Welfare Effects of Criminal Politicians: A Discontinuity-Based Approach

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Abstract

This paper uses unique data on the criminal records of Indian bureaucrats to examine the relationship between politicians' criminality and consumption, crime, and corruption. The identification relies on a regression discontinuity design by which individuals living in districts where a criminal politician was barely elected are compared with individuals living in districts where a criminal politician barely lost. The results show that criminal politicians decrease consumption by vulnerable sections of society: the monthly per capita expenditure of scheduled castes, scheduled tribes, or other backward classes decreases by 19 percent. This paper suggests that the effect of criminal politicians on criminality and corruption may explain this result.

1. Introduction

Criminal politicians in India are frequently cited as an important source of poverty and criminality in the popular press,[1] yet there is little evidence of these

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[1] "The list of cases against Hitendra Thakur . . . is long—extortion, criminal intimidation, attempt to murder, murder and land grab. . . . Without his backing, no professional or businessman can survive here. That is how the constituency, 80 per cent of whose voters are educated, chose someone like him. But the poor Adivasis and Kolis are against him" (Bunsha 2004, p. 5). Many politicians "have a criminal background. Surely their presence in positions of power can only encourage criminals" (Joshi 2005, p. 4).

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effects, despite their prevalence in all levels of government.[2] The lack of evidence stems from the absence of a convincing identification strategy. Instead of these politicians causing poverty and crime in their districts, the opposite may be true, and crime and poverty could facilitate the emergence of criminal politicians.[3] Moreover, criminal politicians might just be the reflection of more powerful underlying forces that simultaneously affect poverty and crime.[4]

To isolate the causal effect of criminal politicians, this paper uses a regression discontinuity design that compares districts in India where a criminal politician barely defeated a noncriminal politician to districts where a criminal politician barely lost to a noncriminal politician. This analysis is made possible by a unique data set of the criminal records of political candidates running in local elections in India. A surprise Supreme Court decision in 2003 mandated that all political candidates for state and federal elections reveal their criminal records—including not only past convictions but also acquittals, discharges, and pending cases[5]—as well as information on assets, liabilities, and educational qualifications. For the 2004 elections, I found 178 districts, with a total population of 380 million, where a criminal candidate faced a noncriminal candidate. This paper then relates the criminal records of politicians at the district level to microeconomic measures of consumption (National Sample Survey of India 2000, 2005), reported criminal activity at the district level (National Crime Records Bureau 2002–6), and corruption (value of gifts received) of law-and-order and administrative (LOA) officials living in their districts (National Sample Survey of India 2000, 2005).

The crucial assumption regarding identification is that, even if agents can influence the vote, there is nonetheless a nontrivial random-chance component to the ultimate score difference between the two candidates (Lee 2008). To confirm the internal validity of the regression discontinuity design, this assumption is evaluated with two strong empirical tests. First, the density of election scores for each candidate should be continuous, at least in the neighborhood of the discontinuity of treatment (McCrary 2008). Second, in the neighborhood of the discontinuity (defined by a score difference between the criminal and noncriminal candidate that is equal to zero), treated and control groups should feature the same distribution of baseline characteristics, as in a randomized

[2] For example, as of May 2011, approximately 30 percent of the 545 elected lawmakers in India's lower house of parliament, the Lok Sabha, have criminal cases pending against them, as reported in *Times in India*, List of MPs with Pending Cases (Lok Sabha 2004) (http://www.lead.timesofindia.com/content/pending_cases.xls).

[3] This would lead to a spurious positive correlation between criminal politicians and poverty by a standard reverse-causality argument.

[4] For example, a region with a highly efficient judiciary may be simultaneously responsible both for increased criminal prosecution, thereby deeming more politicians criminal, and for reducing poverty and crime. Such a situation would lead to a spurious negative correlation between criminal politicians and poverty by a standard omitted-variable-bias argument.

[5] This distinction is important, as one may wonder why there would be any convicted politicians in a totally corrupt world. However, in a totally corrupt world, it is still possible for a judge to investigate thoroughly, accuse, and acquit in exchange for a higher bribe. Politicians who are subject to this procedure would qualify as criminal politicians in this analysis.

controlled trial. Intuitively, if there exists a random-chance element (that has a continuous density) to the final score difference, then whether the criminal candidate wins in a closely contested election with a noncriminal candidate is determined as if by a flip of a coin.

This paper shows that criminal politicians decrease consumption by the vulnerable sections of society. In particular, they decrease the monthly per capita expenditure of scheduled castes, scheduled tribes, or other backward classes[6] (SC/ST/OBC) by 19 percent. To explain such large welfare effects, this paper looks at criminality and corruption. Offenses against the human body and public order, the crime categories that are those most commonly committed by criminal politicians, increase by approximately 19 percent after the election of a criminal politician. The corruption of LOA officials, as measured by the value of gifts received, decreases by 66 percent. This may be because local politicians exert significant influence on LOA officials through, for example, punitive transfers. Such transfers were originally designed as a mechanism for checking the power of LOA officials, but they are sometimes used by criminal politicians to influence the LOA officials for the benefit of themselves, their criminal activity, and the interest groups that they protect. With fewer and smaller bribes necessary, increased criminal activity could follow as a likely consequence. In contrast, those individuals not connected to the criminal politicians—namely, the poor—cannot use politician support and therefore receive the most adverse effects of these criminal politicians.

This paper generates an important policy implication only if there are ways to prevent criminal politicians from reaching office. Banerjee et al. (2010b) showed that the preferences of voters can be influenced by simple information dissemination programs. They implemented a field experiment in which slum dwellers in India were provided with report cards on candidates' qualifications and criminal records. They found that showing these reports decreases the vote share of criminal candidates. Banerjee et al. (2010a) found that a voter mobilization campaign that primed voters to not vote on ethnic lines reduced the vote share of criminal politicians. Banerjee et al. (2010a, 2010b) thus suggest simple ways to reduce the prevalence of criminal politicians, who are shown in this paper to have devastating consequences on the consumption by and criminality of the poor.

This paper also relates to the literature that proposes decentralization as a way to develop governance structures that are responsive to the interests of the poor. That literature emphasizes that although decentralization may improve the accountability of elected representatives, it may also enhance the influence of local elites (Bardhan and Mookherjee 2000). This paper provides an example of the abuse of power by local elites who were elected to public office. It also exemplifies the devastating consequences of local governments being contested and won by

[6] "Other backward classes" is the government's term for socially and educationally disadvantaged castes.

a criminal. It is close in spirit to Besley et al. (2004), who look at the impact of politicians' identity (that is, scheduled caste or tribe) on the provision of local public goods.

