HINDU-MUSLIM VIOLENCE IN INDIA:

A Postscript From the 21st Century

By Anirban Mitra and Debraj Ray[1]

March 2018

1. Introduction

The importance of religious conflict today can hardly be overstated. The appalling situation in Syria — stemming from the activism of the Islamic State (ISIS) — is just one cruel reminder of the utter devastation that religious extremism can wreak. The tragic humanitarian crisis in Myanmar involving the displacement of the Rohingya Muslims has strong religious overtones, as do the attacks on Muslims and Christians by Buddhist nationalist groups in Sri Lanka.

India, of course, is no exception. Following the election of the National Democratic Alliance in 2014, headed by the Bharatiya Janata Party (or BJP), violence — or the threat of violence — fomented by a sense of Hindu religious nationalism has been in the news on a daily basis; for an example, look no further than the spate of lynchings that have followed on the suspicion of beef consumption or trade. Consider the lynching of Mohammad Akhlaq, a Muslim man, in Dadri (a place barely 50km from the Indian capital) on September 28th, 2015. A panel from the National Commission for Minorities in India investigated this event and concluded that this lynching — over rumours that he kept and consumed beef — was *premeditated*. Additionally, it said a Hindu temple had been used to plan the attack. Mr Akhlaq's killing sparked furious debate about religious tolerance, with some criticising Prime Minister Narendra Modi (from the BJP) for not condemning the attack sooner. Two weeks later he called it "sad and undesirable".[2]

Certainly, the country isn't a newcomer to religious violence by any means. Recurrent episodes of Hindu-Muslim conflict in India (going back to the Partition of the Indian subcontinent in 1947 and earlier) have continued through the second half of the twentieth century, accounting for over 7,000 deaths over 1950–2000, and many more at the time of Partition. So — and beginning with the violence unleashed in the state of Gujarat in 1992 — 21st century India is just more of the same, and in its pervading sense of menace and repression, possibly much more.

Scholars from various disciplines have approached the issue of Hindu-Muslim violence from different perspectives. There is the view espoused by Huntington and others, that it is all about "a clash of civilizations." Hopeless and dispiriting as it may be, this primordialist view of violence is hard to fully escape in the wake of the sheer irrational brutality that has been on display in some of the violent encounters. But a bewildered focus on irrationality alone runs the risk of obscuring more calculated realities. For instance, Wilkinson (2004) has explored how the degree of political competition in state-level elections can affect the extent to which (religious, ethnic) minorities become important electorally; that, in turn, can and does influence the attitude of state governments towards riot-containment. Varshney (2003) has highlighted the role of social capital in a

[2]See the following link for more details: http://www.bbc.com/news/world-asia-india-34599849.

multi-cultural society in influencing the pattern of such sectarian violence. In a related vein, Jha (2013) provides evidence that the degree to which medieval Hindus and Muslims could provide complementary, non-replicable services and a mechanism to share the gains from exchange has resulted in a sustained legacy of ethnic tolerance in some South Asian towns. Specifically, he finds that medieval ports, despite being more ethnically mixed, were five times less prone to Hindu-Muslim riots between 1850–1950, two centuries after Europeans disrupted Muslim overseas trade dominance, and remained half as prone between 1950–1995.

In our earlier work (Mitra and Ray 2014) we have followed the line espoused in Engineer (1984, 1987 and 1994) and others (see e.g., Upadhyaya (1992), Rajgopal (1987), Khan (1992), Bagchi (1990) and Das (2000)) by highlighting an economic component to Hindu-Muslim conflict. We model inter-group conflict driven by economic changes within groups and make the following prediction: if group incomes are low, increasing group incomes raises violence *against* that group, and lowers violence generated *by* it. Using data collected by Varshney and Wilkinson from 1979 to 2000, we show that regional Hindu-Muslim violence rises in response to an increase in the regional average of Muslim incomes. The opposite is true when regional Hindu incomes rise.[3] These empirical findings are of interest in their own right, but we can go further by using the theory as a device for the interpretation of the empirical patterns. In our work, we suggest that Hindu groups have largely been the aggressors in Hindu-Muslim violence in India, or at least in Hindu-Muslim violence driven by instrumental, specifically economic considerations.

