main results of the article: either the SC leader plays a pivotal part while in office (enforcing or negotiating a change of behavior of members the dominant castes), or there is a change in the perception of the social norm by members of the dominant castes. In both cases, members of the dominant castes change their behavior for the duration of the electoral term, which is consistent with a reduction of street exclusions during SC quotas. A one-shot quota is already enough to observe this effect. Auxiliary results are inconsistent with alternative channels, such as a change in the stereotypes held by members of the dominant castes, or a change in the aspirations of members of the lower castes.

In the next section, I outline the institutional background of this study. Section 3 reveals the data and the empirical strategy. Section 4 presents the results. Section 5 discusses the interpretation of the results

and section 6 concludes.

## 2 Institutional context

This article exploits a system of caste quotas for the head's seat in Indian local political councils. In 1993, the 73rd amendment to the Constitution of India instituted local political councils called Gram Panchayats (GPs hereafter). The GP is the smallest political entity in India; each GP typically encompasses several villages (the GPs in my sample encompass on average 13 villages). The 73rd amendment requires that states delegate a part of their policy making power to GPs. States typically delegated to GPs the maintenance and building of local public goods (such as roads or water devices), and the selection of the households entitled to social programs. GPs are elected for the electoral term of 5 years.

I focus the analysis on the Pradhans. Pradhans head the GP councils. Pradhans are important because they have agenda-setting power in panchayat meetings, but no power of veto. They are the only council members working full time. Pradhans are elected either directly by GP constituents, or indirectly by members of the GP council.

Crucially, the 73rd amendment requires that every GP ends up having electoral quotas for different minorities (namely, the Scheduled Castes and Tribes, and females). As a consequence of this requirement, during a quota, a village ends up with a Pradhan from a given minority independently of the villagers' actions, the political landscape, or the relation between castes in the village. Quotas are allocated by each state administration. Quotas for the Pradhan's seat mean that this seat is reserved for one term at a time to either a member of a low caste, or a female, or someone who is both. Reserved seats rotate between villages. The allocation rule differs from one state administration to another (the precise rule is not publicly known for all states). Some administrations allocate quotas at random (for example in West Bengal, Bardhan et al., 2010), while others list villages according to the proportion of their population belonging to the low castes, and use these lists to allocate quotas (for example in Rajasthan, Chauchard, 2014). The proportion of caste quotas varies between states: the proportion is determined by the share of low castes in the population of the state. Regarding gender quotas, they are imposed in a third of all constituencies, and rotate at random. I focus on the SC quotas for Pradhan seats in Gram Panchayats.

Caste quotas in Gram Panchayats aim at fighting the legacy of caste discrimination in India. Several caste features induce a strong inertia for caste-based discrimination, and can justify the implementation of affirmative action policies.<sup>4</sup> In particular, caste is hereditary, exclusive, virtually unchangeable at the household level, and each caste has its place on a social status ladder (although the place is not always

clear). In this article, I always refer to castes as the broad groups used by the Indian administration rather than the thousands of *jatis* (which represent the actual form that caste takes in everyday life). The Indian administration allocates electoral quotas after recording castes under four broad groups: Scheduled Castes (SC), Scheduled Tribes (ST), Other Backward Castes (OBC), and Other Castes (OC).

In particular, I focus on SC quotas. Let me here briefly describe the situation of the SCs, I discuss the empirical reasons for this focus in more detail in the next section. The Scheduled Castes are particularly backward castes; their members used to be considered “untouchables”. Despite the constitutional ban, in 2012, 30% of the rural respondents to the Indian Human Development Survey straightforwardly reported that they practiced untouchability. This practice translates in a variety of ways, including the exclusion of SCs from markets, or systematic deviation from market prices to their disadvantage (Thorat, Mahamanlik and Sadana’s survey results in Thorat and Newman, 2010), spatial segregation (Deliège, 2004), widespread exclusion from public goods (through formal denial of access to a public good, or differential treatment, Shah et al., 2006; Hanna and Linden, 2012, respectively), and a specific pattern of crimes against them (a pattern consistent with the enforcement of caste-based discrimination, Bros and Couttenier, 2015; Sharma, 2015).

### **3 Data and Empirical Strategy**

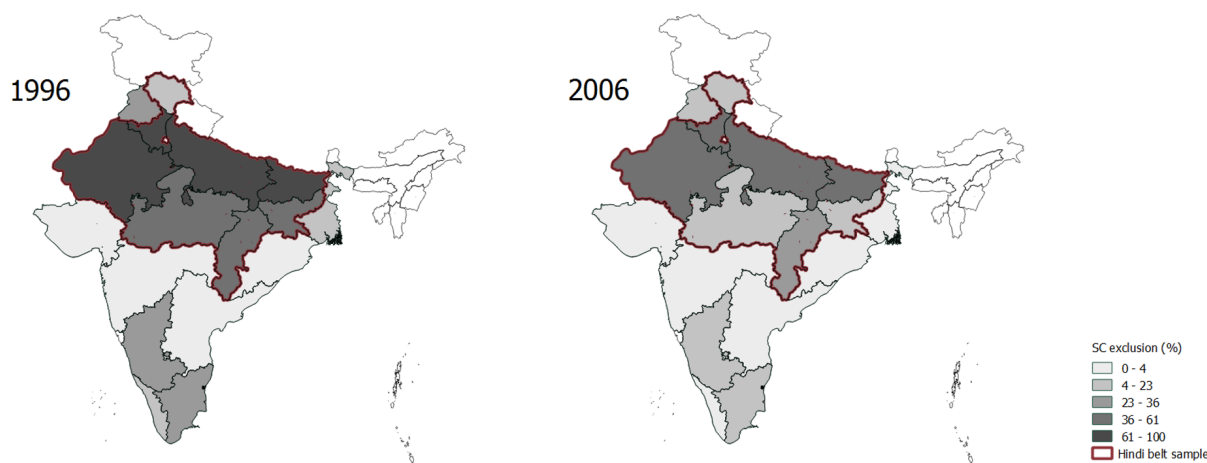
#### **3.1 Dataset**

The empirical analysis relies on the last round of the Rural Economic and Development Survey (REDS), undertaken in 2006 by the National Council for Applied Economic Research.<sup>5</sup> The REDS 2006 contains both a survey at the village level and a complete census of the villagers. The final sample of the article encompasses 40,047 households spread over 95 villages of 5 Hindi Belt states (namely the states of Bihar, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh). It is a subset of the national sample which encompasses 115,000 households from 242 villages spread over the 17 major Indian states (the main results are robust to the sample definition; see section 4.3). I use a linear extrapolation for the SC population shares in 1996, after adding village-level data from the 2001 Census to the REDS 2006 data. All other variables come from the REDS 2006.

