Criminal Politicians and Political Parties: Evidence from Indian Parliamentary Elections[1]

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Abstract

I use data from four recent parliamentary elections in India to investigate the nomination decision problem of political parties. Through a simple model of nomination choice, I predict that parties nominate criminals only when they are needed to win and not otherwise. Using local linear regressions, I confirm this prediction in the data. In particular, I find that the predicted probability from the ex post decision to nominate a criminal has an inverse-U relationship with a party's ex ante margin of victory. This explains why criminals win three times more often than non-criminals upon nomination: they are *selected* by political parties to do so.

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1 Introduction

Politicians with links to corrupt or criminal activity frequently occupy elected office in India. Despite free elections, multiple contesting parties, and publicly available information on criminal cases against candidates, the proportion of criminal candidates in the Indian parliament is substantial—and increasing[3]. Using data from self-declared affidavits filed at the time of nomination[4], researchers have shown that electing politicians with criminal and financial charges encourages criminal activity (Chemin 2012) and reduces economic activity and public good provision (Prakash, Rockmore, and Uppal 2019). And yet, criminally indicted candidates continue to thrive at the ballot box: they win three times more often than non-criminals upon nomination in parliamentary elections.

The puzzle in Indian politics is not that politicians such as Shashi Tharoor or Arvind Kejriwal, who are well-educated, well-spoken individuals besides being criminally indicted, get elected. The former was an Under-Secretary General of the United Nations and ran for the post of Secretary-General in 2006 and the latter was the face of India's anti-corruption movement in 2011. Both were educated in elite institutions and have written books: they are not likely to be seen by voters as hardened criminals. There are also candidates such as Yogi Adityanath, who is the head priest in a Hindu temple in his constituency and campaigns on the grounds of religion and Hindutva values, and whose criminal record also does not draw attention from voters. Rather, the puzzle I address in this paper is that electing seasoned gangsters, accused of multiple counts of murder, kidnapping, and criminal conspiracy, has become the norm rather than the exception in Indian politics. For example, criminal candidates like Mukhtar Ansari and Mohammad Shahabuddin have won landslide victories, sometimes despite having spent the campaign period in jail.

Ansari and Shahabuddin also owe their political success to an element that has received relatively less attention in the literature on criminal politicians: close association with political parties whose leaders have defended and championed them, no doubt for their ability to mobilize both votes and money. Mayawati, the president of the Bahujan Samaj Party and former Chief Minister of Uttar Pradesh

3. At present, 43% of the Members of Parliament are criminally indicted, a 25% increase from the previous election in 2014 (ADR 2019). The charges against them are numerous and serious, amounting to several thousand counts of murder, kidnapping, crimes against women, robbery and dacoity, cheating, forgery, and counterfeiting (ECI 2019).

4. Following a ruling by the Supreme Court of India in 2002, candidates for parliament and state assemblies are required to disclose all criminal cases pending against them while filing their nomination papers.

on four separate terms, has called Ansari a "messiah of the poor." Likewise, Shahabuddin was a close aide of Lalu Prasad Yadav, the president of Rashtriya Janata Dal, former Chief Minister of Bihar, and former Union Minister of Railways. More generally, criminals win most often upon nomination when they are affiliated to a national or state party rather than when they stand as independent candidates. Thus, looking at the advent of criminals in Indian politics through the lens of a political party is insightful because political parties are essential filters for voters in the electoral process. In a context such as India's parliamentary elections, where hundreds of national, state, and local parties contest, they are agents in their own right. Their incentives and trade-offs have important consequences on electoral outcomes.

For these reasons, I study the role of political parties in the election of criminal politicians. Through a simple model, I outline the nomination decision problem faced by a representative political party. Since the primary objective of a political party is to win elections, its decision to nominate a criminal or a non-criminal candidate necessarily accounts for voter attitudes towards criminals. I find through preliminary regressions that vote share rises unambiguously with candidate wealth, and that voters may even reward criminals more for their wealth than they do non-criminals. That voters reward wealthy candidates is not surprising because election costs in India have skyrocketed in recent years[5] and the strict limit on election spending of between $\$10,000$ and $\$12,500$ per candidate is highly unrealistic and exists only on paper. Since there is no public funding of elections in India, political parties understandably prefer candidates who can fund themselves, and thus, campaign financing typically becomes the responsibility of the candidate. Criminal candidates, who are more wealthy that non-criminals on average and probably more willing to contribute money to the party and less likely to demand or use up party funds, thus become appealing.

However, upon including an interaction term between candidate wealth and criminality, I find that vote share has a significant negative relationship with criminality. That is, voters do punish candidates for being criminal. Since criminality has two opposite effects on vote share, the model rests on the premise that political parties face a trade-off between winning elections, which depends on voter attitudes, and suffering a reputation cost for nominating a criminal.[6]

5. Political parties, candidates, and regulatory bodies spent a whopping $8.6 billion in 2019, while the US spent an estimated $6.5 billion in the 2016 presidential and congressional contests (CNN 2019).

6. In reality, it is possible that the positive effect on vote share is not through candidate wealth alone and that some voters actually prefer criminal candidates, for instance, for their ability to "get things done" (Vaishnav 2012). For example, Shahabuddin is known to have held regular

The model predicts that when political parties face a trade-off between winning elections and suffering a reputation cost from nominating criminals, they nominate criminals when they need them to win and not otherwise. That is, the model predicts that when a party is very likely to win or very likely to lose, it chooses to nominate a non-criminal so as to not suffer a reputational cost. However, when a party would win only with a criminal and lose otherwise, it would nominate a criminal. I confirm this in the data when I find that the predicted probability from the *ex post* decision of parties to nominate a criminal has an inverse-U relationship with the difference between a party's vote share in the previous election and that of its closest competitor. That is, holding other factors constant, a party is not likely to nominate a criminal when it does not expect to win or when it expects to win with a landslide. Rather, it is likely to nominate a criminal when it expects the election to be close. Thus, the model offers a simple explanation of why criminals win three times more often than non-criminals do upon nomination: they are *selected* by political parties to do so.

To the best of my knowledge, this is the first model of political party nomination in the literature on criminal politicians. In modelling the decision problem of political parties, I emphasize the significance of the role parties play in a democratic politics. The simple decision problem allows for extensions in several directions, thus providing scope for future work. For instance, the decision problem could be instead modelled as a multi-player game, where the threshold needed to win the election is unknown and one party's nomination behavior is contingent on what other parties do. Since criminal politicians are prevalent in democracies throughout the world,[7] work in this area has implications well beyond the Indian context.