In this paper, we revisit and extend the core issues studied in Mitra and Ray (2014). The main reason behind this retrospection is to check if the robust empirical patterns recorded in Mitra and Ray (2014) persist once we consider a longer time frame extending into the 21st century. This is not simply driven by a concern for greater external validity —- there is a more subtle issue at play. In the Indian context, the new millennium witnessed a marked change in the political arena at both the national and sub-national levels. Gone were the days of hegemony of the Indian National Congress (INC). The challenge to INC's dominance chiefly came from the Bharatiya Janata Party (henceforth, BJP) and its allies. BJP's persistent appeal to "rejuvenate" Hindu religious pride most certainly put a strain on the civic engagement between Hindus and Muslims in several parts of the country. Now this could potentially affect the dynamics of Hindu-Muslim violence; in particular, this could alter — or potentially, *nullify* — the economic effects uncovered in Mitra and Ray (2014). Therefore, in this steadily changing political climate it becomes imperative to re-assess the potency of the previously identified economic effects.

There is a related secondary goal, which is to explore the role of political factors in shaping the patterns of Hindu-Muslim conflict. To be sure, we did account — to an extent — for the influence politics has on religious riots. But that was in the spirit of a robustness exercise — *only* to investigate if the links between Hindu-Muslim incomes and inter-religious violence were salient, controlling for any potential links between politics and such violence.

Specifically, in this exercise, we investigate if there is a correlation between the rise of the BJP and its allies on the national political scene, and religious violence. It is worth reiterating that over the period 1979–2000, the presence of "Hindu" political activism was highly localized and relatively minor in scale. It is only in the last 15 years or so that the BJP and its alliance partners have been prominent on the national political scene. We are in a position to make some preliminary

---

[3]The effect holds even after controlling for literacy, inequality within the groups, and urbanization levels for each region.

observations on these newer developments, thanks to an extended dataset which now goes all the way up to 2010.[4]

We explore the role of the political factors in the following two ways:

(i) We create a measure of BJP presence in each region and directly include it in our regression analysis, and

(ii) we perform the analysis with and without the district of Ahmedabad (situated in the state of Gujarat) and contrast the results.

The idea of measuring BJP presence (details below) is to create an indicator for the pro-Hindutva political forces operating in the region. It should be noted that the BJP is not the sole political player in terms of the ideology and rhetoric relating to the establishment of a "Hindu-*rashtra*" (roughly translates as "nation of the Hindus"). But as a first pass, focusing on the BJP does seem reasonable. We briefly discuss two recent studies whose findings further justify our approach.

Nellis, Weaver and Rosenzweig (2016) analyse data between 1962 and 2000 to show that the election of Congress legislators in close elections contained riot incidents by about 10% over this period. They focus on assembly constituencies that faced close contests and then compare differences in rioting in constituencies where the Congress won to those constituencies where the Congress lost elections to arrive at their findings. They also argue that rioting polarizes voters and harms the electoral prospects of the Congress party in ensuing elections, while it has the opposite effect on the fortunes of its principal rival, the BJP, which gains vote share following such polarization. Iyer and Shrivastava (2018) analyse the effect of Hindu-Muslim riots on state election results. They combine data on geo-coded riots with data on state elections and on demographics and public goods provision for the period 1981 through 2001. To safeguard against the possible endogeneity of riot occurrence to various ambient conditions, they introduce a new instrument which draws upon the random variation in the day of the week that Hindu festivals fall on, as set by a lunar calendar. The probability of a riot *increases* if a Hindu festival falls on a Friday, the holy day for Muslims. In this manner, they are able to isolate the causal effect of riots on electoral results. They find that riots occurring in the year preceding an election increase the vote share of the BJP by a minimum of 5 percentage points.