The Hindi Belt is particularly suitable for studying the link between electoral quotas and group-based discrimination because it displays more tensed inter-caste relationships than does southern India (Jaffrelot, 2002). Figure 1 shows the evolution of declarations of street exclusions, between 1996 and 2006, across states, for members of the SCs (it averages household answers at the state level). The

average exclusion figure in Hindi Belt states is 65% in 1996, against 12% in other states. Politics is also more caste-oriented in Hindi Belt states, where the Scheduled Castes have risen as a political group (Jaffrelot, 2002).

Figure 1: Street exclusion declarations by members of the SCs in 1996 and 2006.



### 3.2 Caste-based Street Exclusions

The explained variable tells whether respondents consider certain streets of their village to be off-limits for them, due to their caste identity. The variable is collected in the household census of the REDS 2006 for (i) the moment of the survey and (ii) 10 years before, through a recall question (section 4.2 discusses the use of a recall question). The question for caste-based exclusion at the moment of the survey is “Have you or any member of your family been prevented from entering any street within the village because of your caste now?”

Concretely, street exclusions mean that it is difficult or impossible for members of the low castes to access some areas of their village. This exclusion is possible because of the spatial segregation of castes in traditional villages (Deliège, 2004; Human Rights Watch, 2007).<sup>6</sup> Chauchard notes from his field work, “As the [SC leader] and their entourage walk through village streets to assess various public works, villagers see members of the SCs on streets on which they otherwise dared not venture” (Chauchard, 2014, p. 407). This quotation underlines that answers to the survey question may depend on both the *de facto* rule enforced in the village, and what members of the SCs perceive as a legitimate behavior for themselves. Both aspects are essential for empowerment.<sup>7</sup> To be consistent with the formulation of the question in the survey, I tend to refer to the variable as a measure of the evolution of exclusions. I discuss



the perception of their own legitimacy by SC households – and other possibilities of interpretation of the main results of the article – in section 5.1.

Table 1: Street exclusions and group shares in states of the Hindi Belt

Caste category	Population share	Share excluded 1996	Share excluded 2006	Households which gained access from 1996 to 2006
SC	20.0%	65.0%	44.5%	2,076
ST	6.5%	31.4%	7.2%	779
OBC	50.8%	5.5%	4.0%	520
OC	22.4%	1.6%	1.3%	62

In the empirical analysis, I compare differences in street exclusion declarations across places and over time. The street exclusion declaration of one individual is an imperfect measure of the absolute level of discrimination faced by this individual. To circumvent this issue, I focus on changes in the declarations of members of different castes within each village. I assume that these changes disclose relevant information on the evolution of caste-based discrimination (across places, and over time). This assumption is in line with Bertrand and Duflo’s plea that impact evaluation can fruitfully exploit changes in an imperfect measure of discrimination – such as answers in Implicit Association Tests – even if the measure taken by itself is hard to interpret (Bertrand and Duflo, 2016).

As expected, the exclusion rates presented in Table 1 are the highest for members of the SCs. In 2006, 44.5% households of the SCs suffered from street exclusions. Although both SCs and STs are associated with a low social status, the corresponding figure for members of the STs is 7%. This great divergence from members of the SCs can be traced back to the specific settlement patterns of each group. SCs are part of traditional multi-caste villages. Historically, SCs handled low-status jobs at the service of higher castes. The STs descended from tribes and traditionally live in isolated autonomous villages.<sup>8</sup> The non-null exclusion rates of OBC and OC can be traced back to specific local patterns: one sub-caste can be dominated in one village and dominant in another (Anderson, 2011).

### 3.3 Caste-based electoral Quotas

The study focuses on SC electoral quotas in Gram Panchayats, implemented in 30 of the 95 villages surveyed. The survey collects electoral information over three periods: the ongoing electoral term, and the two previous terms. As a result, I know which villages have a SC quota in 2006 (the moment of the survey), in 1996 (the moment of the recall question for street exclusions), and in the intermediary electoral term (which took place between 1996 and 2006 since, even if the year of election differs across

states, electoral terms last 5 years everywhere).

An SC quota means that the Pradhan's seat is reserved to a member of the Scheduled Castes. An SC quota is observed only once in each village of the survey. As regards ST quotas, the sample is too small to allow a proper study.<sup>9</sup>

Table 2: Baseline village characteristics, by treatment group (SC quota in one election).