Section 2 discusses the phenomenon of criminal politicians in India. Section 3 describes the regression discontinuity design, and Section 4 describes the main results and the mechanisms. Section 5 concludes.

2. Criminal Politicians in India

The election of criminal politicians in India is relatively common. For example, the Election Commission of India estimates that 1,500 of nearly 14,000 candidates in the 1996 parliamentary election had criminal records, and 40 of these politicians were elected to the eleventh Lok Sabha. As of May 2011, approximately 30 percent of the 545 elected lawmakers in India's lower house of parliament, the Lok Sabha, had criminal cases pending against them.[7] At the state level, more than 700 of the 4,072 sitting members of the legislative assemblies had criminal records (National Commission to Review the Working of the Constitution 2001).

There is ample anecdotal evidence of the connections between criminals and politicians throughout India. For example, the former secretary general of the Lok Sabha, Subhash Kashyap, writes: "The role of criminals in politics began in a big way with the criminals needing the politicians' protection against the processes of law and paying them for it in advance by helping them in elections and otherwise. Politicians needed huge sums of unaccounted money for political activities, their parties, elections and for themselves. . . . Gradually, the politicians became subservient to the dons of the crime world. The latter soon realised that the elections were being won with their money and their muscle power. It was not any surprise when they themselves decided to enter politics" (Kashyap 2007, p. 4).

To counter these problems, the Vohra Committee (1993) was commissioned to study the criminalization of politics and the links between criminals, politicians, and bureaucrats in India. The committee's report, which was submitted by the former Indian Union Home Secretary, N. N. Vohra, in October 1993, proposed a solution in which the criminal records of all politicians would be publicized. On March 13, 2003, the Supreme Court mandated that politicians file an affidavit with the Election Committee of India disclosing their criminal backgrounds. In addition to being required to report all past convictions, acquittals, discharges, and pending cases, politicians are also required to report their assets, liabilities, and educational qualifications. Scanned affidavits from all candidates are publicly available on the Web site of the Election Commission of India.[8] Figure 1 shows

[7] *Times in India*, List of MPs with Pending Cases (Lok Sabha 2004) (http://www.lead.timesofindia.com/content/pending_cases.xls).

[8] Election Commission of India, Affidavits of Candidates (http://eci.nic.in/archive/affidavits/affidavits_fs.htm).

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Annexure-1

Affidavit to be furnished by candidate along with nomination paper
Before the Returning Officer.
for election to Orissa State Legislative (name of the House)
from Chatrapur Assembly constituency
(name of the constituency)

AFFIDAVIT

I, Sri N. Narayan Reddy, Son of Late N. Polleya Reddy, aged 48 years, resident of Vill/Po : Chamakhandi, Ps : Chamakhandi, Dist : Ganjam, At Present Park Street Chatrapur, Ps : Chatrapur, Dist : Ganjam, candidate at the above election, do hereby solemnly affirm and state on oath as under :-

1 The following case(s) is/are pending against me in which cognizance has been taken by the court :-

Case No.	Section & Description for which cognizance taken	The court which has taken cognizance	Date of order of the court taking cognizance	Details of appeal/application / revision against cognizance.
GR 400/95	147,148,353,506,337, 427/149 I.P.C.	SDJM Chatrapur.	02.05.1996	Nil
GR 102/96	147,148,379/34	SDJM Chatrapur	07.10.1996	Nil
GR 104/97	147,148,435,427, 149 IPC.	SDJM Chatrapur	03.04.1998	Nil
SC 36/2001	147,148,427,353,307/ 149 I.P.C.	SDJM Chatrapur.	07.07.1998	Nil
SC 8/2002	147,148,395,149	SDJM Chatrapur	04.06.1998	Nil
SC 43/2003	147,148,307,302/353/ 159	SDJM Chatrapur.	02.02.1999	Nil
SC 52/1994	341,326,307/149	SDJM Chatrapur	02.03.1993	Nil
GR 67/1997	147,148,353,506,427 /149	SDJM Berhampur	04.05.1998	Nil
GR 24/1996	147,148,379,353/34	SDJM Chatrapur.	04.05.1997	Nil

(Contd...P/2)

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CHATRAPUR (GM.)

Figure 1. Affidavit of Narayan Reddy

the affidavit of a criminal politician, where the accusations include murder and assault or use of criminal force to deter a public servant from his duty.[9] Electoral score results show that this candidate won against a noncriminal candidate by 56–44 percent (Election Commission of India 2004, p. 86).

There are two possible concerns regarding the accuracy of the definition of a criminal politician using data from these affidavits. First, the affidavits may contain false information or suppress information. However, rival candidates can easily provide a counteraffidavit, which serves as a safeguard against such practices. Moreover, any discrepancies or false claims found in candidates' af-

[9] Only the numbers of the sections of the Indian Penal Code corresponding to the accusations are reported in the affidavits.

fidavits, supported by some documentary evidence, can be used to file a complaint to the returning officer responsible for overseeing elections. In such a case, the officer refers the case to the appropriate authorities for public prosecution.[10] The second concern regarding this measure of criminality is the possibility of wrongful accusations being made by rival candidates. Accordingly, some individuals who are classified as criminal politicians might have not committed any crimes. This paper addresses this issue by testing an alternative definition of criminal politician in which only a conviction, as opposed to a mere accusation, qualifies as criminality.

Data were collected for all state (Vidhan Sabha [legislative assembly]) and Lok Sabha (federal) elections that occurred in 2004.[11] These data were then matched to the vote shares obtained by the politicians during the elections.[12] In the 1,071 elections that occurred in 2004, 286 candidates reported a criminal record on their affidavits. The political constituencies were then matched to their districts.[13] The sample was then restricted to the 178 districts in which a criminal candidate ran against a noncriminal candidate. In 18 cases with criminals running against another criminal, the criminality status was assigned to the candidate with the greater number of pending cases. Table 1 shows the descriptive statistics of these 178 criminal candidates. Table A1 uses a regression framework to compare the characteristics of criminals with those of noncriminals, with a dichotomous dependent variable equal to one for criminals and zero for noncriminals. Results show that criminal politicians are not less educated, nor do they have more assets. They do, however, have more liabilities and are elected from smaller districts. Pseudo-R^2 values are low, which suggests that criminal politicians differ from noncriminal politicians in other unobservable ways. Addressing this concern is an important contribution of this paper to the literature.