The reason behind isolating the district of Ahmedabad stems from the conjunction of two factors — the place has been a stronghold of the BJP since the party assumed prominence on the national political scene *and* it has been the hotbed of Hindu-Muslim rioting for several decades with an intensification in the early 21st century. Of course, one could argue that this is true for all of the state of Gujarat and not necessarily Ahmedabad. Our counter-argument is this: first, not *all* of Gujarat is equally politically inclined towards the BJP as Ahmedabad is and secondly, the extent of religious violence in some places of Gujarat (like Surat, see Jha 2013) is hardly above the national average and hence much lower than that in Ahmedabad.

In the next section, we discuss the data and the empirical strategy and then present our findings.

---

[4]We are grateful to Lakshmi Iyer for making the data on Hindu-Muslim violence for the period 2001–2010 available to us.

2. Empirical Analysis

We begin by describing our various datasets.

2.1. **Data.** The baseline Varshney-Wilkinson data on Hindu-Muslim violence runs from 1950 to 1995. We extended this dataset by a period of five years, i.e., from 1996 to 2000. Subsequently, the data have been extended by another 10 years and hence bring us to the very end of 2010.[5] All in all, we have conflict data from 1950 to 2010 at our disposal, but we limit ourselves to the sub-period 1979–2010. The main reason for doing so is the non-availability of reliable data on economic conditions (by religious group) for earlier years.

We use three different count measures from the dataset: the number of people killed or injured ("casualties"), the number of people killed or the number of riot outbreaks over the period. In all cases, we take aggregates over a five year period in each location.

As for economic data, large scale household surveys are conducted quinquennially in India as part of the National Sample Surveys (NSS). The survey rounds cover the entire nation and capture monthly expenditure incurred by sample households for domestic consumption.[6] The earliest "thick" round that provides spatially disaggregated economic information by religion is the 38th round (1983).[7] We use five such "thick" rounds: the 38th (1983), the 43rd (1987–1988), the 50th (1993–94), the 55th (1999–2000) and the 61st (2004–2005). For all of these rounds there is information on the religious affiliation of the household, or more precisely, that of the head of the household. We can therefore compute the per-capita monthly expenditures for Hindu and Muslim households.

We are further restricted by the relative lack of spatial disaggregation in the 38th and the 50th rounds, which do not permit identification of the surveyed households all the way down to the district level. To use all five rounds (and thereby exploit the panel structure), we aggregate the Varshney-Wilkinson dataset up to the regional level in India. "Regions" are areas that lie midway between the state and the district. We do so for 55 such regions, which together span 14 major Indian states and account for more than 90% of the Indian population.[8]

---

[5]The data on Hindu-Muslim violence for the period 2001–2010 has been obtained from Lakshmi Iyer. In conducting these extension exercises, the same data collection protocol has been adhered to as followed in the construction of the original dataset, and the source has remained limited to newspaper reports from *The Times of India*.

[6]Unfortunately, a well-known problem in the case of the NSS is that we do not have income data on a nationwide scale, and expenditure is the closest we can get.

[7]NSS surveys which occur annually utilize smaller samples and hence are referred to as "thin" rounds. However, the rounds performed quinquennially draw upon larger samples (about 120,000 households per survey); hence the term "thick".

[8]We leave out border states with their own specific sets of problems: Jammu & Kashmir and Himachal Pradesh in the north, and the north-eastern states of Assam, Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Sikkim and Tripura. There are two specific issues with these areas: (i) NSS does not survey all regions within these states (owing to hilly terrain, safety issues, national security reasons due to border skirmishes, etc.), and (ii) for the border states it is sometimes difficult to tell whether a reported riot is indeed civilian in nature or due to the Army clashing with extremist groups. In addition, the north-eastern states (which happen to be sparsely populated) have an insignificant Muslim population: they are primarily Hindus, Christians, Buddhists and Scheduled Tribes. So even in the violence dataset there are almost no reports of riots there.