The remainder of this paper is organized as follows. In Section 2, I describe the Indian parliamentary elections, data used, and motivate the need for a model to

council where people would come asking for favors, ranging from job promotions to university admissions (Naqvi 2005). So, the ability of candidates, both criminal and non-criminal, to have a "Robin Hood" effect is possibly an omitted variable in my regressions. However, a recent study argued that this channel may not hold weight due to the poor performance of criminally accused candidates in delivering public goods to their constituents. The study analyzed the impact of electing criminally accused politicians on the distribution of National Rural Employment Guarantee (NREGS), India's largest anti-poverty programme, and found a 34% to 40% reduction in project completion in constituencies where a criminal politician was elected (Murray 2020). In any case, criminals who act as beneficiaries likely do so due to their personal wealth, so the interaction between candidate wealth and criminality likely acts as a proxy for this effect.

7. The militia in Brazil (Ferraz and Finan 2008), paramilitaries in Colombia (Acemoglu, Robinson, and Santos 2013; Gallego 2018), armed gangs in Jamaica (Jaffe 2013), mafia in Italy (Daniele 2019), and godfathers in Thailand (Ockey 2003) are all examples of criminals having either played a prominent role in galvanizing support for politicians or contesting and winning elections themselves.

study political parties as well as its central trade-off using preliminary regressions and plots. In Section 3, I outline the model and state its primary prediction. In Section 4, I empirically verify this prediction using non-parametric methods. In Section 5, I conclude.

2 Background and Motivation

2.1 Elections and the Political Process

I use data from four elections between 2004 and 2019 to elect members of the Lok Sabha, the lower house of India's bicameral parliament. During each election, one candidate is selected from a set of nominees in each of the 543 electoral constituencies through the following voting rule: each voter casts a ballot for one and only one candidate and the candidate with the most votes wins.

Candidates may contest in elections independently or represent one of the hundreds of national, state, and local parties. While there is no limit to the number of candidates who can stand for election, a political party may nominate only one representative per constituency. Not all political parties are present in every constituency, however, and their geographic reach varies by party. Broadly, the six national parties have a nationwide presence, the state parties are present in most constituencies in their own state and sometimes in a neighbouring state, and local parties are present in a few neighboring constituencies.

The boundaries of India's 543 electoral constituencies are determined by the Delimitation Commission of India based on recent census data. Approximately 13% of constituencies are reserved for Scheduled Caste (SC) candidates and around 7% of constituencies are reserved for Scheduled Tribe (ST) candidates. Though representation from each state is not changed, the number of SC and ST seats from each state may be altered in accordance with the census. The most recent revision took place on the basis of the 2001 census and came into effect in 2008 (see Appendix for a map).

2.2 Data and Preliminary Evidence

I assemble a dataset on the four Lok Sabha elections using publicly available data from the Election Commission of India (ECI) and the Association for Democratic Reform (ADR)[8]. The ECI has detailed data on election outcomes and the

8. The data for 2004 and 2009 was compiled by Milan Vaishnav, who kindly shared it with me. I supplemented this dataset with information on the 2014 and 2019 elections.

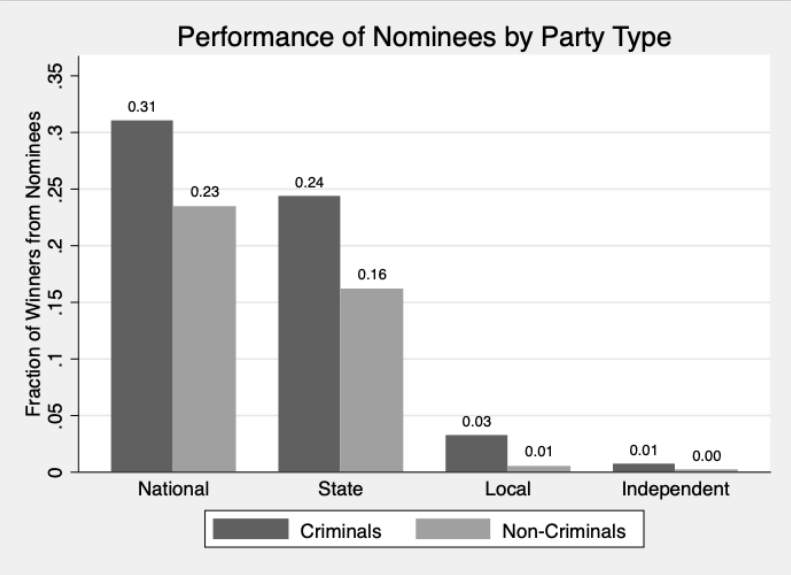
ADR has information from self-declared affidavits on wealth and criminal charges. Taken together, I have over 30,000 observations with variables on age, sex, caste, constituency, electoral outcome, wealth, and criminal charges of individual candidates. I match constituencies to districts and add information from the Census of India, the National Crime Records Bureau, and the Telecom Regulatory Authority of India on district-level literacy rate, share of households with a radio, television, internet etc., and murder rate.

It is important to keep a few things in mind about the data. First, the mapping between district-level and constituency-level data is imperfect because the geographic boundaries are different for the two. I use the matching laid out in the Socioeconomic High-resolution Rural-Urban Geographic Platform for India (SHRUG 2022), which accounts for the delimitation of constituencies in 2007 and the fact that some constituencies may be in multiple districts at once. Second, data on candidate wealth is difficult to verify and may be easily falsified. While the ECI requires declaration of assets with spouses and close family members to avoid hiding assets under others' names, a candidate can potentially transfer their assets to close friends or associates to avoid having to declare them in the affidavits. It is also possible that criminal candidates systematically misreport their wealth, or at least do so differently from non-criminal candidates. Since I do not interpret the size of coefficients on the wealth variables in my analysis, this is not a major concern for my analysis. Finally, it is important to distinguish between criminal indictments and convictions. While not all candidates charged with a criminal case are also convicted, they are criminal charges for which judicial proceedings have commenced. Thus, indictments are not simply accusations and are difficult to fake, particularly for "serious" crimes. Since the question of interest here is why criminals accused of such serious crimes win elections, I restrict my analysis to serious criminals (see Appendix for a precise classification of crimes).

2.2.1 Criminal Politicians and Political Parties

In this section, I argue that nomination by political parties is an important aspect of how criminal politicians win elections. First, I compare fractions of criminal and non-criminal candidates who win upon being nominated by national, state, and local parties, or as independent candidates. Figure 1 shows that criminals win more often upon being nominated than non-criminals regardless of the type of party that nominates them. Both criminal and non-criminal candidates win more often upon being nominated by state or national parties than when they are affiliated with local parties or stand independently.

