

# **Hate Crimes in India: An Economic Analysis of Violence and Atrocities against Scheduled**

## **Castes and Scheduled Tribes**

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### **Abstract**

Crimes against the historically marginalized Scheduled Castes and Scheduled Tribes (SC/ST) by the upper castes in India represent an extreme form of prejudice and discrimination. In this paper, we investigate the effect of changes in relative material standards of living between the SC/ST and upper castes, as measured by consumption expenditures, on changes in the incidence of crimes against SC/ST. Using official district level crime data for the period 2001-10, we find a positive association between crimes and expenditure of SC/ST vis-à-vis the upper castes suggesting that a widening of the gap between groups is associated with a decrease in caste-based crimes. Moreover, this effect seems to be driven by the upper castes' responding to changes in status quo. The results are robust to changes in specifications and modeling assumptions.

**Keywords:** Hate Crimes, Castes, India

**JEL:** J15, K42

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## 1. Introduction

In India, ex-untouchable castes and several tribal groups are victims of discrimination, economic and social exclusion and a stigmatized identity. Additionally, similar to hate crimes in other parts of the world, these groups have been victims of bias-motivated crimes and atrocities at the hands of the upper castes. Atrocities against lower castes routinely take the form of rape of women, abuse by police personnel, harassment of lower caste village council heads, illegal land encroachments, forced evictions and so on (Human Rights Watch, 1999). These instances are in blatant violation of the Indian constitution that abolished untouchability and upholds the ideal of equality among all citizens. Subsequently, there have been other provisions such as the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989, which specifically target such hate crimes. In 2006, acknowledging the gravity of the problem, Indian Prime Minister Manmohan Singh equated the practice of untouchability to that of apartheid<sup>2</sup>.

In this paper, we analyze crimes against the historically disadvantaged Scheduled Castes and Scheduled Tribes (ex-untouchables and marginalized tribes, SC and ST respectively) by the upper castes to understand the mechanisms that cause crimes based on group identity to occur repeatedly. Since the caste system has meant a hierarchy such that the upper castes have traditionally been economically better-off than the lower castes with resulting social dominance, the objective of this study is to analyze whether regional variations in the incidents of violence are systematically linked to variations in relative group economic outcomes between the upper and lower castes and tribes. The motivation is to examine whether crimes committed by the upper castes against the lower castes are a means of asserting their superiority or expressing their frustration at the shift in status quo.

This paper is among the first to analyze data on crimes committed by upper castes against SCs and STs. This is largely facilitated by the fact that starting 2001, official data on such crimes became available at the level of the district. While there is some literature on general violent crimes in India (Dreze and Khera, 2000; Prasad, 2009; Chamarbagwala and Sharma, 2010) and crimes against women (Iyer et al, forthcoming; Sekhri and Storeygard, 2011), the only existing piece of research studying crimes against SC/ST groups is Bros and Couttenier (2010). Using cross-sectional district-level crime data for 2001, they find crimes against SC/ST groups to be higher in districts that have greater commonality of water sources. Common water sources imply water sharing between castes which is considered ritually polluting for the upper castes—more so in rural areas—and is often

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<sup>2</sup> Rahman, Maseeh. "Indian Leader Likens Caste System to Apartheid Regime". The Guardian, Dec. 28, 2006. Available at <http://www.guardian.co.uk/world/2006/dec/28/india.mainsection> (accessed January 5, 2012)

countered with an act of violence against the lower castes. Our study investigates a different hypothesis and exploits the panel structure of the data through which fixed unobservable factors can be controlled.

Our paper can be considered closest in terms of motivation to Mitra and Ray (2010) inasmuch as they too consider the hypothesis that the economic empowerment of a minority or oppressed group leads to a violent backlash against them. They develop a theoretical model to determine how differences in economic progress between religious groups lead to inter-group conflict and test it using Hindu-Muslim riots data for India. They find that an improvement in Muslims' well-being leads to an increase in Hindu-Muslim riots while Hindus' well-being has no significant effect. However, there are two crucial differences between the two studies. Firstly, they analyze communal riots, which represent violence involving a large group of people, while we study individually targeted caste-based violence. Secondly, and more importantly, their data do not allow separation of perpetrators and victims by religion, except by inference, whereas in our data, the identification between victims (SC/ST) and offenders (non-SC/ST) is clear from the start. Thus, this study is a new contribution to the discussion of group-based violence in the Indian context. However, there is an extensive social science literature from the United States that has studied racial violence and this paper builds on that literature.

Using district level data on such crimes and expenditures as a proxy for material standard of living, we find that the incidence of caste violence is positively correlated with the expenditure of the lower castes and tribes relative to the expenditure of the upper castes. Dividing the crimes into predominantly violent crimes and non-violent crimes, we find that changes in relative material standards of living between groups lead to changes in violent crimes aimed at extracting some form of economic surplus or property from the victims.

Although discrimination has largely been discussed in the context of labor markets and access to public goods, this is among the first studies to quantitatively analyze the phenomenon of crimes targeted at the SC/ST groups. Since crimes committed by non-SC/ST individuals against individuals belonging to SC/ST groups fall under the broad category of hate crimes, this paper will be nested in that literature while also drawing from the general crime literature.

The remainder of this paper is organized as follows. Section 2 provides a background on the caste system, existing inequalities and a brief overview of the hate crimes literature. Section 3 describes

the dataset and the summary statistics. Section 4 presents the results and section 5 discusses and concludes.

## 2. Related Literature

### 2.1 The Indian caste system

The 'caste system' is an arrangement of the Hindu population into several thousand groups called *jatis* (castes). These groups have emerged from the ancient *varna* system (also translated as caste) according to which society was divided into initially four, later five, hereditary, endogamous, mutually exclusive and occupation-specific groups. At the top of the varna system were the Brahmins (priests and teachers) and the 'Kshatriya' (warriors and royalty), followed by 'Vaishya' (traders, merchants and moneylenders) and finally the 'Shudra' (engaged in menial labor and low-end jobs). Over time, the Shudras split into two tiers, with those engaged in the most menial and dirty jobs being called the 'Ati-Shudras'. The Ati-Shudras were considered untouchable, such that any contact with them was seen as polluting. They were forced to live in segregated housing, denied access to schools and places of worship attended by upper castes, and required to maintain physical distance from upper castes in order to not pollute them. Additionally, there are the indigenous tribes (or the Adivasis) who on account of geographical isolation, primitive agricultural practices and distinct lifestyle and customs have been socially distanced and face large-scale exclusion from mainstream Indian society.

In 1950, the Constitution notified the untouchable *jatis* and the Adivasis as 'Scheduled Castes' and 'Scheduled Tribes' respectively, in order to remedy their extreme social, educational and economic backwardness<sup>3</sup>. Affirmative action was extended to them in the form of reservations or quotas in national and state legislatures, local village councils and institutions of higher education and government jobs. In addition to the SCs and STs, there is a third category to which reservations have been extended since the early 1990s. This group, known as the 'other backward classes' (OBC) while not burdened with the stigma of untouchability, were socially and educationally backward and suffered from a persistent lack of opportunity and poor socio-economic outcomes<sup>4</sup>.