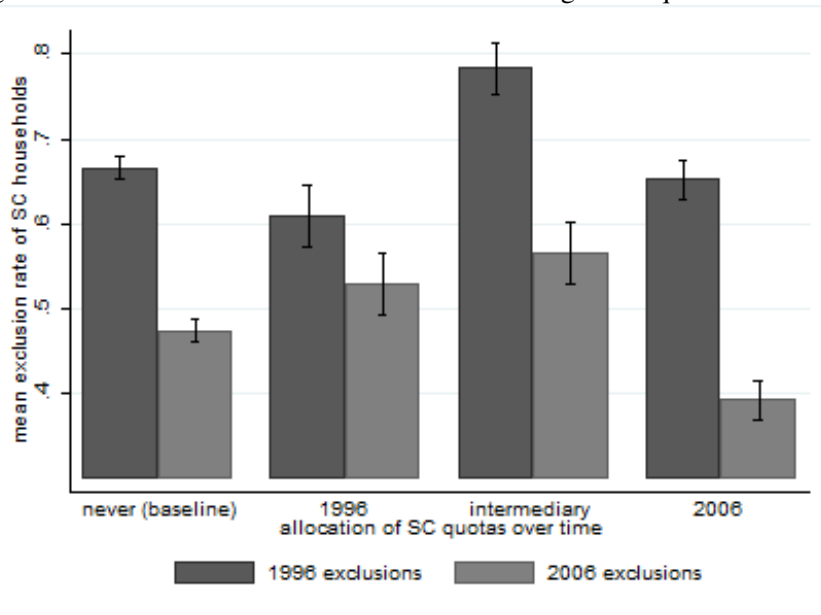
	1996 electoral term			Intermediary electoral term			2006 electoral term		
	No quota	Quota	P> z	No quota	Quota	P> z	No quota	Quota	P> z
population	440.1 (346.5)	242.4 (146.6)		417.1 (349.3479)	479.6 (173.3)		411.2 (328.4)	473.7 (396.5)	
share SC	0.191 (0.133)	0.427 (0.213)	***	0.199 (0.146)	0.346 (0.172)	**	0.202 (0.157)	0.246 (0.121)	
public tap	0.356 (0.482)	0 (0)	*	0.318 (0.468)	0.429 (0.535)		0.316 (0.468)	0.375 (0.5)	
lightening	0.126 (0.334)	0 (0)		0.114 (0.319)	0.142 (0.378)		0.127 (0.3347)	0.063 (0.25)	
school	0.310 (0.465)	0.143 (0.378)		0.307 (0.464)	0.143 (0.378)		0.291 (0.457)	0.313 (0.479)	
bus station	0.391 (0.491)	0.143 (0.378)		0.330 (0.473)	0.857 (0.378)	***	0.367 (0.485)	0.375 (0.5)	
post office	0.460 (0.501)	0.571 (0.535)		0.420 (0.496)	1 (0)	***	0.456 (0.501)	0.5 (0.516)	
police station	0.034 (0.184)	0 (0)		0.034 (0.183)	0 (0)		0.0380 (0.192)	0 (0)	
distance district headquarter (km)	42.75 (27.64)	27.14 (25.18)		42.24 (28.11)	30.29 (17.67)		41.34 (27.96)	41.44 (26.56)	
Observations	87	7		88	7		79	16	

The table displays means and standard errors (in parentheses). P>|z| tells, for each treatment, the p-values of the test that the difference between villages with and without an SC quota at this moment is zero. \*\*\* p<0.01, \*\* p<0.05, \*p<0.1.

Table 2 presents summary statistics at the village level, by moment of treatment, namely an SC quota observed in 1996, in 2006, or between 1996 and 2006. The table presents the p-values of the test that the characteristics of villages are similar across treatments. Treated villages differ from untreated villages for both the 1996 and the intermediary quotas. The attribution of quotas in 2006 is independent of village characteristics. In particular, the 1996 and intermediary SC quotas were allocated to villages with particularly high shares of SC households. This imbalance makes sense since some states rely on the

share of SC households to allocate SC quotas (within each of these states, the GP with the highest share of SCs in its area of reference, for example the district, received an SC quota during the first election).<sup>10</sup> Unlike the two previous rounds, the third round of elections provides a particularly interesting natural experiment. SC seat allocations measured in 2006 are independent of village characteristics. I describe in the next section my strategy to account for the correlation between some village characteristics and quota allocation.

Figure 2: SC street exclusion declarations according to SC quota attributions



To close this section, Figure 2 provides a first raw overview of the relationship between SC street exclusions and SC electoral quotas. The figure displays the evolution of street exclusions for the SCs after splitting the household sample into four panels, which are defined by the moment when the villages had an SC quota. Villages without any record of SC quotas form the baseline. We can see that SC exclusion rates decrease between 1996 and 2006 for all four panels. However, the pattern of decrease differs between panels. In the second panel – villages with an SC quota in 1996 – the 1996 exclusion figure is below its baseline level and the 2006 exclusion figure is above it (both differences are significant). In the third panel – villages with an intermediary SC quota – both the 1996 and the 2006 exclusion figures are above their baseline levels, but the difference decreases with time (from a difference of 12 percentage points in 1996; to 9 percentage points in 2006). In villages with an SC quota in 2006, the 1996 exclusion figure is statistically indistinguishable from the baseline, and the 2006 exclusion figure is significantly lower than the baseline. All observations based on Figure 2 are consistent with a decrease in caste-based discrimination due to ongoing electoral quotas.<sup>11</sup> The rest of the article investigates whether these raw

observations hold after accounting for the correlation between some village characteristics and quota attributions.

### 3.4 Empirical strategy

I investigate the extent to which SC electoral quotas in GPs affect the SC households' declarations of street exclusion. To do that, I exploit three sources of variation. First, I use the rotation of electoral quotas across GPs. Before each election, the state administration allocates quotas to a new set of GPs. Second, I treat the household caste as a source of heterogeneous exposure to electoral quotas (within each GP). Third, I focus the estimation on households whose exclusion declarations changed between 1996 and 2006.

My identification strategy is basically a triple difference procedure that uses electoral quotas as a treatment and compares SC households located in GPs with an SC quota to other households (SC households located in GPs without SC quotas and non-SC households everywhere). The validity of this empirical strategy relies on the assumptions that an SC quota (i) affects only households located in GPs that have been allocated the quota, and (ii) affects differentially SC households and households from other castes. I assume that, in the absence of electoral quotas, the evolution of street exclusions for each caste group would have followed similar trends in all GPs. I cannot provide a pre-trend analysis to back up this assumption. However, from the available evidence presented in Table 2 above, villages with and without quotas in 2006 have similar observable characteristics, and the allocation of quotas in previous terms appears to rest on the share of SC households. In the analysis, village-year fixed effects allow me to account for the allocation rule used by the states' administrations (as in Besley et al., 2004). I also acknowledge that the share of SC households might not affect SC households in the same way as households of other castes. To account for this, I introduce a variable resulting from the interaction of the share of SC households in the village and a binary variable equal to one for SC households.