Figure 1
Performance of Criminal and Non-Criminal Nominees

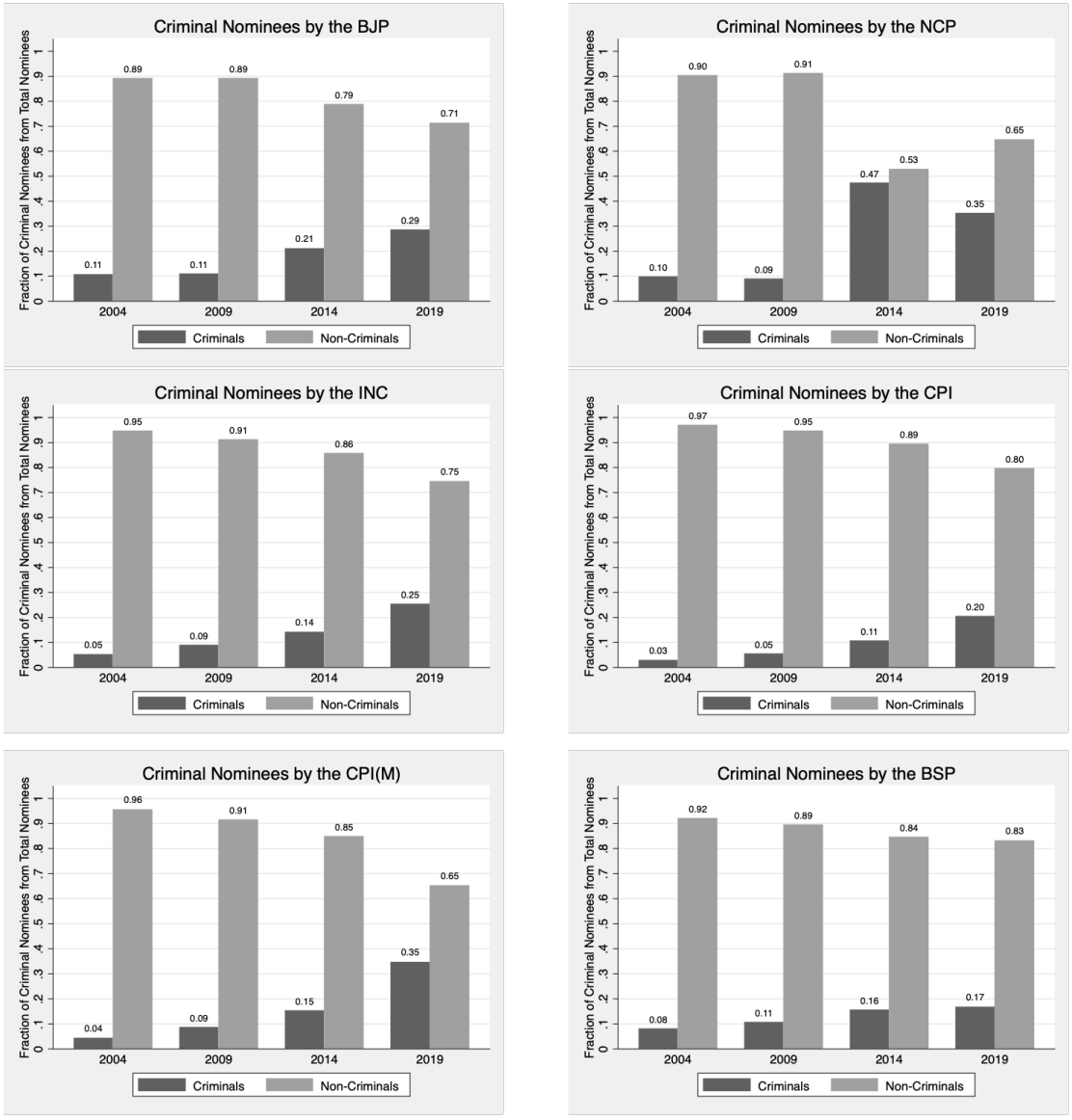


Notes: The dark bars on the left denote criminal candidates who won elections in their constituencies as fractions of the total number of criminal candidates nominated by national, state, local, or independent parties, respectively. Correspondingly, the light bars on the right denote non-criminal candidates who won elections in their constituencies as fractions of the total number of non-criminal candidates nominated by national, state, local, or independent parties, respectively. The calculations are over all constituencies and years in the dataset.

Next, I check if the success of criminal candidates reflects in the nomination behavior of the six national parties: Bharatiya Janata Party (BJP), National Congress Party (NCP), Indian National Congress (INC), Communist Party of India (CPI), Communist Party of India - Marxist (CPI(M)), and Bahujan Samaj Party (BSP)[9]. In Figure 2, I look at the shares of criminals and non-criminal nominated by these parties over time and find that the share of criminal nominees has been rising over the years for all six of them (except NCP between 2014 and 2019, perhaps because the share of criminals in 2014 was already very high). Since criminal candidates are more successful when affiliated with political parties and parties have responded by nominating a higher share of criminals over the years, the role of political parties in the election of criminal candidates is not trivial and needs to be studied further.

9. I exclude All India Trinamool Congress (AITC) from this list because it contested as a national party only in 2019.

Figure 2
Trends in Share of Criminal Nominees for National Parties



Notes: The dark bars on the left denote criminal nominees by a national party as a fraction of its total nominees in a given election year across all constituencies. Correspondingly, the light bars on the right denote non-criminal nominees by a national party as a fraction of its total nominees in a given election year across all constituencies. Thus, for a given party and election year, each pair of dark and light bars add to 1.

Table 1
Median $log(Wealth)$ of Criminal and Non-Criminal Candidates

Election Outcome	Criminals	Non-Criminals
Winner	16.96	16.55
Runner-Up	17.13	16.42
Others	14.53	13.52

Notes: Each cell denotes the value of the median $\log(Wealth)$ *of the group of candidates whose criminality and rank in the election is given by the row and column. For example, the cell corresponding to the first row and first column records the median* $\log(Wealth)$ *of the population of criminal winners across all constituencies and election years. Similarly, the cell corresponding to the third row and second column records the median* $\log(Wealth)$ *of the population of non-criminals who ranked 3 or below in their constituencies in any election year.*

2.2.2 Criminality, Wealth, and Votes

In this section, I show that the median wealth of criminal candidates is higher than that of non-criminal candidates and argue that vote share responds to criminality in two opposing ways: positively towards wealth and wealth of criminal candidates but negatively towards criminality of candidates. In Table 1, I divide the pool of candidates into six categories based on their criminality (1 or 0) and position ($1, 2,$ or > 2) in the election and list the median $log(Wealth)$ of each category. Criminals in every category have higher median $log(Wealth)$ than their non-criminal counterparts. Further, both criminal and non-criminal candidates who are at position 1 or 2 in their constituency have higher median $log(Wealth)$ than those who rank lower. Thus, Table 1 suggests that criminals have higher median wealth than non-criminals and that candidates with more wealth also obtain a higher position in the election.