Apart from the economic variable, we seek some measure of BJP strength in each region. To do so, we use as a measure the *share of regional Lok Sabha seats* won by the BJP. This is the same variable as in Mitra and Ray (2014). There the variable had no significant effect on conflict. To ensure consistency, we have used the same variable here. The idea is to check if this variable behaves any differently *now* owing to the addition of the later rounds. Additionally, given that the Lok Sabha is a national body and given that the BJP is a national party with a distinct ideology it makes sense to see how the BJP MPs affect the climate for riots. It is of course possible to use other measures — for example, the state assembly shares — but then there are two distinct issues which one needs to account for:

(i) the party's ideology/stance/policy could vary from state to state especially given the caste and religious composition of the electorate. In other words, BJP at the centre and BJP at the state could mean different things for riots, and

(ii) state level competition, by itself, can have an independent effect on riots (a la Wilkinson (2004)). So when using BJP's assembly seatshare, one could be picking up some state-level competition effects. It might be difficult to isolate a pure "BJP effect" from the state level competition effect.

Therefore, keeping these considerations in mind, we proceed with this rather conservative measure of BJP presence, namely, the share of Lok Sabha seats won by the party in the region.

We also employ a number of controls: *population* by region, *religious polarization* across Hindus and Muslims, the *literacy rate*, the completion rate for *primary education*, *urbanization*, calculated as the percentage of urban households in the region, and *Gini coefficients* as controls for expenditure inequality among Hindu and Muslims.

2.2. Empirical Specification.

2.2. **Empirical Specification.** We are interested in the effect of changes in Hindu and Muslim expenditures within an area on different measures of Hindu-Muslim conflict within that same area. This motivates the baseline Poisson specification that we use:

$$\mathbb{E}(\text{Count}_{i,t}|\mathbf{X}_{it}, \gamma_i) = \gamma_i \exp(\mathbf{X}'_{it}\beta + \tau_t)$$

where i indexes region while t indexes time, $\mathbf{X}$ is the vector of explanatory variables and controls, and γ_i and τ_t stand for region and time fixed effects in the panel regressions.

We also use the Negative Binomial and OLS specifications as robustness checks. In the case of OLS, to avoid losing observations in cases where reported conflict is zero, we add a very small number (0.01) to the total count variable, so that the dependent variable for the OLS regressions is actually $\ln(\text{count} + 0.01)$. That is, our OLS specification is:

$$\ln(\text{count}_{it} + 0.01) = \gamma_i + \tau_t + \mathbf{X}'_{it}\beta + \text{error}_{it}.$$

Among the important variables in $\mathbf{X}$ are, of course, Muslim and Hindu per-capita expenditures (our proxies for per-capita income), and in some variants their ratio. We will also pay special attention to the regional share of the BJP in the Lok Sabha. Apart from these core variables, population and some measure of Muslim presence are always included as controls in every specification (despite the region fixed effects, these are important variables that could potentially vary with time). Muslim "presence" is measured in two ways: we use either the share of Muslim households in the region, or a measure of Hindu-Muslim polarization along the lines proposed by Esteban and Ray
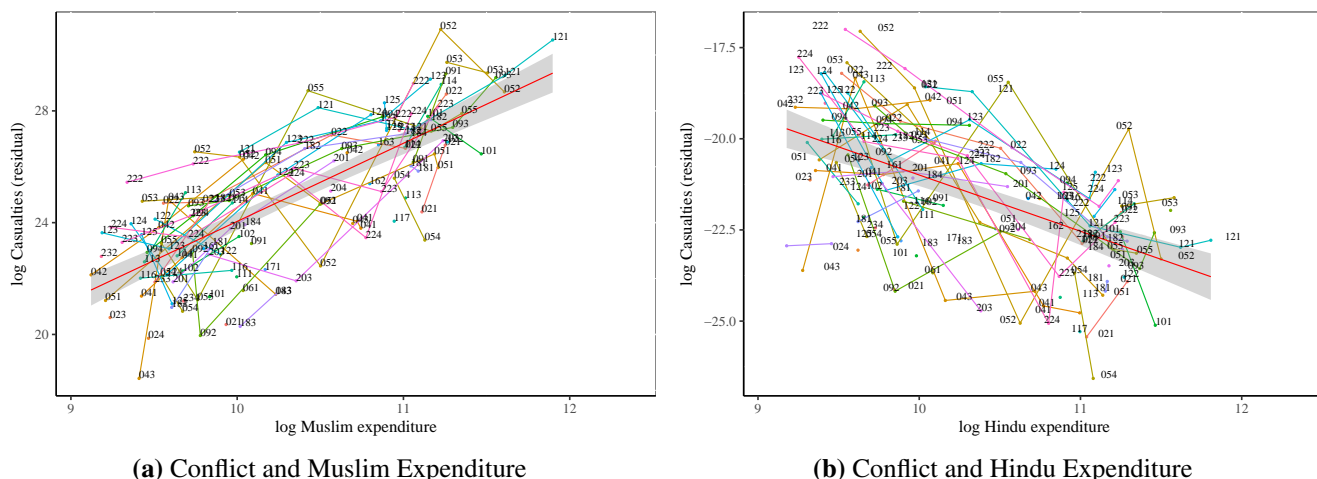
(a) Conflict and Muslim Expenditure