To formally evaluate the effect of electoral quotas, I estimate the following regression:

$$Street\_exclu_{ivt} = \alpha Quota\_SC_{vt} * SC_i + \delta_{vt} + \delta_{gt} + \delta_i + \varepsilon_{ivt} \quad (1)$$

The coefficient of interest is  $\alpha$ . It tells whether the exclusion declarations of SC households are affected by the fact that their Pradhan is elected on an SC quota. I check the robustness of the results controlling for the share of SC households, SC Pradhan elections independently of caste quotas, and SC quotas in the intermediary electoral term. Each time, I use an interaction variable to check whether these village-level features have a heterogeneous impact on SC households. I make sure that the results do not crucially rely on answers to the recall question of 1996 exclusions. I additionally check the robustness

of the results to a proper difference-in-difference setting (deleting villages which received an SC quota before 2006), alternative sample definitions (keeping only SC households in the sample, or including all Indian states) and two placebo tests (one where I change the explained variable from caste-based to religion-based exclusions, and another where I change the explanatory variable from caste to gender quotas).

All regressions include a complete set of fixed effects.  $\delta_i$  are households' fixed effects, to account for time invariant unobservables at the household level. The household caste is absorbed by these fixed effects.  $\delta_{vt}$  are year\*village fixed effects, to account for possible changes over time at the village level which may be correlated with quota attributions.  $\delta_{gt}$  are caste fixed effects for each year, to account for any trend of change at the SC group level which would be independent from SC quotas. I estimate equation 1 using a linear probability model, because my identification strategy requires an important number of fixed effects.<sup>12</sup> The error term  $\varepsilon_{ivt}$  is clustered two ways, to account for shocks both at the level of the caste group within each village and year (the scale of the independent variable of interest), and at the level of the household.<sup>13</sup>

## 4 Results

### 4.1 Main Results

Table 3 documents that an SC quota decreases by about 10% the likelihood that SC households will declare a caste-based street exclusion. The effect is large, stable, and statistically significant in all specifications (from the most parsimonious specification in column 1 to the specification with the maximum set of controls in column 5). The magnitude of the effect of the SC quotas is important, given the descriptive statistics presented in section 3.2, where we saw that the share of SC households reporting an exclusion decreased by 20 percentage points between 1996 and 2006.

The relationship between SC quotas and exclusions is robust to the different specifications. The relationship is independent from the share of SC households (column 2 of Table 3). This result is important because the share of one's peers living in one's village is likely to affect one's living conditions from a network perspective, and caste is a strong network basis (Munshi, 2011; Munshi and Rosenzweig, 2013). Moreover, the composition of a population can affect the incidence of conflicts between subgroups of the population (through different theoretical channels, as discussed in Esteban and Ray, 2011). Since some state administrations use the share of SCs in each GP to allocate quotas, any relationship between the share of SC in the village and the living conditions of the SC could bias the result of column 1. However,

Table 3: Effect of SC quotas on SC households declarations of street exclusion

	(1)	(2)	(3)	(4)	(5)
	street_exclu	street_exclu	street_exclu	street_exclu	street_exclu
SC*quota_SC	-0.0995*** (0.0183)	-0.0984*** (0.0185)	-0.139*** (0.0252)	-0.136*** (0.00892)	-0.138*** (0.0264)
SC*share_SC		-0.0585** (0.0228)	-0.0678*** (0.0218)	-0.0703*** (0.0118)	-0.0699*** (0.0220)
SC*pradh_SC			0.0501** (0.0220)	0.0504*** (0.00724)	0.0498** (0.0218)
SC*intermediary_quota_SC				0.0162 (0.0104)	0.0200 (0.0635)
SC* intermediary _pradh_SC					-0.00420 (0.0550)
Observations	79,972	79,972	79,972	79,972	79,308
R-squared	0.186	0.187	0.188	0.188	0.188

Robust standard errors in parentheses are clustered two ways by year\*village\*caste and household levels.

All specifications include year\*village, year\*caste, and household fixed effects. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

if we compare the results of columns 1 and 2 of Table 3, the coefficient of interest is perfectly stable. Column 3 of Table 3 shows that the omission of the control for SC Pradhans in previous columns attenuates the coefficient of interest. Moreover, SC Pradhans elected outside SC quotas appear to worsen SCs' exclusions. This result may be surprising. I discuss its interpretation in section 5.2. In the meantime, I control for the elections of SC Pradhans outside caste quotas in all specifications.

The two last columns of Table 3 focus on the time dimension of the relationship between SC quotas and street exclusions. The incidence of an SC quota between 1996 and 2006 has no effect on caste-based exclusion declarations by SC households. In Figure 2, we can see a slow convergence between baseline villages and villages with an SC quota during the intermediary electoral term. However, once I account for the necessary controls, the effect of intermediary quotas on current exclusions is a precisely estimated zero (columns 4 and 5 of Table 3). Thus, while ongoing quotas reduce exclusions, the effect does not last.

Table 3 documents that ongoing SC quotas sharply decrease the number of street exclusions declared by SC households, and that the effect is restricted to ongoing quotas. These two results are the main results of this article. From a policy-maker's perspective, a transitory effect of quotas on street exclu-

sions may be worrisome: it means that quotas may not be a suitable tool for changing behaviors in the long run. However, the results are actually mixed. Indeed, ongoing quotas have an important impact. Moreover, in Beaman et al. (2009) a repetition of quotas is crucial for changing the perception of female leaders, so that it could be the case that a repetition of caste quotas is crucial for the enduring effect of quotas.

## 4.2 Cross Section Results and Exploitation of a Recall Question

A major limitation of the above analysis is that it relies on a recall question. The 1996 exclusion figure comes from a recall question asked in the 2006 survey. This paper is not the first to use a recall question on perceptions (for example, Vicente, 2010, uses a recall question to measure corruption). Nonetheless, given the debate on the reliability of recall questions, it is important to investigate the consequences of this choice. To do so, I check first the robustness of the results in a cross-section setting, and second the existence of a link between quotas in 2006 and street exclusion in 1996.