Next, I run the following least squares specification:

$$\begin{aligned} vote\ share_{ijt} =& \beta_0 + \beta_1 \mathbb{1}\{C_{ijt}\} + \beta_2 \ln(wealth_{ijt}) + \beta_3 \mathbb{1}\{C_{ijt}\} \times \ln(wealth_{ijt}) \\ &+ \beta_4 X_{ijt} + \beta_5 Z_{jt} + party_{jt} + state_{jt} + year_t + party_{jt} \times year_t \\ &+ state_{jt} \times year_t + \epsilon_{ijt}, \end{aligned} \tag{1}$$

where $\mathbb{1}\{C\}$ is an indicator for whether candidate i in constituency j in year t

is a criminal, $\ln(wealth)$ is the log of candidate wealth, X is a matrix of candidate characteristics (age, sex, education level, caste) and political controls (incumbency, prior margin, prior party), Z is a matrix of voter characteristics common across candidates in a constituency (literacy rate, household income, proportion of households with access to radio, TV, broadband, SC population, ST population)[10], *party* is a party fixed effect, *state* is a state fixed effect, *year* is a time fixed effect, *party* × *year* is a party-year fixed effect, *state* × *year* is a state-year fixed effect, and ϵ is an exogenous shock.

Table 2
Results from Least Squares

Dependent variable: *vote share*	(1)	(2)	(3)	(4)
$\mathbb{1}\{C\}$	.064**	.049**	−.108**	−.054**
	(.003)	(.003)	(.016)	(.012)
ln(Wealth)		.010**	.010**	.004**
		(.0003)	(.0003)	(.0002)
$\mathbb{1}\{C\} \times \ln(\text{Wealth})$			.011**	.006**
			(.001)	(.0008)
Constant	.014	−.096**	−.087**	−.106
	(.006)	(.007)	(.007)	(.092)
Candidate Characteristics	yes	yes	yes	yes
Voter Characteristics	yes	yes	yes	yes
Political Controls	yes	yes	yes	yes
Party × Year FE	no	no	no	yes
State × Year FE	no	no	no	yes
Observations	29,057	27,644	27,644	27,644
R^2	0.256	0.305	0.309	0.660
* $p < 0.01$ and ** $p < 0.001$				

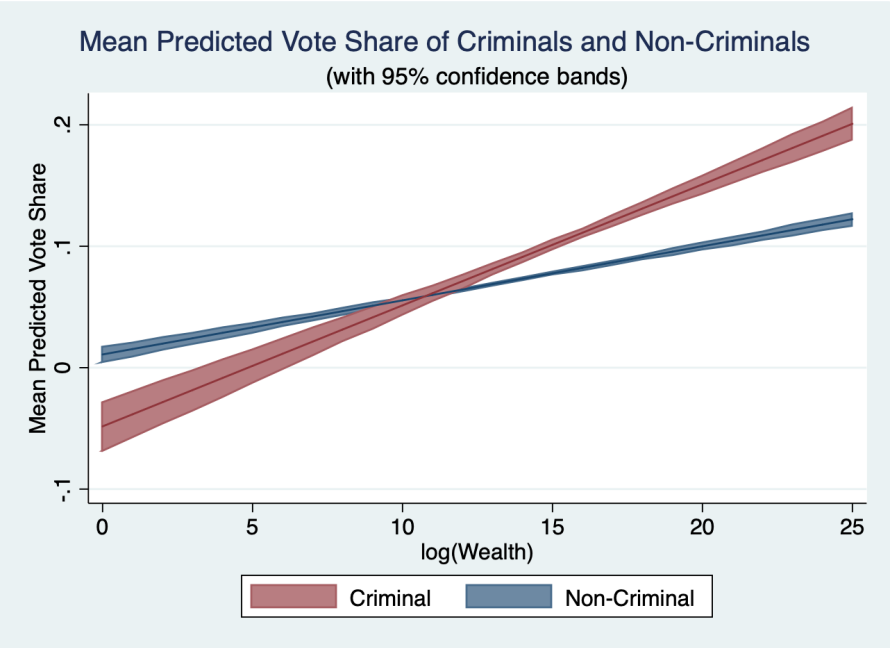
Notes: I run four regressions based on the least squares specification in Equation 1. The first three regressions introduce $\log(Wealth)$, $\mathbb{1}\{C_{ijt}\}$, *and an interaction between them, in stages. Regression (4) adds fixed effects to regression (3).*

In practice, I run four variations of the above specification. I control for candidate characteristics, voter characteristics, and political controls in all of them

10. I add political controls to account for candidate quality for which I do not have a direct measure. The variables regarding literacy rate and access to radio, TV, and broadband are to account for availability and transmission of information to voters, which, some studies have argued, is of concern (Dutta and Gupta 2014; Banerjee et al. 2014).

and include fixed effects in the final one to account for underlying differences in voters' taste for criminals across parties, states, over time, and in parties and states over time. The results in Table 2 show that the coefficient on criminality is positive and significant when vote share is regressed on criminality alone. This positive coefficient on criminality reduces slightly when I add $log(Wealth)$ to the specification but remains significant.

Figure 4
How Vote Share Changes with log($Wealth$) for Criminals and Non-Criminals



Notes: This figure depicts the relationship between vote share and log($Wealth$) of criminal and non-criminal candidates as obtained from regression 4 in Table 1. The vertical axis denotes the mean vote share (over other covariates) of criminal and non-criminal candidates for specific values of log($Wealth$). The lines are drawn with 95% confidence bands.

However, when I introduce an interaction term between criminality and $log(Wealth)$ to the specification, while the coefficient on the interaction term remains positive and significant, that on criminality becomes significantly *negative*. The regression coefficients suggest that criminality has two opposite correlations with vote share. On the one hand, criminality has a positive correlation through wealth, which may be because criminals have additional resources and campaign power that is an omitted variable in the regression or because criminals under-report their wealth systematically differently from non-criminals. On the other hand,

voters seem to punish criminals. Figure 4 plots the relationship between vote share and $log(Wealth)$ for criminal and non-criminal candidates. At lower levels of $\log(Wealth)$, the vote share for a non-criminal candidate is higher, but the opposite is true at higher levels of $\log(Wealth)$.

The coefficients from this regression suggest that the negative correlation with criminality outweighs the positive correlation with wealth, but it is likely that coefficients in the regression are biased due to the data constraints or omitted variables mentioned above. The take away is that criminals have two opposing correlations with vote share, a fact from the data which I later incorporate into the model.

2.2.3 Summary

Before proceeding to the model, I summarize key patterns in the data to motivate the need to study the nomination decision of political party to understand why criminal politicians win elections more often than non-criminals upon nomination. I also emphasize the central trade-off parties face while making the decision of whether to nominate a criminal as suggested by patterns of vote share, criminality, and wealth.