While the reservation policy has made a discernible positive impact in some dimensions, gaps remain between the SC/ST and non-SC/ST groups. Empirical studies continue to find evidence of

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<sup>3</sup> While 'Scheduled Castes' is the official nomenclature, ex-untouchables prefer to self-identify themselves as Dalit (meaning the oppressed) as a term of pride. We will use both terms depending on the context.

<sup>4</sup> Starting late 1990s, large-scale datasets use four social group categories: SC, ST, OBC and 'others'. 'Others' is a reasonable approximation of the upper caste category.

caste-based discrimination in labor markets and 'pre-market' discrimination in terms of access to public goods<sup>5</sup>. Shah et al (2006) in a survey of 565 villages across 11 large states in 2001-02 document the widespread practice of untouchability in a significant proportion of villages in the form of denial of entry to Dalits into non-Dalit homes and places of worship, blocking access to use common water sources, separate seating for Dalit students in schools etc. Moreover, there is a burden of a 'stigmatized ethnic identity' (Berreman, 1971) that even richer Dalits continue to live with. The following account by a Dalit surgeon effectively summarizes the sentiment behind 'stigmatized ethnic identity': "I am a micro-surgeon specializing in hand and spinal reconstruction, and am [a Member of Legislative Assembly] from Bihar, but I still remain very much a dalit—a dhobi, to be precise— open to routine humiliation from the upper castes."<sup>6</sup> This stresses the fact that despite significant policy initiatives, notions about caste rigidities are deeply ingrained and upward economic mobility has not necessarily ensured social integration and tolerance. Violence against lower castes is only the most severe manifestation of that intolerance.

## 2.2 Hate crimes

The term hate crime refers to "unlawful, violent, destructive, or threatening conduct in which the perpetrator is motivated by prejudice toward the victim's putative social group" (Green et al., 2001, pg.480). The most crucial difference between a hate crime and a similar non-hate crime is the underlying motivation. While a conventional crime might be motivated by a desire to expropriate resources from the victim for the personal gain of the offender, in the case of hate crimes, there is a deliberate intention to victimize an individual because of his membership in a certain social group.

A review of the literature, most of which comes from the United States and Europe, indicates that among other things, relative economic position of the dominant group vis-à-vis the subaltern group is an important determinant of hate crimes. Beck and Tolnay (1990) find that during the period 1882-1930, mob violence against blacks in the southern states of USA increased during the years when economic competition intensified. Economic competition was greater during periods when cotton prices fell and labor demand declined thereby leading to greater competition for the reduced number of jobs between blacks and whites. Price et al (2008) find that during 1882-1920, the probability of being lynched was positively associated with the victim's former slave status thereby

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<sup>5</sup> For excellent detailed discussions on economic discrimination in India, see Deshpande (2011) and Thorat and Newman (2010).

<sup>6</sup> Kanaujia, Ramsunder Ram. "Surgeon Second, Dhobi First", Tehelka, Feb. 3, 2007, available at [http://www.tehelka.com/story\\_main26.asp?filename=Cr020307Shadow\\_lines.asp](http://www.tehelka.com/story_main26.asp?filename=Cr020307Shadow_lines.asp) (Accessed Sept 14, 2011)

indicating the importance of racial stigma in white-black relations. Further, they also find the lynching probability to be inversely related to the cotton prices in the southern US counties. In a more contemporary setting, Jacobs and Wood (1999) investigate the relationship between economic and political competition and interracial murders for US cities. As economic competition for jobs increases between blacks and whites, murders of blacks by whites increase. Additionally, cities with a black mayor experience more murders of blacks by whites. Eitle et al (2002) find that economic competition—measured by the ratio of white and black unemployment rate—has a positive effect on crimes committed by whites against blacks. On the other hand, political threat—ratio of black to white voters—has no significant effect on the interracial crimes. Gale et al (2002) use American state-level data for 1992-1995 and find unemployment rates and black-white income gaps to have a positive effect on hate crimes committed by whites against blacks. Krueger and Pischke (1997) find no relationship between incidence of anti-foreigner crimes and unemployment rate or wages in post-unification Germany during 1991-93. The percentage of foreigners has no effect on ethnic crimes in the western Germany but in eastern Germany, foreigner victimization rate falls as their relative number increases. However, Falk et al (2011) find unemployment rates to positively affect violent and non-violent right wing extremist crimes in Germany with the effect on non-violent crimes being greater.

### **3. Data**

#### **3.1 Crime data**

The crime data used in this paper are from the annual publication 'Crime in India' by National Crime Records Bureau (NCRB), Government of India. This data is based on complaints or 'first information reports' filed with the police and not the cases convicted<sup>7</sup>. A First Information Report (FIR) is a written document prepared by the police when they receive information about the commission of a 'cognizable' offence from either the victim or by someone on his or her behalf. It is only after the FIR is registered in the police station that the police take up investigation of the case. While earlier years reported crimes at the state level, since 2001, data on crimes against SC/ST under various categories have become available at the district level. The distinctive feature of this dataset is its classification

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<sup>7</sup> As defined by the Code of Criminal Procedure of India, a 'cognizable' offence is one in which the police is empowered to register an FIR, investigate, and arrest an accused without a court issued warrant. A 'non-cognizable' offence is an offence in which police cannot register an FIR, investigate or arrest without the prior permission from the court. NCRB data records only cognizable offences.

system. The data are defined in such a way that the victim belongs to the SC/ST group and the offender to a non-SC/ST group. For this study, we use the crime data from 2001 to 2010 for 415 districts that make up the following 18 large states: Haryana, Himachal Pradesh, Punjab, Uttar Pradesh, Uttarakhand, Karnataka, Andhra Pradesh, Kerala, Tamil Nadu, Bihar, Jharkhand, Orissa, West Bengal, Madhya Pradesh, Chhattisgarh, Gujarat, Rajasthan and Maharashtra.

There are two main types of crimes: those reported under the Indian Penal Code (IPC) and those that are registered under the Special and Local Laws (SLL). IPC crimes include: i) murder, ii) rape, iii) physical assault or hurt, iv) kidnapping, v) robbery, vi) arson, vii) dacoity and viii) other classified IPC crimes. Other classified IPC crimes is a residual category that includes crimes such as assaulting public servants, killing cattle, criminal trespass and intimidation etc. Crimes under SLL are: i) Protection of Civil Rights Acts, 1955, and ii) The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989. The SLL categories constitute special social enactments to safeguard the interests of SC/ST groups. The Prevention of Atrocities Act specifies provisions for rehabilitation and compensation of victims and setting up of special courts to expedite the trial of cases. Examples of crimes included under SLL are: denying admission to Dalits into places of recreation and worship, educational institutions and hospitals; denying Dalits access to water sources; wrongfully occupying land owned by SC/ST; stripping them naked; practice of untouchability; compelling them to do bonded labor or scavenging jobs and so on<sup>8</sup>. Broadly, the IPC crimes include acts of overt force and aggression and are predominantly violent crimes. On the other hand, SLL crimes are untouchability related offences with the intention of humiliating members of the lower castes, with some amount of violence. Hence, they are largely non-violent crimes.