This paper attempts to relate the publicly known criminal status of politicians to consumption in India. Indeed, as the Vohra Committee (Ministry of Home Affairs 1993, p. 3) report states, criminal elements "elected to local bodies, State assemblies and national Parliament . . . have acquired considerable political clout, seriously jeopardizing the smooth functioning of the administration and the

[10] Section 177 of the Indian Penal Code was read with Section 195 of the Criminal Procedure Code regarding furnishing false information to a public servant.

[11] Election Commission of India, Affidavits of Candidates (http://eci.nic.in/archive/affidavits/affidavits_fs.htm).

[12] Election Commission of India, Election Results (http://eci.nic.in/eci_main1/election_analysis.aspx).

[13] A complication arises in practice, because political constituencies do not map one to one to districts; rather, they are typically smaller than districts. There is no information on constituencies, only districts, in the microeconomic data sets of the National Sample Survey of India. To link electoral results to the microeconomic data set, constituencies are matched to districts, and only districts in which at least one constituency had an election between a criminal and a noncriminal candidate are considered. The score difference between the criminal and noncriminal politician, score_dif$_d$, then takes the value of the score difference between the criminal and noncriminal politician in the constituency. Note that all individuals in the district do not live under the rule of the elected criminal politician. The results thus deliver a conservative estimate of the impact of criminal candidates.

Table 1
Descriptive Statistics for Criminal Politicians

Variable	*N*	Mean	SD
Score Difference	178	−.22	13.09971
Winner	178	.49	.499917
Type of crime:			
Offenses against the human body	15		
Offenses against property	6		
Crimes against public order	70		
Economic crimes	8		
Corruption	9		
Other	70		
Education of politician[a]	178	3.96	1.10
Assets	178	3,273,077	1.34×10^7
Cash	178	31,983.96	110,808.2
Deposits in banks or nonbank institutions	178	232,006.5	3,121,313
Gold and ornaments	178	53,725.61	232,879.5
Bonds, debentures, and shares in companies	178	193,251.2	2,166,932
Value of motor vehicles	178	70,328.37	369,667.1
Movable assets	178	525,940.7	3,623,855
Value of agricultural land	178	280,856.8	1,445,041
Value of nonagricultural land	178	198,471.7	1,381,546
Value of residential and commercial buildings	178	643,535.3	2,942,793
Immovable assets	178	1,042,977	3,983,023
Liabilities	178	254,152.2	1,658,007
Bharatiya Janata Party candidate	178	.08	.27
National party[b]	178	.18	.38
Local elections	178	.24	.43
Number of voters by district (1,000s)	178	1,749.33	870.37

Note. Affidavit information for candidates contesting elections for the state and parliamentary constituencies in India (April–May 2004) are from Election Commission of India, Affidavits of Candidates (http://eci.nic.in/archive/affidavits/affidavits_fs.htm).

[a] Values assigned to the level of education attained by a politician are 0, no schooling; 1, primary education; 2, secondary education; 3, intermediary or preuniversity education; 4, university undergraduate education; 5, university graduate education; and 6, university postgraduate education.

[b] Bahujan Samaj Party, Bharatiya Janata Party, Communist Party of India, Communist Party of India (Marxist), Indian National Congress, and Nationalist Congress Party.

safety of the life and property of the common man causing a sense of despair and alienation among people." In particular, it is the vulnerable portions of society, such as the SC/ST/OBC, who are typically less connected to politicians and would thus be adversely affected by criminal politicians in office. This hypothesis is rigorously tested using the identification strategies discussed in Section 3.

3. Identification Strategy

The relationship between criminal politicians and poverty could be endogenous or could be driven by unobserved heterogeneity across districts. To address this concern, a regression discontinuity design is used. Regression discontinuity designs involve a dichotomous treatment that is a deterministic function of a

single, observed, continuous covariate. Individuals whose score on this covariate surpasses some predetermined threshold are assigned to the treatment group (Hahn, Todd, and van der Klaauw 2001). This statistical methodology is applicable in many settings (Angrist and Lavy 1999; van der Klaauw 2002), but political elections represent an ideal situation for its use, because candidates are elected only if their vote share passes the 50 percent threshold (Lee 2008). With knowledge of the criminal records of politicians, my regression discontinuity design compares districts where a criminal politician barely defeated a noncriminal with those districts where the criminal barely lost. If the final vote share includes a continuous-density random-chance element, then the results of a closely contested election are determined in a manner equivalent to a flip of a coin.

The crucial identification assumption is the continuous density of election scores for each candidate, at least in the neighborhood of the discontinuity of treatment. This condition is directly related to candidates' incentives and ability to sort around the threshold, which is defined by a score difference between the two candidates that is equal to zero. If individuals have the ability to manipulate their scores, then the density of vote shares is likely to be discontinuous. In such a case, the regression discontinuity design is likely to yield biased impact estimates. Even with complete control over vote shares, only certain types of fraud would lead to biased estimates. For example, following Lee (2008), suppose a nontrivial fraction of criminal candidates (but no noncriminal candidates) had the ability to selectively invalidate ballots cast for their opponents and perfectly predict what the true vote share would be without interfering with the vote-counting process. In this scenario, suppose that the criminal candidates adhered to the following rule: if the true vote count would lead to a noncriminal win, dispute ballots to raise the criminal vote share, but if the true vote count would lead to a criminal win, do nothing. It is easy to see that in repeated elections this rule would lead to a discontinuity in the density of the scores at the 50 percent threshold. It is precisely this type of score manipulation that would invalidate the use of regression discontinuity design.[14]

To confirm the absence of score manipulation around the threshold and thus validate the regression discontinuity design, two empirical tests are available. The first test uses visual inspection of the density function of the score difference between criminal and noncriminal candidates. The shape of the function at the threshold exposes the type of discontinuities that suggest the presence of vote share manipulation. Figure 2 graphs this density function and indicates no such evidence. A more formal test, the density test (McCrary 2008), is presented in Figure 3. In the first step, one obtains a finely gridded histogram. In the second

[14] Note that other rules describing fraudulent behavior would nevertheless lead to a continuous density of the scores. For example, suppose that all criminals had the ability to invalidate ballots during the actual vote-counting process. Even if this behavior is widespread, if this ability stops when 90 percent of the vote is counted, there is still unpredictability in the vote share tally for the remaining 10 percent of the ballots. It is plausible that the probability density for the vote share in the remaining votes is continuous.