(b) Conflict and Hindu Expenditure

Figure 1. CONFLICT AND PER-CAPITA EXPENDITURE. Panel (a) plots the residual of casualties against (log) Muslim expenditures after region, time and (log) Hindu expenditure effects have been removed, in the 5-year period following expenditures. Each line segment connects five data points for a region. Panel (b) plots the analogous graph for (log) Hindu expenditures.

(1994) and Montalvo and Reynal-Querol (2005).[9] To be sure, in all the regressions we either control for Muslim percentage or religious polarization but never both simultaneously. The correlation between these two variables is very high (about 0.97).[10]

We also control for inequality (in terms of consumption expenditure) among Hindu and Muslims, as our predictions pertain to balanced increases in income for either group.

The basic controls are constructed using the data from the NSS rounds. In some specifications, we also use an expanded set of controls, to be described below. In all the specifications, expenditures and population are entered logarithmically, and all other controls are brought in linearly.

We look at the effect of group expenditure variables on Hindu-Muslim conflict starting the year right after the corresponding expenditure round. Specifically, expenditures from the 38th round (1983) are matched with conflict during 1984-88, the 43rd round (1987-88) expenditures are matched with conflict during 1989-93, the 50th round (1993-94) expenditures are matched with conflict during 1994-1998, the 55th round (1999-2000) are matched with conflict during 1999-2003 while the 61st round (2004-05) expenditures are matched with conflict during 2004-2008.

All variations utilize both region and time fixed effects, just as the baseline Poisson model does.

Before turning to the results from the regression analysis, we would like to draw the reader's attention to Figure 1. These graphs essentially represent the key correlations we seek to explore in our regression framework. In panel (a) of the figure, we look at the association between "Casualties" (which is the number of people either killed or injured) and average Muslim expenditure at the regional level. To arrive at that regional plot, we first estimate a Poisson regression where Casualties

---

[9]The degree of religious polarization for a region is defined by $4 \sum s_j^2 (1 - s_j)$ for $j = H, M$ where H denote Hindus and M Muslims and s_j denotes the population share of j in the region.

[10]In some areas, there are other dominant religious groups (like Sikhs in Punjab), so that Muslim percentage and Hindu-Muslim polarization measure different things. But these cases are exceptions rather than the rule.

are regressed on Muslim and Hindu expenditures (log) and region and time dummies. Using the estimates from this regression, we are able to remove region, time and (log) Hindu expenditure effects from the actual Casualties variable so as to arrive at the residual of Casualties. As shown in panel (a), this residual is positively correlated with (log) Muslim expenditures. Panel (b) is created by a similar process where we now remove (log) Muslim expenditure effects rather than (log) Hindu expenditure effects to arrive at the residual of Casualties. As the figure depicts, the correlation between this residual of Casualties and average Hindu expenditure is negative. It is precisely these *asymmetric* relationships (between conflict and expenditures) that we seek to explore more carefully in our empirical analysis.

2.3. **Results.** First we present some results using all 55 regions (as in Mitra and Ray (2014)) and using all 5 NSS rounds.