The issue of under-reporting of crime is a standard limitation of most official data on crime, even for developed countries. For a hate crime, under-reporting is expected since there is courage required on the part of the victims to report the crime due to a fear of reprisal. Moreover, the victim is likely to feel ashamed in reporting a crime where he has been humiliated on account of his social identity. Ideally, one would like to use victimization surveys—that ask random samples of individuals whether they have been victims of certain types of crimes over a fixed recall period as compared to police data that is a measure of crimes that get reported by victims to the police—to study crimes of this nature. However, in the absence of such data, this paper makes use of best available nationally representative data and we believe that is a good starting point, especially since quantitative evidence on crimes against SCs and STs is limited. Moreover, with the fixed effects in our regression, we are able to control for the district-specific time-invariant component of under-reporting.

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<sup>8</sup> The complete list of SLL crimes against SC/ST is in appendix 1.

### 3.2 Explanatory variables

Since our unit of analysis is the district, district-level information on the explanatory variables is calculated from the large-scale household surveys conducted once in five years by the National Sample Survey Organization (NSSO). Since our crime data spans the period 2001-2010, we use NSS data from the 'Consumer Expenditure Survey' and 'Employment-Unemployment Survey' modules of 1999-2000 (55<sup>th</sup> round) and 2004-05 (61<sup>st</sup> round). Districts in both rounds of NSS data have been made comparable using the weights provided by Kumar and Somanathan (2009).

In order to utilize the entire time series of district-level crime data and also to match it with the two rounds of district-level data from NSS, for the first period, we aggregate crimes for years 2001 to 2005 and for the second period, we aggregate crimes for years 2006 to 2010. Therefore, we have a two period panel with 415 districts in each period.

The primary variable of interest is the material standard of living of SC/ST relative to that of the upper castes. In order to capture standard of living, we use data on consumption expenditure from the NSS Consumer Expenditure Survey. Thus, our principal variable is defined as the logarithm of ratio of expenditure of SC/ST and expenditure of upper castes.

Among other regressors, we control for percentage of SC/ST in the district and its squared term. District-level average per capita expenditure accounts for overall prosperity. Expenditure-based Gini coefficient accounts for overall inequality. We control for percentage of population living in rural areas since caste-based crimes are likely to be a predominantly rural phenomenon. Educational attainment is controlled for by introducing dummies for different levels of education: illiterate, primary, secondary, higher secondary and above. Unemployment is an important determinant of crime since unemployed people with no legal income are more likely to engage in illegal activities as a way of earning an income. However, in developing countries, the underemployment rate is a more accurate measure of time utilization. Underemployment is commonly defined as the underutilization of labour time or skills of the employed either due to seasonality of work or lack of sufficient work. Percentage of males in the 15-24 age groups in the population represents the size of the group that is most likely to engage in criminal activity.

We also control for political competition at the state-level by using effective number of parties (Laakso and Taagepara, 1979) that is calculated using data from the state assembly election reports



from the Election Commission of India<sup>9</sup>. The idea is that in the event of smaller number of parties competing, since a larger share of votes is required for the winning party, parties need to build broad alliances spanning all social groups and cannot explicitly cater to the interests of a particular group, while in case of a larger number of parties, since the required winning margin is smaller, parties rely on particular social groups for support. Based on this reasoning, we would expect states with greater electoral competition (larger effective number of parties) to be more sympathetic to the cause of the SC/ST groups thereby leading to lesser violence against them<sup>10</sup>.

### 3.3 Descriptive Statistics

We define SC/ST total crime rate as the number of total crimes against SC/ST per 100000 SC/ST population. SC/ST crime rates using IPC and SLL crimes against SC/ST are also measured per 100000 SC/ST population. Over the period 2001-10, SC/ST crime rates have registered a decline. IPC crimes account for approximately 61 percent of total crimes against SC/ST whereas SLL crimes constitute the remaining 39 percent. In terms of broad state-level statistics, Rajasthan has the highest SC/ST total crime rate averaged over the period (29.82). Other states with high SC/ST crime rates are Madhya Pradesh (25.83), Andhra Pradesh (23.25), Uttar Pradesh (16.57) and Bihar (16.26). The lowest crime rates are recorded in West Bengal (0.12) and Punjab (1.81). In terms of IPC crimes against SC/ST, Rajasthan (24.2), Madhya Pradesh (23.8) and Andhra Pradesh (14.21) have high crime rates whereas in terms of SLL crimes against SC/ST, Bihar (10.63), Karnataka (9.66) and Andhra Pradesh (9.04) are the states reporting high rates.

Table 1 contains the summary statistics of the district-level data for the period 2001-10. Of the average 430 total crimes against SC/ST per district, approximately 288 are IPC crimes and 142 are SLL crimes. The SC/ST total crime rate is 100 while the SC/ST IPC crime rate is 67 and SC/ST SLL crime rate is 33. Among the IPC crimes, we make a distinction between crimes against body and non-body crimes. Body crimes are the sum of murder, rape, kidnapping and physical assault/hurt. Non-body crimes are the sum of dacoity, robbery, arson and other classified IPC crimes. The SC/ST body crime rate is 23.07 and the non-body crime rate is 43.47. The general crime rate which measures general crimes where the victims are non-SC/ST—defined as total IPC crimes in the district less IPC crimes

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<sup>9</sup> The formula for effective number of parties is  $n = 1/\sum p_i^2$  where  $p_i$  is the proportion of votes received by the  $i^{\text{th}}$  party in the state elections. Instead of using the total number of parties, this measure places greater weight on parties that have a higher share of votes as compared to those with a low vote share.

<sup>10</sup> Wilkinson (2004) finds that Indian states with higher effective number of parties experience fewer Hindu-Muslim riots.

against SC/ST per 100000 non-SC/ST population—is 1544. On average, crime rates against SC/ST and general crime rates registered a decline between the first and second period.

The district-level average expenditure is Rs. 535 and inequality as measured by expenditure-based Gini is 0.25. The SC/ST average expenditure is Rs. 433, while it is Rs. 679 and Rs. 523 for the upper castes and OBC respectively. Between the two periods, per capita expenditures of all social groups increased although the rate of increase was slowest for the SC/ST groups, thereby leading to a decline in SC/ST expenditure relative to upper castes' expenditure. On average, SC/ST expenditure is 68 percent of the upper caste expenditure.