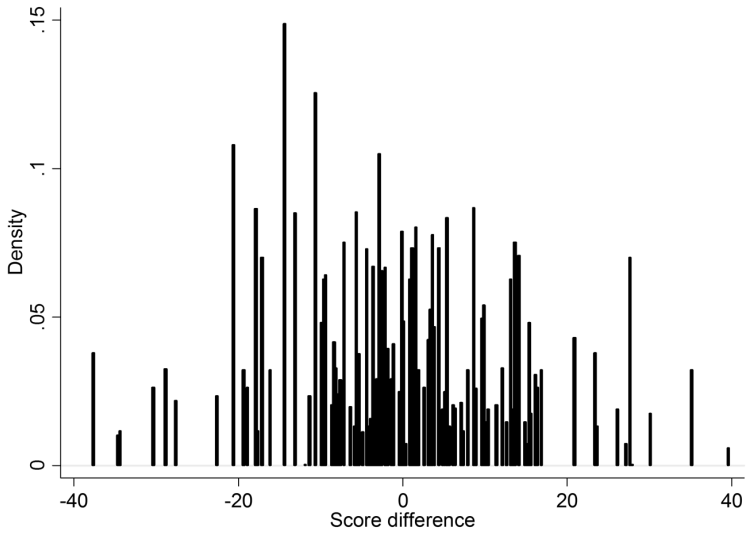

Figure 2. Density function of the score difference between criminal and noncriminal candidates.

step, the histogram is smoothed using local linear regression, separately on either side of the cutoff. Figure 3 shows no evidence of discontinuity. The log discontinuity is .11 (standard error = .28) and thus not significantly different from zero. This test rigorously confirms that there is no discontinuity in the density function of the score differences between criminal and noncriminal candidates.

The second empirical test for electoral fraud involves the comparison of predetermined district characteristics on either side of the vote threshold. If fraud is evident, these characteristics should be different above and below the threshold; if it is not evident, then the characteristics should have the same distribution throughout all districts. This test is performed using predetermined characteristics as dependent variables in the regression discontinuity design. The results will be discussed with the robustness tests in Section 4.

The primary regression specification for this paper features a restricted sample of 178 districts where a criminal candidate faced a noncriminal candidate and takes the following form:

$$y_{id} = \beta_0 + \beta_1 \text{winner}_d + \beta_2 \text{score\_dif}_d + \boldsymbol{X}'_{id}\beta_X + \boldsymbol{X}'_{pd}\beta_p + \alpha_s + \varepsilon_{id},$$

where y_{id} is the monthly per capita expenditure of individual i in an SC/ST/OBC living in district d, score_dif_d is the difference in the score between criminal and noncriminal candidates in district d, winner_d is a variable taking the value of one if the criminal candidate was elected ($\text{score\_dif}_d > 0$) and zero otherwise, $\boldsymbol{X}_{id}$ is a vector of individual characteristics, $\boldsymbol{X}_{pd}$ is a vector of characteristics of

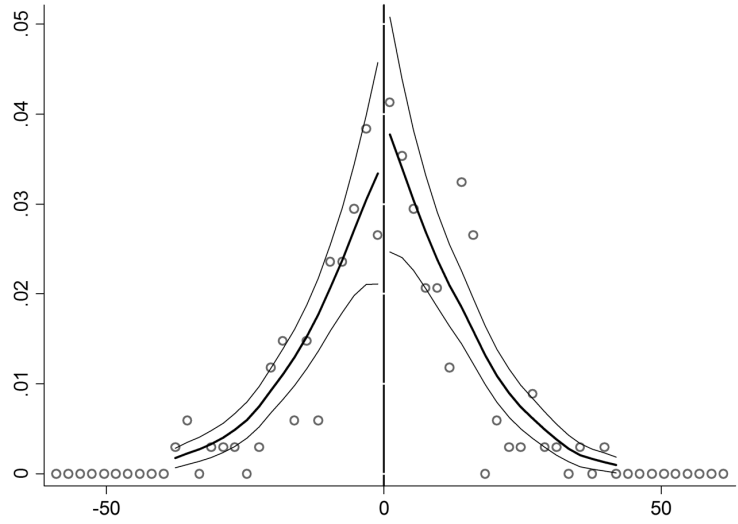

Figure 3. Smoothed density function of the score difference between criminal and noncriminal candidates.

politician p elected in district d, α_s are state fixed effects, and β_1 is the coefficient of interest and represents the discontinuity jump in y_{id} due to a criminal politician being barely elected. Standard errors are clustered at the state level. Following Imbens and Lemieux (2008), local linear regressions are also performed.

4. Results

4.1. Main Result

Figure 4 illustrates the main result of the paper, using data obtained from the sixty-first consumption round of the National Sample Survey of India, a representative sample of 124,843 households collected in 2004–5. The distribution of the monthly per capita expenditure of individuals in SC/ST/OBC is graphed against the score difference between a criminal candidate and a noncriminal candidate. Locally weighted regressions, on both sides of the discontinuity, are used to smooth the outcome. A quadratic fit is also presented. A discontinuity can clearly be seen at the threshold, where the score difference is equal to zero. This graph indicates that the monthly per capita expenditures of individuals in SC/ST/OBC is lower for those in districts where a criminal politician barely won than for those in districts where a criminal politician barely lost.