Table 1 contains some Poisson fixed effects regressions where the dependent variable is "Casualties" (= Killed+Injured). In columns 1 and 2, the coefficients on Muslim expenditure are positive and significant at the 5% and 10% levels, respectively. However in the specification with the full set of controls (column 3), the expenditure terms are no longer significant. The next three columns have the ratio of Muslim-to-Hindu expenditures in place of Muslim and Hindu expenditures. In columns 4 and 5, the coefficients on the ratio of Muslim-to-Hindu expenditures are positive and statistically significant — much like their counterparts in columns 1 and 2. However, with the full set of controls (column 6), the statistical significance on the ratio of Muslim-to-Hindu expenditures is well below 10%. For brevity, we do not report the results from the Negative Binomial and OLS models. They are qualitatively similar.[11]

Hence, there seems to be some flavour of the results from Mitra and Ray (2014) but it is somewhat diluted.

2.3.1. *Urban Households.* Next we conduct the analysis by restricting attention to only urban households. Here we eliminate instances of conflict which are explicitly stated to have occurred in rural areas. However, it should be noted that such cases are relatively few in the violence dataset. Some of the results are presented in Table 2.

In Table 2, the dependent variable in all the regressions is "Casualties" which is the number of people killed or injured. In the first three columns, the coefficient on Hindu expenditures is negative — in addition, it is also statistically significant in columns 2 and 3. In contrast, the coefficient on Muslim expenditure is positive in all three columns; additionally, it is statistically significant in columns 1 and 3. Therefore, in the specification with the full set of controls (column 3), an increase in Muslim expenditures exerts a positive and statistically significant effect on Hindu-Muslim conflict while rising Hindu expenditures tend to drive it down. In columns 4–6, the main variable of interest is the ratio of Muslim-to-Hindu expenditures. In each of the three columns we find that this coefficient is positive and statistically significant. These results resonate with the main findings of Mitra and Ray (2014).

2.4. **The Case of Ahmedabad.** The state of Gujarat has been witness to many incidents — both small and large in scale — of Hindu-Muslim animosity over several decades. The district of

---

[11]These results are available from the authors upon request.

	[1]	[2]	[3]	[4]	[5]	[6]
H pce	-1.742	-1.243	-2.298			
	(0.290)	(0.450)	(0.115)			
M pce	2.259**	1.683*	1.425			
	(0.028)	(0.083)	(0.282)			
M/H				2.210**	1.644*	1.483
				(0.027)	(0.084)	(0.231)
Average Per-Capita Exp.				0.613	0.444	-0.886
				(0.688)	(0.771)	(0.628)
Pop	-0.552	-0.218	-0.202	-0.599	-0.231	-0.186
	(0.765)	(0.904)	(0.908)	(0.750)	(0.899)	(0.915)
RelPol	0.363	0.355	0.746	0.399	0.379	0.699
	(0.918)	(0.916)	(0.781)	(0.909)	(0.910)	(0.798)
Literacy		0.053**	0.051**		0.053**	0.051**
		(0.021)	(0.014)		(0.021)	(0.014)
Urban		-0.006	-0.012		-0.006	-0.012
		(0.569)	(0.445)		(0.578)	(0.447)
Gini H			5.063			5.042
			(0.342)			(0.343)
Gini M			0.864			0.952
			(0.786)			(0.768)
BJP LS seatshare	0.310	0.387	0.356	0.319	0.386	0.358
	(0.616)	(0.468)	(0.491)	(0.602)	(0.470)	(0.490)
Log-Likelihood	-6,934.71	-6,576.82	-6,475.35	-6,931.57	-6,576.64	-6,475.09
Number of observations	230	230	230	230	230	230

Table 1. The Effect of Hindu and Muslim Expenditures on Regional Conflict: Poisson FE regressions. *Sources and Notes.* Varshney-Wilkinson dataset on religious riots, *National Sample Survey* 38th, 43rd, 50th, 55th and 61st rounds. All counts over a five-year period starting immediately after the expenditure data. Dependent variable is regional casualties (killed+injured). Robust standard errors clustered by region; corresponding p-values in parentheses. Time dummies included in all regressions. *significant at 10% **significant at 5% ***significant at 1%

Ahmedabad, in particular, has achieved considerable notoriety in this regard. Fields, Levinson, Pande and Visaria (2008) write:

"Recurring communal violence between Hindus and Muslims has become increasingly common in Indian cities over the last two decades of the twentieth century (Varshney 2002), and nowhere is it more acute than in Ahmedabad. Correspondingly, residential arrangements in this city are remarkably segregated: by 2002, 71 percent of the population in our sample lived in completely homogeneous neighborhoods, a fact that presumably reflects increasing intolerance for living with members of another religion."