SC/ST account for 29 percent of the district-level population and 79 percent of the population is in rural areas. The underemployment rate is around 16 percent. Males in the 15-24 age groups make up 9 percent of the population. 46 percent of the population is illiterate, 20 percent have completed primary education, 24 percent have completed secondary education and only 10 percent has completed higher secondary and higher levels of education. The state-level effective number of parties is around 4.6.

## 4. Analysis

### 4.1 Results

We use a linear fixed effects regression model. District fixed effects are included to control for district-specific time-invariant unobservable factors that may influence the relationship between crime and the explanatory variables. Among other factors, district fixed effects control for the time-invariant district-specific under-reporting of crime. A time dummy is included for the second period. Standard errors are clustered at the district level to account for possible correlated shocks to district-level crimes over time.

The general form of the estimating equation is:

$$Y_{it} = \alpha_1 + \beta * e_{dt} + \sum_k \mu^k X_{dt}^k + \delta_d + \gamma_t + \epsilon_{dt}$$

Where  $y_{it}$  is the logarithm of the SC/ST crime rate<sup>11</sup>,  $e_{dt}$  is logarithm of the relative expenditure between SC/ST and upper castes,  $X_{dt}^k$  is the vector of k controls in district d at time t,  $\delta_d$  are district

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<sup>11</sup> Results are qualitatively similar if crime rates are calculated per 100000 total population instead of SC/ST population.

fixed effects,  $\Upsilon_t$  is a time dummy for the second period and  $\epsilon_{dt}$  is the error term. We expect the coefficient of the relative expenditure term,  $\beta$ , to be positive.

Table 2 presents the main results. In column 1, the dependent variable is the SC/ST total crime rate. We use the following explanatory variables: percentage SC/ST, percentage SC/ST squared, percent rural, Gini coefficient, underemployment rate, education dummy variables, percentage of young males and effective number of parties. The coefficient of the relative expenditure term is positive and significant. Since crime rates and relative expenditures show a downward trend between the two periods over which we analyze the data, this implies that a 1 percent decrease in the relative expenditures or widening of the gap between lower and upper castes is associated with a 0.3 percent decrease in violence. Percentage SC/ST and its quadratic term are negative and positive respectively, suggesting that an increase in percentage of SC/ST is associated with a decrease in victimization and the decrease is slower as the percentage SC/ST increases. Across all regressions, we obtain similar results for the SC/ST percentage term. Becker (1957) suggests that the effect of numbers of the minority groups can go in either direction: an increase in numbers could either reduce prejudice and hostility on account of greater interaction and familiarity or could have an adverse effect by fuelling fears that the minority group is trying to challenge the dominant group.

In column 2 of Table 2, the dependent variable is the SC/ST IPC crime rate. We use the same explanatory variables as in column 1. Results are qualitatively similar to column 1. A 1 percent decrease in the relative expenditure is associated with a 0.35 percent decrease in IPC crimes committed by the upper castes against the SC/ST groups. Overall higher inequality in the district, as measured by the Gini, is positively associated with IPC crime rates. This result is in accordance with other literature that finds inequality to be significant determinant of violent crimes in society (Kelly, 2000; Fajnzylber et al, 2002). In column 3 of Table 2, the dependent variable is the SC/ST SLL crime rate. In this regression, the relative expenditure term is insignificant thereby indicating that the relative economic position of SC/ST vis-à-vis the upper castes is not associated with the SLL crime rate. The coefficient on the effective number of parties was insignificant in columns 1 and 2, it is now negative and significant implying that as the number of parties competing in the state increases, SLL crimes against SC/ST register a decline.

To understand the effects of group-wise economic progress on the incidence of caste violence, in Table 3, instead of using relative expenditures, we enter the logarithm of expenditures group-wise:

expenditure of SC/ST, expenditure of other backward classes (OBC) and the expenditure of upper castes (UC). Since we have group-wise expenditures, we do not control for overall expenditure. In column 1, the dependent variable is the SC/ST total crime rate. While OBC expenditure and SC/ST expenditure have no effect on crime rate, the upper castes' expenditure coefficient is negative and significant implying that a 1 percent increase in their expenditure is associated with a 0.34 percent decrease in crime rates. The most plausible mechanism at play is that of opportunity cost. This idea is crucial to models of crime originating with Becker's influential work (1968). With an increase in the material standard of living, each unit of time spent in committing crimes becomes more costly for the perpetrators. As we show later, upper castes' expenditure has no effect on the incidence of general crimes implying that it is the lower castes that are differentially targeted with changes in relative economic positions over time. Moreover, as our data indicate, the average expenditure increased most rapidly for the upper castes and slowest for the SC/ST groups, thereby increasing the gap between the two groups and diminishing the perceived threat associated with economic position of subaltern group relative to the dominant group<sup>12</sup>.

In column 2, the dependent variable is the SC/ST IPC crime rate. Again, while SC/ST and OBC expenditure is insignificant, a 1 percent increase in upper castes' expenditure is associated with a 0.56 percent decrease in IPC crime rates. In column 3, the dependent variable is the SC/ST SLL crime rate. All the group-wise expenditure terms are insignificant. The coefficient on the effective number of parties is negative and significant. As in the relative expenditure specification in of Table 2, the Gini coefficient is positively associated with IPC crime rate but uncorrelated with SLL crime rate.

Results from Tables 2 and 3 jointly show that firstly, while relative expenditure is an important determinant of caste-based crimes, it is the perpetrator (upper caste) characteristics and not the victim (SC/ST) characteristics driving the results. Secondly, while IPC crimes are correlated with relative expenditure and upper castes' expenditure, SLL crimes are not. This indicates that changes in relative economic status of groups are associated with changes in largely violent crimes where the intention is to expropriate or wrest economic surplus from the victims rather than crimes that seek to insult and humiliate victims on account of their lower social status. This seems to be consistent with findings from field surveys that report increases in violent acts by upper castes whenever lower castes try to assert their rights or demand their fair share by way of wages, forest rights or basic

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<sup>12</sup> Blumer (1958) posits that perceived threat among the dominant group manifests in the following ways: i) a feeling of superiority; ii) a feeling that the subordinate group is intrinsically different; iii) a feeling of exclusive claim over certain privileges; iv) a fear that the subordinate group desires a greater share of the dominant group's prerogatives.

human rights. SLL crimes that are largely non-violent occur on a more routine basis as a result of long term social attitudes, for instance beliefs about hierarchy or the “right” order of the world, place of the Dalits in the social hierarchy and therefore might not be as closely related to changes in economic status.