Figure 4 merely suggests the presence of a discontinuity but does not establish its statistical significance. Table 2 addresses this concern by using a regression

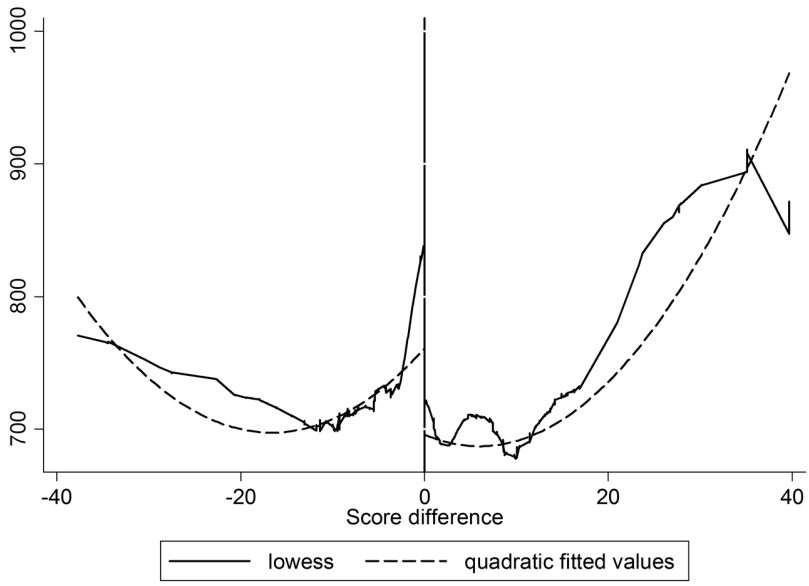

Figure 4. Locally weighted regression (lowess) of the monthly per capita expenditure for scheduled casts, tribes, and other backward classes in 2004–5.

framework. Column 1 shows that the monthly per capita expenditure of individuals in SC/ST/OBC decreases significantly (by 137 rupees). Table A3 shows that the average monthly per capita expenditure for this section of society is 718.17 rupees. In other words, the election of a criminal politician decreases the monthly per capita expenditure of individuals in SC/ST/OBC by 19 percent. The coefficient is barely significant, which might be due to an incomplete specification. Columns 2–8 of Table 2 increase the flexibility of the specification and provide robustness checks to examine the sensitivity of this result.

4.2. Robustness Checks

Table 2 presents specification tests. Column 2 includes an interaction term between Winner and Score Difference, to allow for potentially different slopes in the response of consumption to score differences before and after the discontinuity. To test for potential nonlinearities in the effect of the Score Difference, column 3 includes (Score Difference)^2. In addition, column 3 uses an interaction between Winner and (Score Difference)^2 to allow for a different quadratic fit of the dependent variable. Column 4 uses kernel-weighted local polynomial smoothing, following Imbens and Lemieux (2008). The standard error is bootstrapped, with 200 replications with replacement. Column 5 includes individual

Table 2
Impact of Criminal Politician in Office on Consumption of the Poorest

	Monthly per Capita Expenditure																	
	SC/ST/OBC																	
	OLS						Kernel-Weighted Local Polynomial Smoothing		OLS		OLS, Score Difference in [−5, 5]		OLS, Ration Card Recipients		Full Sample, Ration Card Recipients, Probit	
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
Winner	−136.86^{+}	(84.17)	−139.82^{+}	(82.14)	−162.19^{+}	(93.00)	−111.51**	(26.69)	−99.77*	(49.90)	−166.44**	(59.25)	−184.92**	(60.94)	.08^{+}	(.05)
Score Difference	5.79	(4.88)	−.14	(3.72)	15.74	(12.13)			−.07	(6.35)	9.33	(40.72)	−.69	(7.40)	−.01**	(.01)
Winner × Score Difference			11.44	(8.11)	−14.15	(16.89)			8.54	(9.61)	94.01^{+}	(51.14)	13.91	(10.96)	.01	(.01)
(Score Difference)^2					.51	(.33)			.14	(.16)	−3.20	(6.37)	.13	(.19)	−.00**	(.00)
Winner × (Score Difference)^2					−.20	(.58)			−.35	(.24)	−10.92	(6.73)	−.39	(.28)	.00**	(.00)
Individual controls	No		No		No		No		Yes		Yes		Yes		Yes	
State fixed effects	No		No		No		No		Yes		Yes		Yes		Yes	
Politician controls	No		No		No		No		Yes		Yes		Yes		Yes	
N	26,366		26,366		26,366				26,355		11,335		30,871		40,743	
R^2	.01		.01		.02				.20		.20		.24			

Note. Probit regressions show marginal effects at the mean. Robust standard errors, in parentheses, are clustered at the district level.
$^{+}$ Significant at the 10% level.
* Significant at the 5% level.
** Significant at the 1% level.

controls,[15] state fixed effects, and politician control variables.[16] Column 6 restricts the sample to elections where the score difference was between +5 and −5 percentage points. There are 55 such districts, with a total population of 140 million individuals. The key result from these specification variations is that the impact of criminal politicians on the monthly per capita expenditure of individuals in SC/ST/OBC remains significantly negative.

To show that the results are not entirely driven by the SC/ST/OBC, column 7 restricts the sample to ration card recipients (recipients of Antodoya cards or those below the poverty line). This column shows that electing a criminal politician is associated with a 22 percent decrease in the monthly per capita expenditure of ration card recipients. This effect at the intensive margin is accompanied by an effect at the extensive margin, as column 8 shows that the election of criminal politicians causes an 8-percentage-point increase in the probability of being a ration card recipient.

The same analysis that was used for Table 2 was conducted at other thresholds of the score difference to test the robustness of the results. There should be no significant results at other levels of score difference—for example, at a score difference of +5 percent—because criminal politicians are elected both below and above this threshold. Indeed, in Table 3 I find no significant discontinuity either at +5 percent or at −5 percent.

As discussed above, false accusations may be made by rival candidates. Simply looking at the charges pending against candidates might overstate the true criminal nature of the candidates. To address this concern, I carefully read and coded the affidavits according to the state of the complaints. Convicted is a dichotomous variable equal to one if the criminal politician was convicted and zero otherwise. For the total monthly per capita expenditure I thus include an interaction term between Winner and Convicted (as well as an interaction between Score Difference and Convicted). The insignificance of the interaction between Winner and Convicted indicates that there is no differential effect of convicted criminal politicians. Results are thus not driven by false accusations.

The rest of Table 3 presents a test of the identification assumption of the regression discontinuity design: there should be no systematic difference in predetermined characteristics between districts where a criminal politician barely

[15] The individual controls are Age, household size, and four social group dummies (scheduled tribe, scheduled caste, other backward class, and others), a dummy indicating if the household owns land, and three dummies for the broad occupation group (law, order, and administrative officials).

[16] Crime categories include offenses against the human body, offenses against property, crimes against public order, economic crimes, corruption, and other. Movable assets include cash; deposits in banks, financial insitutions, and nonbanking financial companies; gold and ornaments; bonds, debentures, and shares in companies and business; and motor vehicles. Immovable assets include agricultural land, nonagricultural land, and residential and commercial buildings. Liabilities include total debts at a bank or financial institution as well as tax dues and dues to government departments. Also included are 24 political party dummies. This information is from affidavits on the candidates contesting elections for the state and parliamentary constituencies in India (April–May 2004), which was obtained from Election Commission of India, Affidavits of Candidates (http://eci.nic.in/archive/affidavits/affidavits_fs.htm).