A first essential observation is that the results are robust to the use of a cross-section specification. I use the following cross-section specification:

$$Street\_exclu_{iv} = \beta_1 + \beta_2 Quota\_SC_v * SC_i + \beta_3' X_i + \delta_v + \eta_{iv} \quad (2)$$

The coefficient of interest is  $\beta_2$ . It tells whether the declarations of exclusion of SC households in 2006 are affected by the fact that their current Pradhan is elected on an SC quota.  $X_i$  is a vector of household-level controls which can be related to the household's social status in the village.  $X_i$  contains the household head's caste category, sex, education level (above or below primary), age, income, and a binary variable telling whether the household's main source of income is agriculture.  $\delta_v$  are village fixed effects, to account for all village-level unobservables. The error term,  $\eta_{iv}$  is clustered at the level of the variable of interest, namely caste categories within villages.

The cross section results in Table 4 are consistent with the panel results in Table 3. In 2006, SC households living in a village with an SC quota are about 10% less likely to suffer from caste-based street exclusions (columns 1 to 6 of Table 4).<sup>14</sup> Once again, the result is independent of the share of SC households in the village (comparison of columns 1 and 2). Moreover, controlling for declarations of caste-based exclusions in 1996 (the recall question) has no effect on the magnitude of the coefficient of interest, although it improves the precision of the estimation (comparison of columns 2 and 3, Table 4). Both observations ensure that answers to the recall question are unbiased and credible. Indeed, the state administration allocates quotas independently of inter-caste relationships in each village, hence a change

Table 4: Effect of SC quotas on SC street exclusions in 2006

	(1)	(2)	(3)	(4)	(5)	(6)
	street_exclu	street_exclu	street_exclu	street_exclu	street_exclu	street_exclu
SC*quota_SC	-0.0921** (0.0458)	-0.0920** (0.0464)	-0.0920*** (0.0290)	-0.132*** (0.0398)	-0.130*** (0.0405)	-0.134*** (0.0410)
SC*share_SC		0.0949 (0.156)	0.00358 (0.0898)	-0.0369 (0.0935)	-0.0522 (0.103)	-0.0358 (0.101)
past_street_exclu			0.568*** (0.0258)	0.569*** (0.0259)	0.569*** (0.0259)	0.567*** (0.0260)
SC*pradh_SC				0.0495 (0.0344)	0.0497 (0.0340)	0.0422 (0.0343)
SC*intermediary_quota_SC					0.0180 (0.0442)	0.137*** (0.0439)
SC*intermediary_pradh_SC						-0.126*** (0.0196)
SC	0.474*** (0.0259)	0.451*** (0.0467)	0.108*** (0.0302)	0.108*** (0.0298)	0.109*** (0.0302)	0.113*** (0.0301)
Observations	40,047	40,047	40,047	40,047	40,047	39,715
R-squared	0.334	0.335	0.582	0.583	0.583	0.583

Robust standard errors in parentheses are clustered at the village\*caste level. All specifications include village fixed effects and control for caste categories, sex, primary education, age, income, and agriculture as the main income source.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

in the magnitude of the coefficient would have been consistent with a recall bias (among households experiencing a quota in 2006). As for the precision of the estimate, if recall declarations were random, controlling for these declarations would not affect it. Finally, and still consistent with the panel estimates, intermediary SC quotas do not affect current street exclusions (columns 5 and 6 of Table 4).

A second observation supporting the credibility of the recall variable is that the answers of SC households for 1996 exclusions are independent of the treatment at the moment of the survey (electoral quotas). I transform Equation 2 to check the relationship between street exclusions in 1996 (used as an explained variable) and quotas in 2006 (used as an explanatory variable). My concern would be that ongoing quotas could induce a recall bias (making SC households over-optimistic or pessimistic about the past). However, Appendix Table A1 shows that an SC quota in 2006 does not have any impact on SC households' answers to the 1996 street exclusion question.

Taken together, these results reduce the concern that answers to the recall question could bias the



main results.

### **4.3 Robustness**

I check the main results against two additional concerns: the interpretation of the quota variable, and the consequences of sample definitions.

Focusing on the measure of quotas, the main results are robust to the usual setting of a difference-in-difference. The coefficient of interest stays unchanged when I delete from the sample all villages with an SC quota before 2006 (column 1 in Appendix Table A2). The main results are also robust to two placebo tests. I first check that the religion-based exclusions of Muslim households do not react to SC quotas. I should not observe any reaction since religion and caste are different grounds for exclusion, and the survey records these exclusions in different variables. The percentage of Muslim households excluded from streets because of their religion drops from 27% to 16% between 1996 and 2006. But the decline in Muslim households' exclusions is independent from SC quotas (column 2, Appendix Table A2). Conversely, gender quotas, meant to empower women, do not have an effect on the caste-based exclusions of SC households (the aggregate effect of gender quota and female Pradhan is insignificant in column 3, Appendix Table A2).

Results are also robust to two alternative sample definitions. In columns 1 and 2 of Appendix Table A3, I include only SC households, since they declare most of the street exclusions. In column 3 and 4, I include all Indian states even if there is less variation in street exclusions outside of the Hindi Belt. Both the significance and the magnitude of the coefficient of interest stay constant across alternative samples. Moreover, the effect remains limited to ongoing quotas, intermediary quotas do not have an effect on current street exclusion in both specifications of Appendix Table A3 (for the intermediary electoral term in column 4, even if each variable is significant, the aggregate effect of SC quota and SC Pradhan is insignificant).

## **5 Discussion**

### **5.1 Interpretation of the main Results**

Following the literature presented in the introduction, the decrease of caste-based exclusions during SC quotas could circulate through different channels. These potential channels are: improved access to public goods enforced or negotiated by the minority leader, a change in the organization, solidarity, aspirations or feeling of legitimacy of the minority members, and a change in either the stereotypes or the perception of the social norm of the majority members. In this section, I discuss the relevance of

these channels with respect to their implications in the medium run (after the end of the term with an electoral quota), and in view of the auxiliary results.