In Table 4, we decompose the IPC crimes into two mutually exclusive categories: crimes against body, and non-body crimes. Body crimes are the sum of murder, rape, kidnapping and physical assault/hurt. Non-body crimes are the sum of dacoity, robbery, arson and other classified IPC crimes and are largely property crimes. In columns 1 and 2, the dependent variable is the SC/ST body crime rate and we report results of the relative expenditure specification and the group-wise expenditure specification respectively. Neither relative expenditure nor the upper castes’ expenditure is associated with the incidence of body crimes. In columns 3 and 4, the dependent variable is the SC/ST non-body crime rate. Column 3 indicates a positive association between relative expenditure of SC/ST and upper castes and non-body crimes. In column 4, upper castes’ expenditure is negatively associated with non-body victimization. The coefficient on the Gini is positive and significant for the non-body crimes but not for the body crimes. These results suggest that it is the non-body crimes component of the IPC crimes against SC/ST that is responsive to changes in relative expenditure and upper castes’ expenditure. This indicates that IPC crimes against SC/ST occur as crimes with the objective of depriving victims of their material property rather than inflicting physical bodily harm. These findings further strengthen our inference from Tables 2 and 3 that crimes by upper castes are committed with the objective of grabbing the economic surplus and destruction of material property of the SC/ST groups.

In Table 5, we add a control variable to capture how crime-prone the district is in general. While the relationship between hate crimes and non-hate motivated crimes has not been clearly established in the literature since the underlying motivation for hate crimes and similar non-hate crimes is different, it is plausible that areas with a culture of violence or higher level of general crimes are more susceptible to the occurrence of hate crimes on account of poorer law enforcement machinery. We measure how crime-prone a district is by defining a variable called the general crime rate that measures the general criminality in the district. It is measured as total IPC crimes in the district less IPC crimes against SC/ST per 100000 non-SC/ST population. In columns 1 and 2, we use the SC/ST total crime rate and in columns 3 and 4, we use the SC/ST IPC crime rate<sup>13</sup>. Results from Tables 2 and 3 are robust to controlling for logarithm of general crimes rate. Moreover, in all

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<sup>13</sup> Results from regressions where the dependent variable is the SC/ST SLL crime rate (not shown) are similar to results in Tables 2 and 3.

specifications, we find that the coefficient on general crime rate is positive and significant suggesting that more crime-prone districts do in fact experience greater victimization of the SC/ST community.

In Tables 6a and 6b, we model the *number* of total crimes against SC/ST and IPC crimes against SC/ST respectively as count data and employ a negative binomial regression model. We add the logarithm of the SC/ST population on the right hand side. Since the relative expenditure and group-wise expenditures are in log form, the coefficients can be interpreted as elasticities. In column 1, the main explanatory variable of interest is the relative expenditure between SC/ST and upper castes, the coefficient of which is positive and significant. In column 3, we use the group-wise expenditures specification and find that the upper castes' expenditure is negatively associated with violence. In columns 2 and 4, we also control for logarithm of general crime rate in the district and the results are qualitatively similar. Hence, our results are fairly robust to alterations in the modeling assumptions.

#### **4.2 Some Further Questions**

This section discusses some questions and concerns that might follow from the results section and addresses how we mitigate these concerns. One of the concerns is that the crimes against SC/ST could be a part of the overall trend of general crimes in the district. The idea is that if the relative economic status of caste groups is also correlated with general crimes in the district, then we cannot conclude that it is only crimes against SC/ST that are uniquely linked to relative group economic positions. In order to check for this, in Table 7a, we present results of regressions where the dependent variable is logarithm of general crime rate. If the coefficients on our expenditure variables turn out to be insignificant, we would have ruled out this concern. In column 1, the coefficient of the relative expenditure term is insignificant, as are the group-wise expenditures in column 2, which stress the fact that differences in material standard of living between caste groups uniquely affect crimes against SC/ST groups and are not associated with general crimes in society. As a robustness check, I model the general crimes as a count variable in Table 7b and use the negative binomial regression model. Results are qualitatively similar to those in Table 7a.

A second concern with the results could be that particular high crime states such as Rajasthan, Madhya Pradesh or Uttar Pradesh might be driving the results, such that excluding observations from that state might affect our results. In order to check for this, we iteratively run the entire set of regressions dropping one state at a time and find that our results are robust to such exclusions<sup>14</sup>.

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<sup>14</sup> Results are not shown here in the interest of space, but are available with the author.

A third concern is that of reverse causality. Targeted crimes of a violent nature against a specific community could be a debilitating force leading to reduced earnings and expenditures, which would make them further worse-off compared to the upper castes. If this reverse causality exists, then our effects are under-estimated and provide a lower bound for the true estimates. To check for this, we regress log of SC/ST expenditures in 2004 on log of SC/ST crime rate in 2004<sup>15</sup>. We find the coefficient on the crime rate term to be insignificant implying that crimes against SC/ST do not negatively affect their standard of living.

A fourth possible concern could be out-migration of SCs and STs from their districts to other districts on account of such targeted violence. While, we cannot control for the possibility of migration in our regression analysis since the NSS data does not allow us to identify migration, we cite findings from other data sources to investigate this issue. Bhagat (2009) using 2001 Indian Census data documents that 62 percent of the internal migration in India is in the form of intra-district migration. Inter-district and inter-state migration account for 24 percent and 13 percent respectively of total internal migration. For males and females, employment and marriage respectively are the primary reasons for migration indicating that migration is on account of reasons other than violence. More crucially, since our unit of analysis is the district and the largest stream of migration is intra-district, our results will not be affected.

Fifth, one can claim that the effects we observe are really those of changes in reporting of crimes rather than changes in actual incidence of crime. We argue that is not the case, primarily on two grounds. Firstly, in regressions using the group-wise expenditure specification in table 3, crimes are correlated with the upper castes' expenditure and not with lower castes' expenditure indicating that it is the perpetrator characteristics driving such crimes. If it were a case of reporting, then it is the victim characteristics that should have been correlated with crimes. Secondly, the SLL crimes are the purely caste-based crimes motivated solely by the lower caste status of the victims and this should be the category that is most likely to be sensitive to reporting by victims<sup>16</sup>. However, as our regressions indicate, SLL crimes are not associated with changes in relative economic positions.

Finally, and more in the nature of a caveat, is the fact that since the analysis is conducted at the level

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<sup>15</sup> Since district-level crime data for 2000 is not available, we can only check for reverse causality using the cross-section for 2004. Results are available with the author.

<sup>16</sup> Iyer et al (forthcoming) find that there is better reporting of SLL crimes after lower castes obtain mandated representation in local councils.

of the district, nothing can be definitively said about the nature of individual motivations that leads to the incidence of such crimes. This means that theories that make predictions about individual incentives to engage in such behavior that do not vary across districts, cannot be tested. Having said that, with this available data, these results provide suggestive evidence that variations in relative group economic positions are linked to variations in violence levels.