Table 3
Robustness Checks

	Winner		Winner × Convicted		
Dependent Variable	Coefficient	SE	Coefficient	SE	*N*
Monthly per capita expenditure:					
Discontinuity at +5%	−8.27	115.82			26,366
Discontinuity at −5%	69.63	107.60			26,366
Total	−159.89[+]	(92.97)	−68.21	130.92	26,366
In 2000	−74.40	85.33			8,107
Sex in 2000	−.02	.03			13,933
Education in 2000	−.22	.39			13,917
Murder	.06	.14			160
Election code violation	−.10	.07			160
Assets	−1,470,313.18	7,283,029.86			160
Liabilities	−1,267,870.63	998,286.86			160
Education	−.21	.42			125
National party	.20	.15			160

Note. Values are the results of ordinary least squares regressions, with robust standard errors in parentheses. The dependent variable monthly per capita expenditure (discontinuities and total) is the monthly per capita expenditure of scheduled castes, scheduled tribes, and other backward castes (SC/ST/OBC) from the sixty-first round (2004–5) of the National Sample Survey in India. Total monthly per capita expenditure looks at the possibility of wrongful accusations. It thus includes an interaction term between Winner and Convicted, as well as an interaction between Score Difference and Convicted. The dependent variable monthly per capita expenditure in 2000 for SC/ST/OBC is from the fifty-fifth round (1999–2000) of the National Sample Survey in India. The last six dependent variables are from the affidavit information of the candidates contesting elections for the state and parliamentary constituencies in India (April–May 2004) from Election Commission of India, Affidavits of Candidates (http://eci.nic.in/archive/affidavits/affidavits_fs.htm). Murder, election code violation, and national party are dummy variables where yes equals one and no equals zero. All regressions also control for levels in score differences and include polynomials (an interaction term between Winner and Score Difference, (Score Difference)^2, and an interaction between Winner and Score Difference.

[+] Significant at the 10% level.

won and districts where a criminal politician barely lost. The fifty-fifth consumption round (1999–2000) of the National Sample Survey in India is the source for the dependent variables for the measures determined in the year 2000. The insignificance of the Winner coefficient in 1999–2000 indicates that there were no differences in monthly per capita expenditures based on SC/ST/OBC, sex, or the educational level of people in districts where a criminal politician barely won in 2004. Furthermore, the remaining variables show that criminal politicians who barely won are comparable to criminal politicians who barely lost. For example, compared with criminal politicians who barely lost, those who barely won committed the same amount of offenses related to murder or elections and had the same levels of assets or liabilities, the same levels of education, and the same affiliation to national parties. This tends to indicate that there was no systematic manipulation of the scores at the threshold by criminal politicians.

This section has thus established that criminal politicians significantly decrease the welfare of the poor. The next section suggests mechanisms that might explain this finding.

4.3. Potential Mechanisms

4.3.1. Criminality

Criminal politicians may affect consumption by the poorest by increasing the prevalence of criminality, which disproportionately affects the most vulnerable sections of society. In theory, however, it is unclear exactly how criminal politicians would influence criminality. On one hand, the presence of criminal politicians in office may encourage criminality. On the other, criminal politicians may have extralegal sanctions at their disposal to reduce crime.

Table 4 explores the impact of criminal politicians on criminal activity. For murder, the dependent variable is the number of murders committed in a district (National Crime Records Bureau 2002–6). Only the coefficient of Winner is reported, but Score Difference is included in every specification. The table shows that there are 25 more murders committed in districts where a criminal politician was barely elected, amounting to a 19 percent increase.[17] However, this coefficient is not significantly different from zero. Overall, the table shows that offenses against the human body increase.[18] This is also true of crimes against public order, such as riots, and arson. In particular, after the election of a criminal politician, riots and arson increase by 23 and 34 percent, respectively. No significant effect is found for offenses against property and economic crimes. This is consistent with Table 1, which shows that criminal politicians primarily commit offenses against the human body and against public order. Criminal politicians thus encourage a type of criminal activity similar to their own. The table also shows that crimes against women increase after a criminal politician is elected.

It is important to note that prior to 2004, there were no significant differences in the offense levels of any type, as witnessed by the insignificance of the dummy variable Winner interacted with a year dummy equal to one before 2004. This is a strong validation of the identification assumption underlying the regression discontinuity design estimates, because there should be no impact of criminal politicians in years prior to their election.

4.3.2. Corruption

When in power, criminal politicians may encourage bribe taking by bureaucrats, by lowering the perceived probability of being prosecuted for corruption. They might also hire less honest bureaucrats, which would increase corruption levels.

At the same time, there are several reasons why criminal politicians might drive down corruption. First, criminal politicians may enforce regulations less strictly, thus reducing the demand for bureaucratic services and removing op-

[17] This must be considered in light of the fact that there are, on average, 135 murders per year per district.

[18] Results remain essentially the same when the sample is restricted to elections where the score difference was between −5 and +5 percentage points, although the precision of the results decreases.

Table 4
Impact of a Criminal Politician in Office on Crime

Type of crime	Winner	Winner × Year before 2004	Observations	R^2
Offenses against the human body:				
Murder	25.15 (19.70)	−42.22 (44.60)	732	.70
Culpable homicide	2.84+ (1.46)	−3.29 (3.77)	732	.72
Dowry deaths	5.75** (2.17)	−3.48 (5.12)	628	.73
Offenses against property:				
Robbery	25.42 (29.51)	−68.54 (64.77)	732	.69
Burglary	25.53 (111.94)	−279.53 (257.99)	732	.70
Theft	88.86 (465.08)	−1,157.45 (1,056.59)	732	.72
Crimes against public order:				
Riots	52.17+ (29.87)	−109.58 (105.38)	628	.69
Arson	14.28* (7.07)	−34.89 (26.99)	628	.68
Economic crimes:				
Criminal breach of trust	31.21 (32.25)	−138.42 (122.81)	628	.69
Cheating	−8.86 (50.91)	−168.14 (155.86)	628	.72
Counterfeiting	2.17 (4.37)	−16.38 (15.51)	628	.73
Crimes against women:				
Kidnapping/abduction of women or girls	30.19+ (17.89)	−49.56 (41.92)	732	.74
Cruelty by husband, relatives	114.21+ (65.99)	−295.38 (247.80)	628	.71