Given the transitory effect of quotas on exclusions, either a change in the perceived social norm, or a pivotal part played by an SC Pradhan, appear to be the two most relevant channels. To be more precise, several of the changes on which Chauchard (2014) grounds the evolution of what members of the dominant castes perceive as the social norm are temporary changes. Chauchard (2014) lists four essential changes induced by ongoing SC quotas: a member of the SCs is suddenly in a position of power,<sup>15</sup> the SC Pradhan has a greater material wealth than is usual for members of the SCs, the quotas increase the contact between SC and non-SC households,<sup>16</sup> the quotas may create new channels of communication between the SC households of the village and the formal and informal institutions at a higher political level. The first and third changes of this list mechanically disappear at the end of the quota and the persistence of the fourth is uncertain. Similarly, if increased access is due to the Pradhan's direct actions (imposing or negotiating better conditions for SC households), the Pradhan can no longer perform these actions once he or she leaves office.

Alternative channels are harder to reconcile with the main results, given the absence of a link between intermediary quotas and current street exclusions. These channels could still be relevant in the longer run, but I do not document their effect in this article.

Should increased access be due to a collective action, because the SC quota triggers a change of organization or solidarity among SCs, the collective action should last beyond the end of the quota. Either a genuinely collective action stemming from the people has taken place, therefore making it likely that the organization would survive after the end of the reserved electoral term, or the mobilization relies on the patronage of the SC Pradhan, not as a fully collective action but as a result of the Pradhan's direct action, and it vanishes when the SC quota ends.

Similarly, if quotas trigger a change in SC households' aspirations and feelings of legitimacy, these changes should not disappear the moment the leader ceases to occupy the Pradhan's seat. Indeed, different studies find long-lasting effects of interventions that affect the aspirations or feeling of legitimacy of minority members. On electoral quotas, Iyer et al. (2012) show a clear change of trend in the manner that women voice their concerns after gender quotas; their effect is not restricted to places with an ongoing gender quota. In other contexts, being assigned to a gender-biased teacher in primary school affects the performance of Israeli students in middle and high school, and which subjects students choose in high school (Lavy and Sand, 2015). Moreover, it is possible to reduce the gap in test scores between black and white students in the US by simply making students write short essays that "reaffirm their sense of personal adequacy" (Cohen et al., 2006). Writing such an essay at the beginning of one term

still significantly affects students' performances more than two years after the intervention (Cohen et al., 2009).

The stereotype channel is also inconsistent with a transitory impact of quotas. If non-SC households' stereotypes were changed by their contact with a low caste leader, they should not change back to segregation at the departure of the leader. The point of Allport's contact theory is that there is inertia in stereotypes (Allport, 1954), and field experiments testing the contact hypothesis on school children of different races document long lasting effects (Slavin, 1979).

Two auxiliary results go in the direction of the above discussion: they are consistent with the Pradhan and social norm channels, and inconsistent with several of the alternative channels. First, quotas have a significant effect on street exclusions only after the end of the second year of the reserved term (column 1, Table 5). This delayed effect is not consistent with the immediate update in aspirations observed in field experiments (Hoff and Pandey, 2006).

Second, SC quotas do not improve SCs' perception of caste-based discrimination on the job market (columns 2 to 5, Table 5). Discrimination on the job market – as perceived by respondents – declined by one to three percent between 1996 and 2006 (one percent decline in discrimination against themselves, three percent in discrimination against their relatives). However, SC quotas have no effect, or a worsening effect, on these variables (in columns 2 and 3 of Table 5; the aggregate effect of SC quotas and SC Pradhans is significant and negative although the magnitude is small). These results are inconsistent with a change in the non-SC households' stereotypes because, if stereotypes evolve, they should do so in both the public sphere (street exclusions) and the private sphere (work-related interactions). For the same reason, these results are hard to reconcile with an interpretation of the variable of exclusion from streets as a measure of respondents' perceptions of their legitimacy, independently of the actions of members of the dominant castes.

Altogether, these elements point toward a change in the – public – behavior of members of the dominant castes during SC quotas. The first incidence of an SC quota in a village thus changes – and by a good deal – an important dimension of discrimination, even if the effect does not last.

## **5.2 SC Pradhans and Gender Quotas**

In Table 3, SC Pradhans elected outside caste quotas are shown to worsen the situation of SC households. At first sight, it seems puzzling – if not worrying – that the elections of SC Pradhans inside and outside SC quotas have contradictory effects. This subsection suggests that these apparently contradictory effects can be due to unexpected interactions between the leader's caste and the incidence of gender quotas.

The 19 elections of SC Pradhans outside SC quotas are endogenous. In particular, all these elections

Table 5: The effect of quotas through time, and on labor market discrimination

	(1)	(2)	(3)	(4)	(5)
	street_exclu	discr_job head	discr_job head	discr_job	discr_job
SC*quota_2nd_year	-0.0510 (0.0418)				
SC*quota_3rd_year	-0.276*** (0.0564)				
SC*quota_4th_year	-0.133*** (0.0260)				
SC*quota_5th_year	-0.151*** (0.0352)				
SC*quota_SC		0.0481*** (0.0185)	0.0474** (0.0194)	0.00855 (0.0201)	0.0109 (0.0207)
SC*pradh_SC	0.0501** (0.0234)	-0.0392** (0.0186)	-0.0393** (0.0189)	-0.00638 (0.0206)	-0.00697 (0.0204)
SC*intermediary_quota_SC			-0.00441 (0.0221)		0.0319 (0.0232)
SC*intermediary_pradh_SC			-9.58e-05 (0.0176)		-0.0111 (0.0203)
SC*shareSC	-0.0703*** (0.0213)	-0.0295* (0.0174)	-0.0288 (0.0179)	-0.00165 (0.0131)	-0.00432 (0.0138)
Observations	79,972	79,972	79,308	79,970	79,306
R-squared	0.189	0.013	0.013	0.032	0.032

Robust standard errors in parentheses are clustered two ways by year\*village\*caste and household levels. All specifications include year\*village and year\*caste and household fixed effects. *SC \* quota\_2nd\_year* is equal to one for SC households living in one of the 4 villages where an SC Pradhan has been elected, on an SC quota, for more than one year but less than two years. I follow the same logic to create *SC \* quota\_3rd\_year* (2 villages), *SC \* quota\_4th\_year* (7 villages), and *SC \* quota\_5th\_year* (11 villages). *discr\_job head* is equal to one if the respondent declares that he or she suffers from caste-based discrimination on the labor market, *discr\_job* is equal to one if the respondent declares that other members of his or her household suffer from caste-based discrimination on the labor market. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

but one happen during a gender quota (15 elections), or after an SC quota during the previous electoral term (3 elections). As a result, more than three quarters of the SC Pradhans elected outside SC quotas are elected on gender quotas. Incidentally, SC households are more numerous in villages where SC Pradhans were elected, but they remain a minority of the overall population (the share of SC households in villages

with SC Pradhans elected outside quotas is 29%, against 18% in villages without an SC Pradhan).