	[1]	[2]	[3]	[4]	[5]	[6]
H pce	-1.876	-2.691*	-3.162***			
	(0.171)	(0.060)	(0.008)			
M pce	1.402*	1.493	1.844*			
	(0.077)	(0.109)	(0.085)			
M/H				1.446*	1.662*	1.952**
				(0.062)	(0.061)	(0.046)
Average Per-Capita Exp.				-0.704	-1.395	-1.631
				(0.547)	(0.264)	(0.183)
Pop	-0.774	0.158	0.172	-0.763	0.194	0.207
	(0.517)	(0.899)	(0.890)	(0.529)	(0.878)	(0.868)
RelPol	0.056	1.246	1.442	-0.048	1.089	1.250
	(0.974)	(0.520)	(0.386)	(0.978)	(0.568)	(0.458)
Primary Edu.		0.079***	0.080***		0.080***	0.080***
		(0.003)	(0.003)		(0.003)	(0.002)
Gini H			2.991			3.007
			(0.533)			(0.513)
Gini M			-1.092			-0.538
			(0.586)			(0.797)
BJP LS seatshare	0.523	0.977	0.939	0.536	0.987	0.946
	(0.463)	(0.115)	(0.146)	(0.458)	(0.115)	(0.155)
Log-Likelihood	-6,922.78	-6,318.98	-6,273.87	-6,908.62	-6,289.13	-6,245.32
Observations	229	229	229	229	229	229

Table 2. The Effect of Hindu and Muslim Expenditures on Regional Conflict: Poisson FE regressions (Urban households). *Sources and Notes.* Varshney-Wilkinson dataset on religious riots, *National Sample Survey* 38th, 43rd, 50th, 55th and 61st rounds. All counts over a five-year period starting immediately after the expenditure data. Dependent variable is regional casualties (killed+injured). Robust standard errors clustered by region; corresponding p-values in parentheses. Time dummies included in all regressions. *significant at 10% **significant at 5% ***significant at 1%

As observed (briefly) earlier, Ahmedabad has also been a political stronghold of the BJP and pro-Hindutva allies starting from the early 1990s – but this has intensified since the late 1990s.[12] Given this state of affairs, we isolate Ahmedabad from our sample and perform our analysis afresh while excluding the *region* containing the Ahmedabad district for all the 5 time periods.

Like before, prior to examining the results from the regression analysis, we turn to a graphical depiction of the key relationships. This is presented in Figure 2. These graphs essentially are the counterparts to the ones presented in Figure 1. The only difference is that the sample of regions here does *not* include the region containing Ahmedabad.