First, criminals win more often than non-criminals regardless of whether they are nominated by national, state, or local parties, or stand independently. Criminals win more often when they are nominated by national or state political parties rather than as independent candidates or by affiliation to regional parties. The share of criminal nominees by the six national parties has been rising over the years. Thus, the nomination decision of political parties is an important aspect of how criminals win elections and needs to be studied further.

Second, criminal candidates have more wealth than non-criminal ones, which gives them an advantage at the ballot box because voters unambiguously reward wealthier candidates, and even more so if they are criminal. However, criminality also has a significant negative correlation with vote share and a political party needs to account for the trade-off arising from opposite effects of criminality on vote share while deciding whether to nominate a criminal.

Next, I proceed to the model of nomination decision of political parties and an empirical test of its primary implication. Through a simple decision framework where political parties face a trade-off between reputation cost and higher probability of winning when they choose criminals, the model offers an explanation as to why we see criminals winning more often than non-criminals in the data upon nomination.

3 The Model

Consider a political party (denoted by i) in a given constituency and election year. Suppose i must choose from the "best" criminal and "best" non-criminal, so their binary choice set is $\{C, NC\}$. Let i's utility function have the following linear specification:

$$u^* = a\mathbb{1}\{win\} - b\mathbb{1}\{C\},$$

where $a - b > 0$ means that i faces a trade-off between winning the election and loss of reputation from nominating a criminal and that i prefers to win with a criminal than to lose with a non-criminal.[11]

Let i win if its vote share is more than some exogenously given threshold, $\bar{v}$. I assume that i's votes depends on party strength, money spent on the election, criminality of candidate, and other candidate-specific controls (such as age, education level, caste, incumbency etc.) and arrive at the following specification:

$$vote\ share^\dagger = \theta_{01} + \alpha strength + \beta money^* - \gamma\mathbb{1}\{C\} + \eta X + \epsilon,$$

where $\epsilon \sim N(0, \sigma_\epsilon^2)$.[12] I assume that *money* comprises of donations from supporters, which rises with party strength, and campaign contributions by the nominee if they are a criminal and arrive at the following specification:

$$money^* = \theta_{02} + \delta strength + \phi\mathbb{1}\{C\} + \psi,$$

where $\psi \sim N(0, \sigma_\psi^2)$.

Substituting the second equation into the first, we arrive at the following vote share equation for the population of potential nominees:

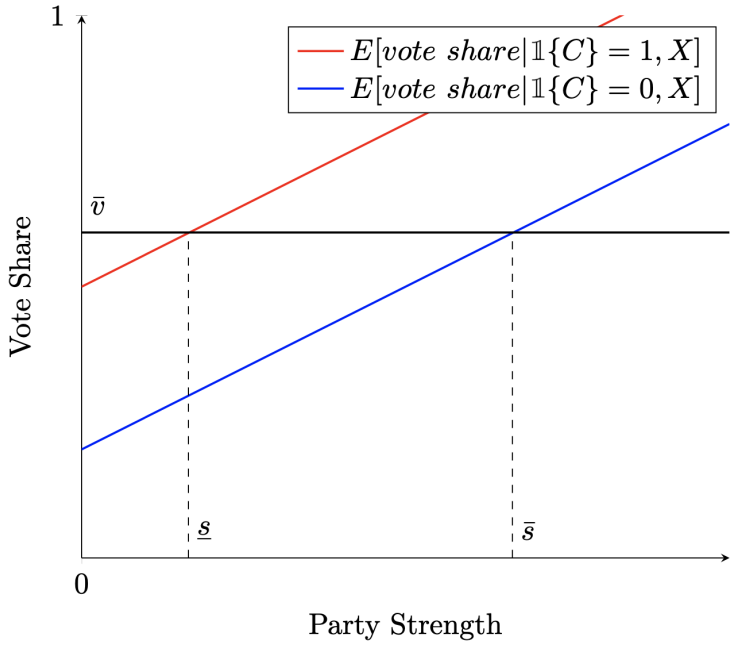
$$\begin{aligned} vote\ share^\dagger &= \underbrace{\theta_{01} + \beta\theta_{02}}_{\equiv\theta_0} + \underbrace{(\alpha + \beta\delta)}_{\theta_1} strength + \underbrace{(\beta\phi - \gamma)}_{\equiv\theta_2}\mathbb{1}\{C\} + \eta X + \underbrace{\beta\psi + \epsilon}_{\tilde{e}} \\ &= \theta_0 + \theta_1 strength + \theta_2\mathbb{1}\{C\} + \eta X + \tilde{e}, \end{aligned} \tag{2}$$

11. The * superscript means that i's utility is unobserved by the econometrician.

12. The † superscript on *vote share* means it is observed by the econometrician only for the candidate who was nominated and not the alternative who got passed over. According to the model, *vote share* is observable for half of the potential nominees. The * superscript on *money* means that the actual money spend on elections is unobserved by the econometrician, so we need to assume a form for *money* in terms of observables.

where $\tilde{e} \sim N(0, \beta^2\sigma_\psi^2 + \sigma_\epsilon^2)$, assuming $\epsilon \perp\!\!\!\perp \psi$.

Figure 5
Strength Thresholds that Determine a Political Party's Nomination Decision



Notes: The red and blue lines denote the expected vote share when the party nominates a criminal and a non-criminal, respectively, conditioning on other factors, X. The exogenous vote threshold needed to win, $\bar{v}$, determines two strength thresholds, $\underline{s}$ and $\bar{s}$. The nomination decision of the party is then determined for these strength thresholds.

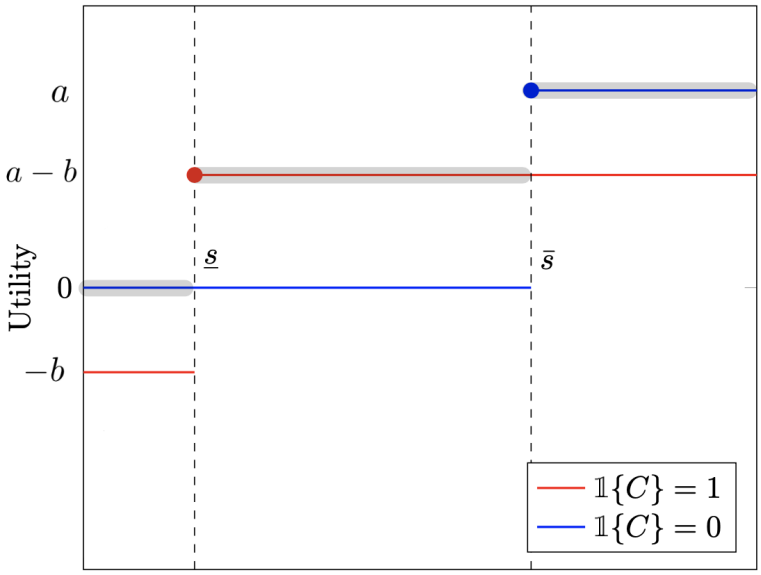
Since we do observe criminals being nominated in the data, it must be that $\theta_2 > 0$. In Figure 5, I show graphically how expected vote share against party strength for a party's criminal and non-criminal options for the special case where $X_C = X_{NC} \equiv X$. It is easy to see in the figure that the model makes the following nomination decision contingent on party strength:

$$\mathbb{1}\{C\} = 1 \text{ if } strength \in [\underline{s}, \bar{s}), \text{ and}$$

$$\mathbb{1}\{C\} = 0 \text{ if } strength \notin [\underline{s}, \bar{s}).$$

Figure 6 illustrates how this nomination decision comes about as a result of the party's utility maximization. The model predicts that when a party's strength is below $\underline{s}$, it loses regardless of which candidate it nominates. So, it prefers to nominate a non-criminal so as to avoid suffering a reputational cost without any chance of winning ($0 > -b$). Similarly, when a party's strength is above $\bar{s}$, it

Figure 6
Utility from Party's Nomination Decision (Criminal vs. Non-Criminal) Against its Strength



Notes: The red and blue lines show the utility from nominating a criminal and non-criminal candidate, respectively, for different levels of party strength. The grey shadow highlights whether the party obtains higher utility from the criminal or non criminal-candidate, thus determining the party's nomination choice in each case. When strength $< \underline{s}$ *or strength* $\geq \bar{s}$*, the party obtains a higher utility from nominating a non-criminal. It is only when strength* $\in [\underline{s}, \bar{s})$ *that nominating a criminal leaves the party better off, so that is when it nominates a criminal.*

wins regardless of which candidate it nominates. So, it prefers to nominate a non-criminal and enjoy its utility from winning rather than nominate a criminal and suffer a reputational cost with no additional gains ($a > a - b$).

However, when a party's strength is between $\underline{s}$ and $\bar{s}$, it wins if it nominates a criminal and loses if it nominates a non-criminal. So, the model predicts that the party will nominate a criminal because loss of reputation from nominating a criminal is offset by gain from winning the election ($a - b > 0$). The central trade-off in the party's utility function drives this result, which implies that when a party faces a reputational cost from nominating a criminal and gains from money that a criminal brings in, it only nominates a criminal when they are needed to

win and not otherwise. The result offers a new explanation for why criminals win more often than non-criminals upon nomination: political parties *select* criminals when they are expected to win and not otherwise.

4 Empirical Evidence

In this section, I use data from Indian parliamentary elections to test the main prediction of the model. That is, do political parties only nominate criminals when they need them to win and not otherwise? If the model prediction is true, we should see that a party nominates non-criminals when it believes it will win or lose with a very high margin and nominates criminals when it believes that it will win or lose with a very low margin. In other words, assuming the party accurately predicts its predicament in the election, we should see that the predicted probability from the *ex post* decision to nominate a criminal has an inverse-U relationship with the *ex ante* margin of victory or loss.

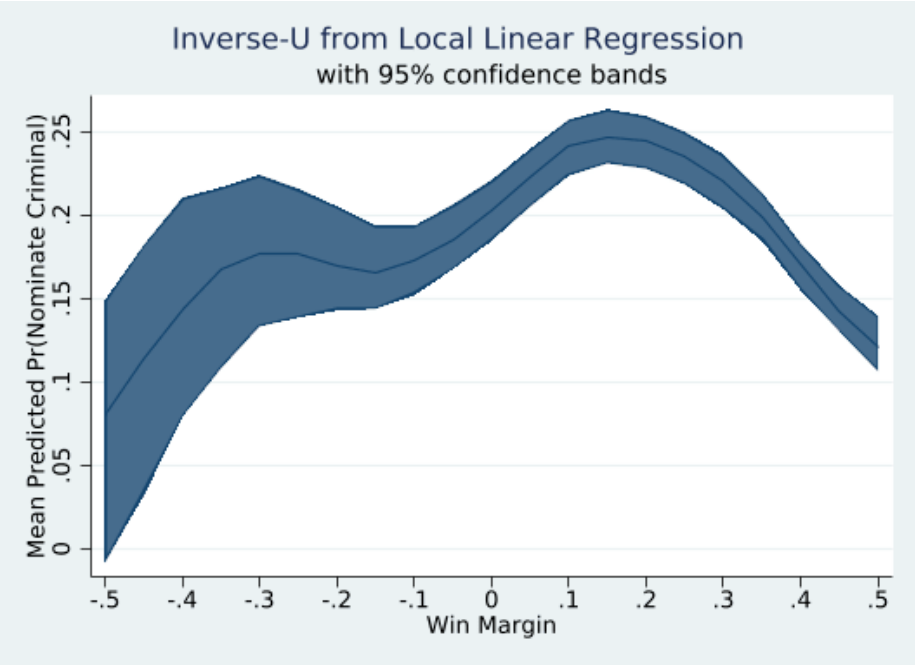
To this end, I first define a variable to capture a party's *ex ante* margin of victory or loss based on its vote share in the previous election year. For party i in constituency j at time t, let $win\ margin_{ijt} \equiv max\{vote\ share_{-ij,t-1}\} - vote\ share_{ij,t-1}$. This variable takes negative values when i expects to win election at time t (because it won last year) and positive values when it expects to lose (because it lost last year). When it takes values that are only slightly negative or slightly positive, it means that the party won or lost, respectively, by a narrow margin. When it takes values that are highly negative or highly positive, it means that the party won or lost, respectively, by a wide margin.

This definition of *win margin* imposes three restrictions on the data: (1) I restriction attention only to political parties, so drop independent candidates and the NOTA option from my sample, (2) I retain only parties who contested in the previous election in the same constituency e.g., for a party to be present in the data for a particular constituency in 2019, it should have contested in 2014 in the same constituency, and (3) I drop the 2004 election data from the sample because I do not have data prior to that. In total, I work with around 5,000 observations.

Next, I use an indicator variable, $\mathbb{1}\{C_{ijt}\}$, which takes the value 1 when party i nominates a criminal in constituency j year t and 0 otherwise, to capture the party's *ex post* decision to nominate a criminal. This is the outcome variable of interest, which I believe is a flexible function of *win margin*. So, I estimate $E[\mathbb{1}\{C_{ijt}\}|win\ margin_{ijt}] = f(win\ margin_{ijt})$ using a local linear kernel regression. The epanechnikov kernel is used for continuous regressors and the liracine

kernal for discrete regressors. The optimal bandwidth is obtained using cross-validation and standard errors by fitting the model through bootstrap replications.