Gender and caste may interact in at least three ways, even if gender quotas by themselves do not affect caste-based exclusions (column 5 of Appendix Table A2). First, the election of an SC woman may lead to a backlash against members of the SCs. Brown and Chowdhury (2014) show that, in theory, affirmative action may increase sabotage activity by members of the dominant group. In our case, a gender quota disqualifies the traditional – high-caste male – elite from running for office. The re-allocation of seats across castes clearly takes place at the benefit of the SCs, and at the expense of the dominant castes (first and fourth rows of Table 6, consistent with Buch, 2013). By construction, such competition cannot occur after a caste quota.

Table 6: Caste shares for Pradhans and constituents in 1996 and 2006 elections without any caste quota

Caste (in %)	Villages without any quota (58 elections)		Villages with only a gender quota (67 elections)	
	Pradhan	Population	Pradhan	Population
SC	10	20	22	21
ST	0	6	5	5
OBC	42	53	46	52
OC	48	21	27	22
Total	100	100	100	100

SC female Pradhans may also face specific difficulties in implementing their preferred policies. Bardhan et al. (2010) document that SC female Pradhans target SC beneficiaries more than non-SC female Pradhans do, but still target them *less* than male Pradhans do (whether SC or non-SC). For Bardhan et al. (2010), this result is a consequence of the lack of socialization of newly elected female Pradhans, which prevents SC women from implementing traditional patronage.

Finally, caste-based and gender-based preferences may not converge. In a situation symmetric with ours, Clots-Figueras (2011) shows that the effect of gender on vote patterns is different between low caste women (elected on seats reserved to SC ST in state elections) and higher-caste women (elected on unreserved seats). She argues that this difference may come from the fact that gender and class identities can lead to contradictory preferences. Moreover, gender quotas may exacerbate differences in preferences if they strengthen the gender identity of the leader. Indeed, in laboratory experiments, insisting on the ethnicity *versus* gender of Asian women affects their math and verbal performances in opposite directions each time consistently with stereotypes (Shih et al., 2006).

The fact that almost all SC Pradhans – outside SC quotas – are elected on a gender quota makes

these elections extremely specific. As a result, the coefficient for SC Pradhans mixes many effects, and in particular the effects of gender and caste. The above discussion outlines three reasons why the interaction of gender and caste effects is important to keep in mind, and why it may be consistent with a worsening of caste-based discrimination. More broadly, this discussion calls for further research on the notion of the intersection of different identities and the way that it shapes actions.

## 6 Conclusion

This paper investigates the effect of electoral quotas on caste-based exclusions from streets for Scheduled Caste households. I provide robust evidence that electoral quotas at the village level sharply decrease caste-based exclusions. SC quotas decrease exclusions for SC households by about 10 percentage points. However, the impact is restricted to ongoing quotas. Building upon the literature, these results are consistent with a change in the behavior of members of the dominant castes in reaction to SC quotas. These results are inconsistent with either a change in stereotypes of members of the dominant castes, or a change in the aspirations of members of the SCs.

The main contribution of the paper is to document that electoral quotas can affect everyday discrimination. The evolution of discrimination is one of the crucial questions nowadays because discrimination influences the opportunities that people – and the society – get. I show that the first incidence of an SC quota in a village is already enough to temporarily reduce caste-based discrimination. However, the temporary nature of the effect of quotas can be worrisome if the objective of the policy-maker is to repeal quotas after they have been allowed to induce a change in practices. These findings call for replication with data collected after a repetition of quotas targeting castes and other minorities. More broadly, further research is needed on ways to bring societies into stable non-discriminatory equilibriums.

## Notes

<sup>1</sup>To be precise, discrimination means that people with similar characteristics – apart from their group identity – in similar circumstances are treated differentially (Bertrand and Duflo, 2016). Affirmative action means that a person or institution in a position of power actively improves an outcome of interest for a minority, going beyond non-discrimination (Holzer and Neumark, 2008).

<sup>2</sup>The seminal works by Chattopadhyay and Duflo (2004) for women, and Besley et al. (2004) for castes, document that minority leaders favor the members of their group in the allocation of public goods and benefits. However, more recent studies do not confirm this finding (Bardhan et al., 2010; Jensenius, 2015).

<sup>3</sup>Indeed, even if all forms of discrimination were statistical and could be argued to be efficient screening devices in the presence of imperfect information (Arrow, 1973), “[d]iscrimination is no less damaging to its victims for being statistical.

And it is no less important for social policy to counter” (Phelps, 1972, p. 661). See Roemer and Trannoy (2015) for a recent discussion of the different notions of equality.

<sup>4</sup>GP quotas are one of several affirmative action policies in India. Other Indian affirmative action policies are quotas for public servant positions, quotas for higher education institutions, and reserved constituencies in state and national assembly elections. The first quotas were introduced by the British administration as early as 1919.

<sup>5</sup>The actual survey took place in a series of different waves, between 2006 and 2009. For conciseness, I refer to 2006 as the year of the survey, but I keep in mind the staggered implementation in the empirical analysis.