## **5. Discussion and Conclusion**

This paper provides one of the first analyses of crimes against Scheduled Castes and Tribes in India with a view to understanding the effect of a change in the gap between upper and lower castes' standard of living on the victimization of the SC/ST community. We find that changes in relative economic position between the lower castes and upper castes are positively correlated with changes in the incidence of hate crimes, such that a widening of the gap in expenditures between the lower and upper castes is associated with an increase in crimes committed by the upper castes against the SC/ST. We interpret this as the upper castes' responding to a change in threat perception created by changes in the relative standard of living of a group that has been historically subordinated. There is ample evidence that suggests that upper castes use and justify various forms of violence as tools to ensure adherence to caste-based norms and traditions by the lower castes. Further, between the IPC and SLL crimes it is the violent IPC crimes that are responsive to economic gaps. As a re-affirmation of this conjecture, we find that among the largely violent crimes, it is the property related crimes—crimes that seek to deprive the victim of his property symbolic of his material progress—that are affected by the relative standards of living. Even though the magnitudes of the effects we obtain are small, just the incidence of such crimes instills a sense of apprehension among lower castes. This reflects the fact that even though affirmative action has led to some visible changes in some dimensions of economic condition of SC/ST groups, they have not been truly empowered since notions of caste hierarchies remain deeply entrenched in society.

Although the incidence of such crimes is usually treated as a law and order problem by the system, it is more broadly a question of social justice. Attacks often take the form of collective punishment, whereby entire communities are punished for the perceived transgressions of individuals who seek to alter established norms or demand their rights. Dalit women, occupying the bottom of both the caste and gender hierarchies, are uniquely susceptible to violence. Over and above the occurrence of such crimes, the working of the criminal justice system perpetuates the problem. There is flagrant violation of justice in the form of police resistance in filing complaints; low conviction rates leading



to easy acquittals for perpetrators; high pendency due to only a few special courts operating; and poor implementation of economic relief to victims. Newspaper reports frequently find that judgment on cases is delayed by several years due to the lax performance of the courts and the apathetic attitude of the legal machinery. A report discussing the performance of the SC/ST Prevention of Atrocities Act, 1989 finds that at the end of 2007, 79 percent of cases remained pending for trial at criminal courts showing no significant improvement over a pendency rate of 82.5 percent in 2001<sup>17</sup>. Moreover, the pendency rate is approximately the same for all crimes under the Prevention of Atrocities Act, 1989, Protection of Civil Rights Act and IPC, indicating that the provision for “speedy trials” under Prevention of Atrocities Act, 1989 is not being duly followed. The failure to investigate, file, and pursue cases involving crimes against SC/ST groups has a deleterious effect not only on the individuals harmed in each instance of violence, but more broadly on the communities in general—such failures empower potential perpetrators by signaling that crimes against lower castes will go unpunished and also further disempowers marginalized communities by eroding their trust in the legal system.

While our analysis uses the lowest level of disaggregated data that are available, which is a good starting point, a study at the village level would make the analysis much richer since such events are highly localized and dependent on village level dynamics that we cannot observe in our data. Future research should aim at studying the occurrence of such violence and atrocities at the household level through victimization surveys in order to better understand individual motivations.

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<sup>17</sup> 20 years Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act: Report Card by National Coalition for Strengthening SCs and STs (Prevention of Atrocities) Act (accessed on January 5, 2012 at [http://idsn.org/fileadmin/user\\_folder/pdf/New\\_files/India/SCST\\_PoA\\_Act\\_20\\_years\\_report\\_card\\_-\\_NCDHR.pdf](http://idsn.org/fileadmin/user_folder/pdf/New_files/India/SCST_PoA_Act_20_years_report_card_-_NCDHR.pdf))

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**Table 1 Descriptive Statistics**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
<b>Crime variables:</b>			
Total crimes against SC/ST	830	429.949	419.273
General IPC crimes in the district	830	21321	20156.51
IPC crimes against SC/ST	830	288.131	351.523
SLL crimes against SC/ST	830	141.818	175.935
IPC Body crimes against SC/ST	830	94.984	112.963
IPC Non-body crimes against SC/ST	830	193.147	280.945
SC/ST total crime rate	829	99.843	135.11
SC/ST IPC crime rate	829	66.543	107.06
SC/ST SLL crime rate	829	33.299	52.68
SC/ST body crime rate	829	23.071	42.076
SC/ST non-body crime rate	829	43.472	75.431
General crime rate	830	1544.339	1492.724
<b>Explanatory variables:</b>			
SCST MPCE/UC MPCE	828	0.677	0.166
Population	830	2144479	1375044
Percent SC/ST	830	29.796	15.245
Percent Rural	830	79.39	17.285
Percent Underemployed	830	16.019	7.552
Percent Young male	830	9.414	1.854
Gini	830	0.252	0.056
Average expenditure	830	535.138	186.327
SCST expenditure	829	433.173	128.257
UC expenditure	829	679.067	274.219
OBC expenditure	820	523.106	179.112
Effective Number of parties	830	4.593	1.383
Percent Illiterate	830	45.872	15.417
Percent Primary	830	19.916	6.363
Percent Secondary	830	24.064	9.085
Percent Higher secondary and above	830	10.148	5.756

Note: Crime rate means crimes per 100000 SC-ST population. IPC crimes are the sum of murder, rape, kidnap, hurt, dacoity, robbery, arson and other IPC crimes. SLL crimes are the sum of crimes registered under the Prevention of Atrocities Act and the Protection of Civil Rights Act. Body Crimes are the sum of murder, rape, kidnapping and physical assault. Non-body crimes are the sum of dacoity, robbery, arson and other IPC crimes. General crime rate is total general IPC crimes less IPC crimes against SC/ST per 100000 non-SC/ST population. Young males refer to males in the 15-24 age groups.

**Table 2 Effect of relative expenditure on total, IPC and SLL crime rates**

	(1) Crime rate (Total Crimes)	(2) Crime rate (IPC Crimes)	(3) Crime rate (SLL Crimes)
Ln (SCST exp/UC exp)	0.304** (0.118)	0.355** (0.149)	0.298 (0.294)
Ln (exp)	-0.008 (0.283)	-0.378 (0.389)	0.413 (0.591)
SCST%	-0.087*** (0.0096)	-0.1*** (0.011)	-0.08*** (0.022)
SCST%-sq	0.0007*** (0.0001)	0.0009*** (0.0001)	0.0006** (0.0003)
Rural%	0.005 (0.00409)	0.0004 (0.00525)	0.005 (0.00978)
Gini	1.05 (1.009)	2.656** (1.239)	-0.378 (1.942)
Underemployed	0.003 (0.00434)	0.003 (0.00578)	0.011 (0.00899)
Young Males%	-0.014 (0.0163)	0.022 (0.0241)	-0.031 (0.0343)
Illiterate	-0.01 (0.00964)	-0.001 (0.0131)	-0.019 (0.0217)
Primary ed	0.008 (0.0129)	0.007 (0.0165)	0.005 (0.0240)
Secondary ed	-0.0021 (0.0132)	-0.0083 (0.0177)	0.001 (0.0272)
Effective Parties	0.0344 (0.0716)	0.134 (0.0977)	-0.386** (0.162)
Time	Yes	Yes	Yes
N	828	828	828
F-statistic	16.45	9.96	4.53
R-squared	0.34	0.22	0.12

Note: Standard errors in parentheses, clustered at district level. \*, \*\*, \*\*\* indicate significance at 10%, 5% and 1% respectively. All regressions include district fixed effects, time dummy and constant term. All dependent variables are in logs. Crime rate is crimes per 100000 SC/ST population. IPC crimes are the sum of murder, rape, kidnap, hurt, dacoity, robbery, arson and other IPC crimes. SLL crimes are the sum of crimes registered under the Prevention of Atrocities Act and the Protection of Civil Rights Act. For the education dummy variables, 'higher secondary and above' is the omitted category.