Figure 7
Inverse-U Relationship of Predicted Probability of Nominating a Criminal with Win Margin

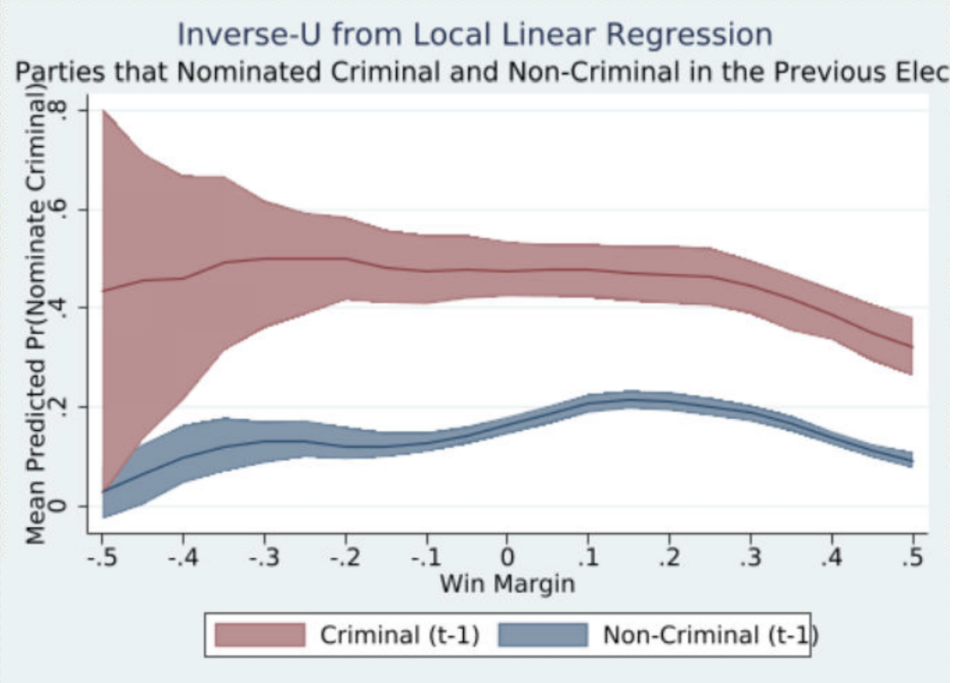


Notes: This figure plots the relationship of the predicted probability of nominating a criminal with win margin obtained from a local linear regression of the ex post decision to nominate a criminal on ex ante win margin. I allow win margin to take values between -0.5 and 0.5 with increments of 0.05 and fit the model using 100 bootstrap replications. The confidence bands are at the 95% *level.*

In Figure 7, I plot the mean predicted probability of nominating a criminal, $\hat{Pr}(\mathbb{1}\{C\}|win\ margin)$, against *win margin*. On the vertical axis is the estimated population-averaged mean of the predicted probability of nominating a criminal when *win margin* takes a specific value on the horizontal axis. Since there are fewer winners in the data relative to nominees, the confidence bans for negative values of *win margin* are large and the first peak is not statistically significant. However, the graph is unmistakably non-monotonic at the second peak. I interpret this inverse-U shape as evidence that the *ex post* probability of nominating a criminal is high when a party's *ex ante* winning margin is low and vice versa.

In Figure 8, I allow the ex post decision to nominate a criminal to be a

Figure 8
Inverse-U Relationship of Predicted Probability of Nominating a Criminal with Win Margin by Parties that Nominated a Criminal and Non-Criminal Candidate in the Previous Election



Notes: This figure plots the relationship of the predicted probability of nominating a criminal with win margin obtained from a local linear regression of the ex post decision to nominate a criminal on ex ante win margin and whether a criminal was nominated by the party in the previous election. I allow win margin to take values between -0.5 and 0.5 with increments of 0.05 and fit the model using 100 bootstrap replications. The confidence bands are at the 95% *level.*

flexible function of both *win margin* and $\mathbb{1}\{C_{ij,t-1}\}$, and indicator variable for whether the party nominated a criminal in the previous election. That is, I estimate $E[\mathbb{1}\{C_{ijt}\}|win\ margin_{ijt}, \mathbb{1}\{C_{ij,t-1}\}] = f(win\ margin_{ijt}, \mathbb{1}\{C_{ij,t-1}\})$ using a local linear regression and plot the $\hat{Pr}(\mathbb{1}\{C\}|win\ margin, \mathbb{1}\{C_{ij,t-1}\} = 1)$ and $\hat{Pr}(\mathbb{1}\{C\}|win\ margin, \mathbb{1}\{C_{ij,t-1}\} = 0)$ against *win margin*. Since the graph for parties that nominated a criminal in the previous election is well above that for those who nominated a non-criminal in the previous election, we can see that there is a large persistence effect of criminals. The confidence band for the first graph is large for low values of win margin, probably because there are very few instances in the data of parties that nominated a criminal *and* won a landslide victory in the previous election. However, for both types of parties, the predicted

probability of nominating a criminal has a non-monotonic relationship with ex ante *win margin*.

5 Summary and Conclusion

In this paper, I study the nomination decisions of political parties as a way to explain why criminal politicians win more often than non-criminal ones do upon nomination in Indian parliamentary elections. From preliminary regressions, I find that criminality has two opposite correlations with vote share: on the one hand, the coefficient on criminality alone is negative and significant and on the other hand, the coefficient on the interaction between wealth and criminality is positive and significant. Thus, the nomination decision problem of a representative political party is premised on the trade-off between wealth that criminals bring in and the reputation cost to the party from nominating them. The model predicts that when faced with such a trade-off, a political party nominates a criminal candidate only when they are needed to win and not otherwise. I verify this prediction in the data using local linear regressions and find that a party's predicted probability from its *ex post* decision to nominate a criminal has an inverse-U relationship with its *ex ante* margin of victory. Thus, this paper offers a simple explanation of why criminals win more often than non-criminals upon nomination: they are *selected* by political parties to do so.

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A Data and Variables

In this section, I first define “serious criminal" using a classification of the Indian Penal Code (IPC) violations against candidates in my dataset. Next, I list all the variables used in my analysis with a brief description of the level of their availability and sources.

A.1 Definition of a ‘Serious Criminal’

Candidate affidavits contain a list of IPC violations they are charged with, so it is possible to know the exact nature of crimes they are accused of. I have, admittedly, not yet made complete use of the richness of the available information. However, I do make a distinction between minor crimes and serious crimes.