<sup>6</sup>A report, by Human Rights Watch and the Center for Human Rights and Global Justice (at New York University School of Law), underlines that these exclusions are still enforced and have clear material and symbolic consequences on the life of SC households. “The Special Rapporteur on racism addressed the issue of segregation in his 1999 Annual Report: In the rural areas especially, the practice of untouchability is said to be very much alive and is reflected in segregated housing, with the [SCs] forced to live at least 1/2 km from the rest of the villagers, and in the prohibition for them to use the wells, the shared water source. Segregation also reportedly exists in the schools, public services and public places” (Human Rights Watch, 2007, p. 45). Moreover, “The Untouchability in Rural India survey found that [for SC households] out of the 483 villages surveyed, a ban on marriage processions on roads was in place in 47.4 percent of villages, while a ban on festival processions on public roads was in place in 23.8 percent of villages” (Human Rights Watch, 2007, p. 99).

<sup>7</sup>In particular, on self-perception, a growing literature insists on the “relevance of self-fulfilling prophecies as an explanation for persistent differences in performance between different groups of workers or students” (Bertrand and Duflo, 2016, p. 52). Hoff and Pandey (2006, 2014) document the relevance of this pattern for caste identities.

<sup>8</sup>As a result, still today, STs more often than SCs either live in places where they belong to the majority or form a very small minority. In the REDS2006 sample, 60% of STs live in villages where STs represent less than 10% or more than 50% of the population, while only 10% of SCs live in villages where SCs make up less than 10% or more than 50% of the population.

<sup>9</sup>Only 3 villages display variations in both ST exclusion declarations and reservation status. At least one ST is present in 47 of the 90 villages in the study, but only 5 villages have experienced an ST quota during one of the two terms, and in 2 of these villages the STs never declare any street exclusion. 4 other villages have had an ST quota in both terms, but the impact is not time variant in their case; hence it would be captured by household-level fixed effects.

<sup>10</sup>A GP is often constituted of more than one village. The absence of data on caste group repartition across GPs in India does not allow me to test the balance of the actual share of SCs in each GP. However, the share of SCs in each village already provides both essential information on the conditions of living of the SC households, and a rough proxy of the SC population in the GP.

<sup>11</sup>In the second and third panels, all the exclusion figures but one are above the baseline. The exception is the 1996 figure of the second panel, which corresponds to the moment of an SC quota. These observations are consistent with high rates of exclusion in these villages, attenuated only during SC quotas.

<sup>12</sup>The use of Linear Probability Models has spread since Angrist and his plea that, ultimately, quantities of interest are marginal effects.

<sup>13</sup>An approach popularized by Cameron et al. (2011). I follow the implementation proposed by Schaffer (2005) since it is more efficient for handling an important number of fixed effects.

<sup>14</sup>The estimate is not likely to be driven by unobserved heterogeneity. The formal test proposed by Oster (2013) – extending the test by Altonji et al. (2005) – yields an absolute value for delta of 5. To compute it, I use column 1 of Table 4 as the parsimonious specification, and the most conservative assumption for the maximum R-squared (namely, R-squared maximum

equal to 1). This estimated value of delta is above the rule of thumb suggested by Oster (2014) – namely delta equal to 1.

<sup>15</sup>Although this power is relative, since the Pradhan needs to keep harmonious relationship with members of his or her council, and may sometimes be considered to act as a proxy for a local strongmen

<sup>16</sup>If only geographic contact through visits of the SC leader to non-SCs neighborhoods and vice-versa.

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## ONLINE APPENDIX, NOT FOR PUBLICATION

Table A1: The (placebo) effect of SC quotas in 2006 on street exclusions of SC households in 1996

	(1)	(2)	(3)
	street_exclu	street_exclu	street_exclu
SC*quota_SC	-0.000207 (0.0525)	-9.98e-05 (0.0533)	0.0768 (0.108)
SC	0.643*** (0.0295)	0.603*** (0.0524)	0.602*** (0.0526)
SC*share_SC		0.161 (0.187)	0.238 (0.190)
SC*pradh_SC			-0.0945 (0.102)
Observations	40,047	40,047	40,047
R-squared	0.447	0.447	0.448

Robust standard errors in parentheses are clustered at the year\*caste level. All specifications include village fixed effects and control for caste categories, sex, primary education, age, income, and agriculture as the main income source. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table A2: The attribution of quotas and street exclusions

	(1)	(2)	(3)
	Diff-in-diff	Placebo	Placebo
	no SC quotas	religion-based	gender-based
	before 2006	exclusion	quotas
	street_exclu	street_exclu	street_exclu
SC*quota_SC	-0.104*** (0.0332)		
SC*pradh_SC	0.0307 (0.0236)		
Mus*quota_SC		0.0456 (0.0420)	
Mus*pradh_SC		-0.0148 (0.0214)	
SC*quota_woman			-0.114*** (0.0318)
SC*pradh_wo			0.143*** (0.0331)
SC*shareSC	-0.0906*** (0.0219)		-0.0600** (0.0276)
Observations	70,982	79,706	79,706
year*village fixed effects	X	X	X
year*caste fixed effects	X	X	X
year*religion fixed effects		X	
household fixed effects	X	X	X
R-squared	0.190	0.046	0.185

Robust standard errors in parentheses are clustered two ways by year\*village\*caste and household levels. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table A3: The effect of SC quotas on street exclusions in different samples

	(1)	(2)	(3)	(4)
	SC households sample		All India sample	
	street_exclu	street_exclu	street_exclu	street_exclu
SC*quota_SC	-0.117*** (0.0308)	-0.111*** (0.0327)	-0.133*** (0.0184)	-0.150*** (0.0213)
SC*pradh_SC	0.0442* (0.0263)	0.0372 (0.0268)	0.0552*** (0.0186)	0.0616*** (0.0201)
SC*intermediary_quota_SC		0.0322 (0.0743)		0.0760** (0.0346)
SC*intermediary_pradh_SC		-0.0252 (0.0634)		-0.0715** (0.0325)
SC*shareSC	-0.0703*** (0.0239)	na na	-0.0634** (0.0251)	-0.0679*** (0.0260)
Observations	16,266	16,172	194,846	186,692
year fixed effects	X	X		
village fixed effects	X	X		
year*village fixed effects			X	X
year*caste fixed effects			X	X
household fixed effects	X	X	X	X
R-squared	0.188	0.186	0.193	0.196

Robust standard errors in parentheses are clustered two ways by year\*village\*caste and household levels. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.