**Table 3 Effect of group-wise expenditures on total, IPC and SLL crime rates**

	(1) Crime rate (Total Crimes)	(2) Crime rate (IPC Crimes)	(3) Crime rate (SLL Crimes)
Ln (SCST exp)	0.138 (0.191)	-0.134 (0.309)	0.496 (0.474)
Ln (UC exp)	-0.341** (0.143)	-0.563*** (0.185)	-0.158 (0.341)
Ln (OBC exp)	-0.0393 (0.196)	0.112 (0.319)	-0.107 (0.454)
SCST %	-0.091*** (0.009)	-0.097*** (0.0109)	-0.091*** (0.0251)
SCST %-sq	0.0008*** (0.0001)	0.0009*** (0.0001)	0.0008** (0.0003)
Rural %	0.0052 (0.00411)	-0.0004 (0.00527)	0.006 (0.0102)
Gini	0.978 (0.936)	2.652** (1.142)	-0.393 (1.898)
Underemployed	0.0009 (0.00435)	0.002 (0.00567)	0.0109 (0.00949)
Young Males%	-0.0163 (0.0158)	0.0269 (0.0253)	-0.0448 (0.0349)
Illiterate	-0.0077 (0.00979)	0.0031 (0.0131)	-0.0195 (0.0211)
Primary ed	0.0092 (0.0133)	0.0093 (0.0164)	0.0045 (0.0239)
Secondary ed	0.0045 (0.0128)	0.0028 (0.0166)	0.0043 (0.0276)
Effective Parties	0.0428 (0.0707)	0.151 (0.0975)	-0.396** (0.164)
Time	Yes	Yes	Yes
N	818	818	818
F-stat	15.81	9.54	4.25
R-squared	0.34	0.22	0.13

Note: Standard errors in parentheses, clustered at district level. \*, \*\*, \*\*\* indicate significance at 10%, 5% and 1% respectively. All regressions include district fixed effects, time dummy and constant term. All dependent variables are in logs. Crime rate is crimes per 100000 SC/ST population. IPC crimes are the sum of murder, rape, kidnap, hurt, dacoity, robbery, arson and other IPC crimes. SLL crimes are the sum of crimes registered under the Prevention of Atrocities Act and the Protection of Civil Rights Act. For the education dummy variables, 'higher secondary and above' is the omitted category.

**Table 4 Decomposing IPC crimes into Body Crimes and Non-body crimes**

	(1) Crime rate (Body crimes)	(2) Crime rate (Body crimes)	(3) Crime rate (Non-Body crimes)	(4) Crime rate (Non-Body crimes)
Ln (SCST exp/UC exp)	0.0559 (0.154)		0.417** (0.186)	
SCST%	-0.0897*** (0.0113)	-0.0929*** (0.0105)	-0.1*** (0.0127)	-0.0985*** (0.0146)
SCST%-sq	0.0007*** (0.0001)	0.0008*** (0.0001)	0.0009*** (0.0001)	0.0009*** (0.0002)
Gini	0.361 (1.122)	0.416 (1.048)	4.085*** (1.439)	4.038*** (1.355)
Ln (SCST exp)		-0.259 (0.292)		-0.225 (0.365)
Ln (UC exp)		-0.182 (0.190)		-0.691*** (0.221)
Ln (OBC exp)		0.193 (0.297)		0.308 (0.361)
Time	Yes	Yes	Yes	Yes
N	828	818	828	818
F-stat	10.34	9.41	7.74	8.09
R-squared	0.21	0.2	0.18	0.18

Note: Standard errors in parentheses, clustered at district level. \*, \*\*, \*\*\* indicate significance at 10%, 5% and 1% respectively. All regressions include district fixed effects, time dummy and constant term. All dependent variables are in logs. Crime rate is crimes per 100000 SC/ST population. Body Crimes are the sum of murder, rape, kidnapping and physical assault. Non-body crimes are the sum of dacoity, robbery, arson and other IPC crimes. Other controls included (but not shown) include percent rural, percentage of young males, education dummies, log of expenditure, underemployment rate, Gini and effective number of parties.

**Table 5 Effect on crime rates against SC/ST after controlling for general crime rates**

	(1) Crime Rate (Total crimes)	(2) Crime Rate (Total crimes)	(3) Crime Rate (IPC crimes)	(4) Crime Rate (IPC crimes)
Ln (SCST exp/UC exp)	0.247** (0.122)		0.305** (0.151)	
SCST%	-0.0851*** (0.0103)	-0.0928*** (0.00817)	-0.0978*** (0.0103)	-0.0991*** (0.0102)
SCST%-sq	0.0004*** (0.0001)	0.0006*** (0.0001)	0.0006*** (0.0001)	0.0007*** (0.0001)
Ln (SCST exp)		0.0299 (0.184)		-0.219 (0.305)
Ln (UC exp)		-0.322** (0.153)		-0.548*** (0.185)
Ln (OBC exp)		-0.0361 (0.178)		0.114 (0.301)
General Crime	0.953*** (0.123)	0.981*** (0.123)	0.836*** (0.167)	0.768*** (0.173)
Time	Yes	Yes	Yes	Yes
N	828	818	828	818
F-stat	28.54	28.99	12.84	12
R-squared	0.43	0.44	0.27	0.25

Note: Standard errors in parentheses, clustered at district level. \*, \*\*, \*\*\* indicate significance at 10%, 5% and 1% respectively. All regressions include district fixed effects, time dummy and constant term. All dependent variables are in logs. Crime rate is crimes per 100000 SC/ST population. IPC crimes are the sum of murder, rape, kidnap, hurt, dacoity, robbery, arson and other IPC crimes. Other controls included (but not shown) include percent rural, percentage of young males, education dummies, log of expenditure, underemployment rate, Gini and effective number of parties. General crimes are (log of) total IPC crimes less total IPC crimes against SC/ST per 100000 non-SC/ST population.