Source. Criminal data are from National Crime Records Bureau (2002–6).
Note. Values are the results of ordinary least squares regressions, with robust standard errors in parentheses. The dependent variables are the number of crimes per district corresponding to the type of crime indicated. Score Difference is always included. Score Difference and Winner are interacted with a year dummy before 2004 to perform a falsification exercise before 2004. Five year fixed effects and thirty-five state fixed effects are included in all regressions.
+ Significant at the 10% level.
* Significant at the 5% level.
** Significant at the 1% level.

portunities for bribery. Second, the election of criminals may lessen overall business activity, further reducing the volume of bureaucratic services. A third reason why corruption would be reduced by criminal politicians stems from their power to punitively transfer LOA officials.[19] These punitive transfers allow politicians to credibly threaten LOA officials with sanctions if they do not acquiesce to requests for permits, licenses, or acquittals for themselves and their associates. Accordingly, the presence of a greater number of criminal politicians in office may be associated with a decrease in the amount of monetary bribes for LOA officials. Fourth, politicians may even usurp the bribes that would have gone to bureaucrats, by better controlling them and by extracting more of their

[19] The first (1981) and second (1993) Judges' Transfer Case allow local politicians to fire and transfer judges without the consent of the judiciary. The Police Act of 1861 grants powers to local politicians to regulate and exercise control over the police (Raghavan 2003). Punitive transfers of Indian Administrative Service officials are extremely common (Potter 1987; Iyer and Mani 2008; Singh and Bhandarkar 1994; Kingston 2004). Punitive transfers of these officials are identified by Wade (1982, p. 319) as "the politician's basic weapon of control over the bureaucracy."

rents. Finally, Bernheim and Kartik (2011) develop a model of the endogenous determination of candidates' characters (honesty and public spirit) and argue that the public revelation of information concerning candidates' characters, unless completely conclusive (in the sense of reducing the support of the conditional distribution of types), has no effect on the quality of governance through the actual honesty or public spiritedness of elected officials. Thus, the overall impact of criminal politicians on corruption is ambiguous, and Table 5 explores this issue using a rigorous identification strategy.

Using the National Occupations Code (1968) or the National Industry Code (1998), I found 2,032 LOA officials in the sixty-first round of the National Sample Survey of India (see Table A2 for the codes and sample sizes). The sixty-first consumption round provides information on the source of the nondurable goods consumed (food, pan [betel leaf], tobacco, intoxicants, fuel, and light) per household. The survey indicates the quantity and value of goods received as gifts. The values of gifts received per LOA official for different products were added to generate a household total value of gifts received (see Table A3 for descriptive statistics). While the value of gifts received does not perfectly measure the bribes received by LOA officials, it is measured consistently throughout the districts belonging to both the treatment and control groups. Therefore, any systematic difference between the two types of district may indicate a change in (in-kind) bribes.

Table 5 explores the impact of criminal politicians on the value of gifts received by LOA officials. Column 1 shows that the election of criminal politicians leads to a statistically significant 66 percent reduction in the value of good received by LOA officials.[20]

Column 2 includes polynomials of the score difference and interactions between Score Difference and Winner. Column 3 uses kernel-weighted local polynomial smoothing, where the standard error is bootstrapped with 100 replications with replacement. Column 4 includes the complete set of controls used previously (individual controls, state fixed effects, and politician control variables). Criminal politicians remain significantly and negatively associated with the value of gifts received by LOA officials. Column 5 presents a falsification exercise by looking at the values of gifts received by the whole sample, excluding LOA officials, and finds no effect. Because politicians have no powers of punitive transfers over these individuals, it follows that the values of gifts received are unaffected.

Overall, Table 5 shows that criminal politicians reduce the values of bribes received by LOA officials. This finding is consistent with the misuse of punitive transfers by criminal politicians to reduce the need for bribe giving, but more evidence on punitive transfers would be needed to confirm this theory.

[20] Results remain essentially the same when the sample is restricted to elections where the score difference was between -5 and $+5$ percentage points.

Table 5

Impact of Having a Criminal Politician in Office on Bribe-Taking Behavior of Law-and-Order and Administrative (LOA) Officials

	LOA Officials				
		Specification Tests			
	Baseline (1)	Polynomials (2)	Kernel-Weighted Local Polynomial Smoothing (3)	Controls (4)	Rest of Sample: Controls (5)
Winner	−215.87^{+} (125.28)	−435.42* (215.07)	−756.17* (317.93)	−369.25^{+} (209.97)	−134.65 (128.31)
Score Difference	6.05 (4.78)	7.91 (26.78)		20.38 (22.36)	27.35^{+} (14.40)
Winner × Score Difference		2.02 (43.56)		−12.53 (30.68)	−46.18* (18.46)
(Score Difference)^2		.01 (.64)		.44 (.53)	.67 (.42)
Winner × (Score Difference)^2		−.37 (1.27)		−.75 (.91)	−.07 (.61)
Individual controls	No	No	No	Yes	Yes
State fixed effects	No	No	No	Yes	Yes
Politicians control	No	No	No	Yes	Yes
N	2,032	2,031	2,031	2,031	38,701
R^2	.00	.06		.06	.01

Note. Values are the results of ordinary least squares regressions, with robust standard errors, in parentheses, clustered at the district level. The dependent variable in all columns is the value of gifts received (food, pan [betel leaf], tobacco, intoxicants, fuel, and light) during the past 30 days.

$^{+}$ Significant at the 10% level.

* Significant at the 5% level.

** Significant at the 1% level.

5. Conclusion

Using a regression discontinuity design in which the districts where criminal politicians barely won are compared with districts where they barely lost, this paper shows that criminal politicians decrease individual consumption by the vulnerable sections of society. In particular, they decrease the monthly per capita expenditure of SC/ST/OBC by 19 percent. Criminal activity is encouraged, especially for the types of crime that politicians most frequently commit. For example, offenses against the human body and public order increase by approximately 19 percent after the election of a criminal politician. In addition, the corruption of LOA officials, measured by the value of gifts received, decreases by 66 percent.