I classify minor charges as those that might be related to elections, campaigning, opinion, lifestyle, speech or assembly, or those related to a politician’s vocation and daily conduct. I consider charges under all other IPC sections to be “serious.” These include, but are not limited to, murder, attempted murder, kidnapping, dacoity, crimes against women, and arms act violations (Vaishnav 2012, 2017).

A.2 List of Variables

In Table A2, I list the variables used in my analysis along with their sources. This is not a complete list but contains the variables used in my empirical analysis.

A.3 Electoral Constituencies of India

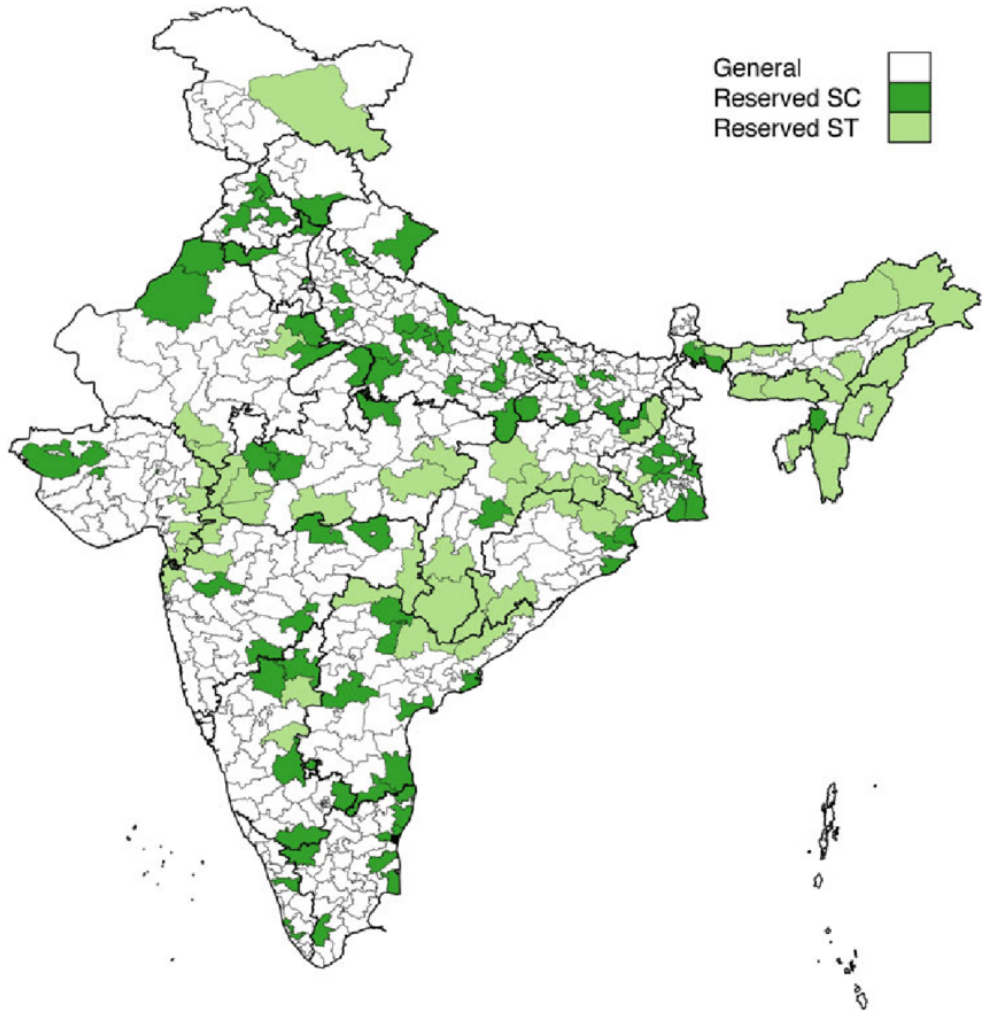
Figure 8 shows the boundaries of the electoral constituencies formed in 2008. Constituencies that reserved for SC and ST candidates are highlighted in shades of green.

Variable	**Source**	**Unit of Availability**
Identifiers		
Year	TCPD/ECI	Constituency
State	TCPD/ECI	Constituency
Constituency	TCPD/ECI	Constituency
Candidate Characteristics		
Candidate Name	TCPD/ECI	Individual
Sex	TCPD/ECI	Individual
Age	TCPD/ECI	Individual
Caste	TCPD/ECI	Individual
Education Level	TCPD/ECI	Individual
Profession Type	TCPD/ECI	Individual
Political Controls		
Party Name	TCPD/ECI	Individual
Party Type	TCPD/ECI	Individual
Incumbent (indicator)	TCPD/ECI	Individual
Recontestant (indicator)	TCPD/ECI	Individual
Turncoat (indicator)	TCPD/ECI	Individual
Number of Previous Terms Served	TCPD/ECI	Individual
Same Constituency (indicator)	TCPD/ECI	Individual
Same Party (indicator)	TCPD/ECI	Individual
Previous Party Name	TCPD/ECI	Individual
Previous Constituency Name	TCPD/ECI	Individual
Prior Vote Margin	TCPD/ECI	Individual

Variable	Source	Unit of Availability
Election Outcomes		
Raw Votes	TCPD/ECI	Individual
Position	TCPD/ECI	Individual
Winner (indicator)	TCPD/ECI	Individual
Runner-Up (indicator)	TCPD/ECI	Individual
Total Number of Candidates	TCPD/ECI	Individual
Total Votes	TCPD/ECI	Constituency
Total Electors	TCPD/ECI	Constituency
Deposit Lost (binary)	TCPD/ECI	Individual
Vote Share	TCPD/ECI	Individual
Vote Margin	TCPD/ECI	Individual
Crime and Wealth		
Total Assets	ECI	Individual
Total Liabilities	ECI	Individual
Net Wealth	ECI	Individual
log(Wealth)	ECI	Individual
Criminal (indicator)	ECI	Individual
Serious Criminal (indicator)	ECI	Individual
Number of Cases	ECI	Individual
Voter Characteristics		
Total Population	Census of India	District
Literacy Rate	Census of India	District
% Primary Education	Census of India	District
% Secondary Education	Census of India	District
% SC Population	Census of India	District
% ST Population	Census of India	District
% Households with Radio	Census of India	District
% Households with TV	Census of India	District
% Households with Telephone	Census of India	District
% Households with Broadband	TRAI	District
Mean Household Income	IHDS	District
Murder Rate	NCRB	District

Table A2: List of Variables

Figure 9
Parliamentary Constituencies Indicating Political Reservation for SC/ST Candidates



Notes: The figure is sourced from "Power, Performance and Bias: Evaluating the Electoral Quotas for Scheduled Castes in India" (Jensenius 2013).