**Table 6a Negative Binomial Regressions using total crimes against SC/ST**

	(1) Total Crimes	(2) Total Crimes	(3) Total Crimes	(4) Total Crimes
Ln (SCST exp /UC exp)	0.263** (0.104)	0.248** (0.102)		
Ln (SCST exp)			0.212 (0.164)	0.198 (0.161)
Ln (UC exp)			-0.265** (0.122)	-0.263** (0.121)
Ln (OBC exp)			0.179 (0.159)	0.140 (0.159)
General crimes		0.427*** (0.0904)		0.421*** (0.0997)
N	824	824	806	806

Note: Standard errors in parentheses \*, \*\*, \*\*\* indicate significance at 10%, 5% and 1% respectively. Other variables controlled for (but not shown) include SCST%, SCST%-sq, percent rural, percentage of young males, education dummies, log of expenditure, underemployment rate, Gini and effective number of parties. SC/ST population is used as scaling variable on right hand side. General crimes are (log of) total IPC crimes less total IPC crimes against SC/ST per 100000 non-SC/ST population.

**Table 6b Negative Binomial Regressions using IPC crimes against SC/ST**

	(1) IPC crimes	(2) IPC crimes	(3) IPC crimes	(4) IPC crimes
Ln (SCST exp/UC exp)	0.286** (0.137)	0.289** (0.136)		
Ln (SCST exp)			-0.0492 (0.214)	-0.0735 (0.213)
Ln (UC exp)			-0.441*** (0.159)	-0.457*** (0.159)
Ln (OBC exp)			0.290 (0.195)	0.291 (0.196)
General crimes		0.258** (0.106)		0.214* (0.113)
N	820	820	802	802

Note: Standard errors in parentheses \*, \*\*, \*\*\* indicate significance at 10%, 5% and 1% respectively. IPC crimes are the sum of murder, rape, kidnap, hurt, dacoity, robbery, arson and other IPC crimes. Other variables controlled for (but not shown) include SCST%, SCST%-sq, percent rural, percentage of young males, education dummies, log of expenditure, underemployment rate, Gini and effective number of parties. SC/ST population is used as scaling variable on right hand side. General crimes are (log of) total IPC crimes less total IPC crimes against SC/ST per 100000 non-SC/ST population.

**Table 7a Regressions using general crimes as dependent variable**

	(1) General Crimes	(2) General Crimes
Ln (SCST exp/UC exp)	0.06 (0.0526)	
Ln (SCST exp)		0.11 (0.0926)
Ln (UC exp)		-0.0191 (0.0595)
Ln (OBC exp)		-0.0032 (0.0991)
Time	Yes	Yes
N	828	818
F-stat	14.07	13.99
R-squared	0.39	0.37

Note: Standard errors in parentheses, clustered at district level. \*, \*\*, \*\*\* indicate significance at 10%, 5% and 1% respectively. All regressions include district fixed effects, time dummy and constant term. All dependent variables are in logs. Other controls used but not shown include percent rural, percentage of young males, education dummies, log of expenditure, underemployment rate, Gini and effective number of parties. General crimes are (log of) total IPC crimes less total IPC crimes against SC/ST per 100000 non-SC/ST population.

**Table 7b Negative binomial regressions using general crimes as dependent variable**

	(1) General Crimes	(2) General Crimes
Ln (SCST exp/UC exp)	0.0452 (0.0372)	
Ln (SCST exp)		0.0749 (0.0577)
Ln (UC exp)		-0.0247 (0.0421)
Ln (OBC exp)		-0.0113 (0.0580)
N	826	808

Note: Standard errors in parentheses \*, \*\*, \*\*\* indicate significance at 10%, 5% and 1% respectively. Other variables controlled for (but not shown) include SCST%, SCST%-sq, percentage rural, percentage of young males, education dummies, log of expenditure, underemployment rate, Gini and effective number of parties. Non-SC/ST population is used as scaling variable on right hand side. General crimes are total IPC crimes less total IPC crimes against SC/ST.

## **Appendix 1**

### **Crimes included under the Special and Local Laws (SLL) against Scheduled Castes and Tribes**

#### **1) The Protection of Civil Rights Act, 1955**

Sections 3 - 7A of the Act define the following as offences if committed on the ground of "untouchability":

- 1) Prevention from entering public worship places, using sacred water resources.
- 2) Denial of access to any shop, public restaurant, hotel, public entertainment, cremation ground etc.
- 3) Refusal of admission to any hospital, dispensary, educational institutions etc.
- 4) Refusal to sell goods and render services.
- 5) Molestation, causing injury, insult etc.
- 6) Compelling a person on the ground of untouchability to do any scavenging or sweeping or to remove any carcass etc.

#### **2) The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989**

Whoever, not being a member of a Scheduled Caste or a Scheduled Tribe:

- 1) Forces a member of a Scheduled Caste or a Scheduled Tribe to drink or eat any inedible or obnoxious substance;
- 2) Acts with intent to cause injury, insult or annoyance to any member of a Scheduled Caste or a Scheduled Tribe by dumping excreta, waste matter, carcasses or any other obnoxious substance in his premises or neighbourhood;
- 3) Forcibly removes clothes from the person of a member of a Scheduled Caste or a Scheduled Tribe or parades him naked or with painted face or body or commits any similar act which is derogatory to human dignity;
- 4) Wrongfully occupies or cultivates any land owned by, or allotted to, or notified by any competent authority to be allotted to, a member of a Scheduled Caste or a Scheduled Tribe or gets the land allotted to him transferred;
- 5) Wrongfully dispossesses a member of a Scheduled Caste or a Scheduled Tribe from his land or premises or interferes with the enjoyment of his rights over any land, premises or water;

- 6) Compels or entices a member of a Scheduled Caste or a Scheduled Tribe to do 'begar' or other similar forms of forced or bonded labour other than any compulsory service for public purposes imposed by Government;
- 7) Forces or intimidates a member of a Scheduled Caste or a Scheduled Tribe not to vote or vote for a particular candidate or to vote in a manner other than that provided by law;
- 8) Institutes false, malicious or vexatious suit or criminal or other proceedings against a member of a Scheduled Caste or a Scheduled Tribe;
- 9) Gives any false or frivolous information to any public servant and thereby causes such public servant to use his lawful power to the injury or annoyance of a member of a Scheduled Caste or a Scheduled Tribe;
- 10) Intentionally insults or intimidates with intent to humiliate a member of a Scheduled Caste or a Scheduled Tribe;
- 11) Assaults or uses force to any woman belonging to a Scheduled Caste or a Scheduled Tribe with intent to dishonour or outrage her modesty;
- 12) Being in a position to dominate the will of a woman belonging to a Scheduled Caste or a Scheduled Tribe and uses that position to exploit her sexually to which she would not have otherwise agreed;
- 13) Corrupts or fouls the water of any spring, reservoir, or any other source ordinarily used by members of the Scheduled Caste or the Scheduled Tribe so as to render it less fit for the purpose for which it is ordinarily used;
- 14) Denies a member of a Scheduled Caste or a Scheduled Tribe any customary rite of passage to a place of public resort or obstructs such members so as to prevent him for using or having access to a place of public resort to which other members of public or any section thereof have a right to use or access to;
- 15) Forces or causes a member of a Scheduled Caste or a Scheduled Tribe to leave his house, village, or any other place of residence