Three policy implications stem from this paper. First, in consideration of the devastating consequences on criminality of and the consumption by the poorest, it is important to identify ways to reduce the prevalence of electoral victories of criminal politicians. The reform mandating the publication of criminal records of politicians, which supplied important data for this paper and increases awareness of politician criminality, was precisely aimed at this goal. Therefore, a promising avenue of research is the evaluation of the impact of the reform on the probability of election of criminal politicians. In a field experiment, Banerjee et al. (2010b) provide slum dwellers with report cards on candidate qualifications and criminality and find that showing these reports decreases the vote share of the criminal candidates.

Second, in providing an example of elite capture of local governments, this paper relates to the literature that focuses on decentralization as a way to develop governance structures that are responsive to the interests of the poor (Bardhan and Mookherjee 2000). This paper thus illustrates the devastating consequences of local government capture.

Finally, this paper calls attention to the difficulties of corruption measurement. If corruption is measured only by bribe taking (proxied, in this paper, by the value of gifts received), then it is likely to be underestimated, as other forms of corruption might exist. The threat of punitive transfers exercised by politicians over LOA officials may be another potent form of influence. Therefore, measures of corruption that focus solely on bribes and ignore other forms of special interest influence provide a misleading impression of the true welfare effects of criminal politicians. This is similar to the conclusions of Bardhan and Mookherjee (2006). In this paper, the reduction in gifts received was not a desirable outcome, because it was accompanied by a decrease in consumption by the poorest sections of society and an increase in overall criminality.

Appendix

Additional Tables

Table A1

Correlates of Criminality of Politicians: Probit Regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Education of politician	−.01 (.39)		−.01 (.54)	−.01 (.39)	−.01 (.31)	−.01 (.60)	−.01 (.76)
Primary		−.03 (.23)					
Secondary		.14 (1.18)					
Intermediary		.08 (.61)					
Undergraduate		.07 (.73)					
Postgraduate		.11 (1.03)					
Bharatiya Janata Party candidate			.06 (1.29)				
National party candidate[a]				−.01 (.18)		−.03 (.94)	−.04 (1.01)
Local elections					−.00 (.01)		
Number of voters by district (millions)						−.03* (2.74)	−.03* (2.85)
Liabilities						.01+ (2.13)	.01+ (1.99)
Assets						−.00 (1.58)	
Cash							−.09 (1.50)
Deposits in banks or nonbank institutions							.01 (1.39)
Gold and ornaments							−.01 (.26)
Bonds, debentures, and shares in companies							−.00 (1.54)
Motor vehicles							.00 (.13)
Agricultural land							−.00 (.13)
Nonagricultural land							.00+ (2.42)
Residential and commercial buildings							−.00 (1.51)
Pseudo-R^2	.0002	.0058	.003	.0003	.0002	.0371	.0438

Note. The dependent variable is whether the politician is a criminal (yes = 1 and no = 0). Marginal effects are shown at the mean. Robust z-statistics are in parentheses. N = 1,071.

[a] Bahujan Samaj Party, Bharatiya Janata Party, Communist Party of India, Communist Party of India (Marxist), Indian National Congress, and Nationalist Congress Party.

+ Significant at the 5% level.

* Significant at the 1% level.

Table A2
Description of Sample of Law-and-Order and Administrative Officials

Category	Description[a]	NSS61	NSS61 and in the 178 Districts	NSS55	NSS55 and in the 178 Districts
Law officials	Lawyers (140), judges (141), legal assistant (142), jurists (149), legal activities [74110]	289	91	1,507	698
Order officials	Policemen and detectives (inspector, police; subinspector, police; police constable; detective) (571); customs examiners, patrollers, and related workers (572); protection force, home guard, and security workers (573); watchmen, chowkidars, and gate keepers (574); protective service workers (579); investigation and security activities [74920]; defense activities [75220]; public order and safety activities of the union government [75231]; public order and safety activities of the state governments [75232]	2,449	731	8,844	3,449
Administrative officials	All categories for union government, state government, or local bodies: elected officials (20), administrative and executive officials (21), general public service activities [7511], regulatory agencies for social services [7512], regulatory agencies for more efficient operation of business [7513], ancillary service activities [7514], compulsory social security activities [753], village officials (310)	6,525	1,210	31,976	10,744
Total	Law-and-order and administrative officials	9,263	2,032	42,327	14,891

Note. Total sample size: sixty-first round of the National Sample Survey of India (NSS61) = 124,943 households; fifty-fifth round of the National Sample Survey of India (NSS55) = 600,016 households.

[a] National Occupations Classification (1968) and National Industrial Classification (1998) are in parentheses. Additional relevant categories from the National Industrial Classification (2004) are in square brackets.

Table A3
Descriptive Statistics

	N	Mean	SD
Dependent variables:			
Poverty:[a]			
Proportion of individuals in SC/ST/OBC	40,838	.65	.47
Mean per capita expenditure of individuals in SC/ST/OBC	26,370	718.17	589.81
Ration card recipients	40,838	.76	.43
Mean per capita expenditure of ration card recipients	30,900	813.74	742.07
District-level criminality:[b]			
Offenses against the human body:			
Murder	732	135.40	970.71
Culpable homicide	732	11.12	49.56
Dowry deaths	628	21.01	62.31
Offenses against property:			
Robbery	732	130.17	1,331.91
Burglary	732	571.01	5,644.09
Theft	732	2,126.08	23,872.35
Crimes against public order:			
Riots	628	223.57	1,517.46
Arson	628	41.60	373.47
Economic crimes:			
Criminal breach of trust	628	151.14	1,774.64
Cheating	628	271.61	2,186.84
Counterfeiting	628	23.07	255.67
Crimes against women:			
Kidnapping/abduction of women/girls	732	93.11	1,030.52
Cruelty by husband, relatives	628	394.42	3,908.92
Corruption of LOA: value of gifts received[c]	2,032	323.01	2,715.56
Individual control variables of SC/ST/OBC:[a]			
Social group:			
Scheduled tribe	26,370	.11	.31
Scheduled caste	26,370	.26	.44
Other backward class	26,370	.63	.48
Age	26,370	44.86	13.67
Household size	26,370	4.88	2.55
Owns land	26,359	.86	.35

Note. The sample is from the consumption round of the sixty-first round of the National Sample Survey of India (NSS61), restricted to the 178 districts. SC/ST/OBC = scheduled castes, scheduled tribes, or other backward classes; LOA = law-and-order and administrative officials.

[a] Data are for 178 districts from NSS61.

[b] Data are for 178 districts and are from National Crime Records Bureau (2002–6).

[c] Data are for NSS61.

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