---

[12]One illustration of this is the fact that the state government of Gujarat has *always* been headed by a BJP Chief Minister since 1998; prior to that periods of BJP dominance were interspersed with either Congress or some other party's rule. Additionally, the Member of Parliament from any constituency in the Ahmedabad district has never been from outside of the BJP since the 1990s.
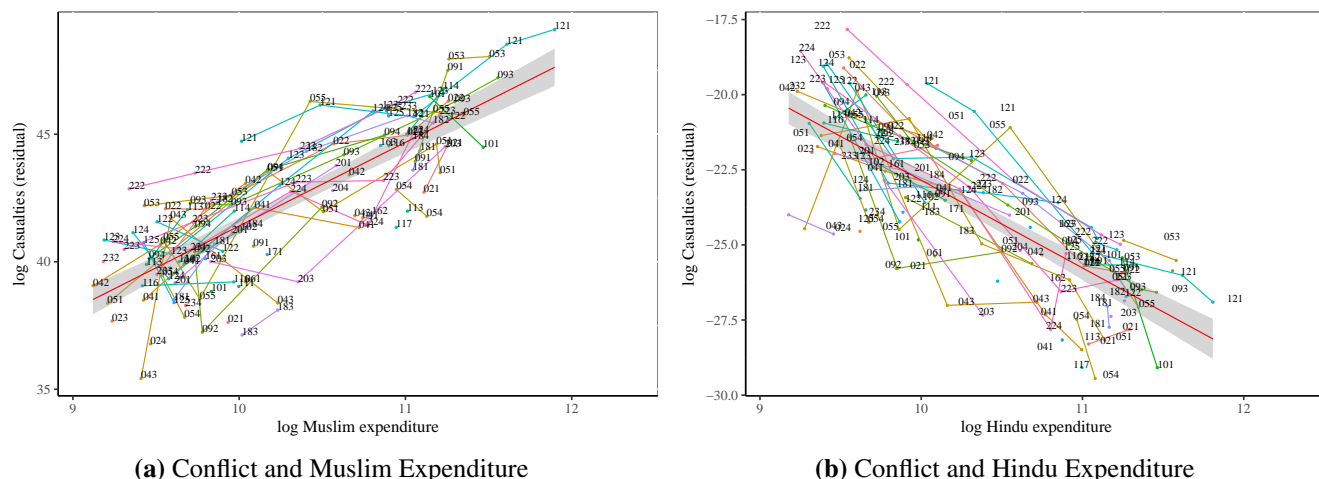
(a) Conflict and Muslim Expenditure

(b) Conflict and Hindu Expenditure

Figure 2. CONFLICT AND PER-CAPITA EXPENDITURE: WITHOUT AHMEDABAD. Panel (a) plots the residual of casualties against (log) Muslim expenditures after region, time and (log) Hindu expenditure effects have been removed, in the 5-year period following expenditures. Each line segment connects five data points for a region. Panel (b) plots the analogous graph for (log) Hindu expenditures.

So in panel (a) of the figure, we look at the association between "Casualties" (which is the number of people either killed or injured) and average Muslim expenditure at the regional level. Once again, we first estimate a Poisson regression where Casualties are regressed on Muslim and Hindu expenditures (log) and region and time dummies. Using the estimates from this regression, we are able to remove region, time and (log) Hindu expenditure effects from the actual Casualties variable so as to arrive at the residual of Casualties. As shown in panel (a), this residual is positively correlated with (log) Muslim expenditures. Panel (b) is created by a similar process where we now remove (log) Muslim expenditure effects rather than (log) Hindu expenditure effects to arrive at the residual of Casualties. As the figure depicts, the correlation between this residual of Casualties and average Hindu expenditure is negative. Therefore, these asymmetric relationships (between conflict and expenditures) uncovered in our earlier work persist in the sample without Ahmedabad.

Next, we present our results using all households (urban and rural); subsequently, we will restrict our attention to just urban households and urban conflict.

Table 3 contains some results where the dependent variable is "Casualties". This table is the exact counterpart of Table 1. All the difference stems from the fact that the sample here excludes the region containing Ahmedabad.[13]

A column-by-column comparison of Tables 1 and 3 reveals that the basic patterns are similar. However, the significance on the expenditure terms is much enhanced here. Specifically, in the first three regressions reported (columns 1–3) the coefficient on both Hindu and Muslim expenditures are highly significant. As before, an increase in Muslim expenditures is associated with rising conflict while an increase in Hindu expenditures has a mitigating effect on conflict.

Next, we investigate the effects of Muslim-to-Hindu expenditure ratios on Hindu-Muslim violence. Some of these results are collected in columns 4–6 of Table 3. Note, this the exact counterpart of

---

[13]That the sample size is reduced by 5 (one for each period) is easily checked regression by regression.

	[1]	[2]	[3]	[4]	[5]	[6]
H pce	-3.659*	-3.357*	-3.500**			
	(0.053)	(0.052)	(0.013)			
M pce	2.747***	2.464***	3.267***			
	(0.008)	(0.006)	(0.004)			
M/H				2.835***	2.546***	3.267***
				(0.003)	(0.002)	(0.002)
Average Per-Capita Exp.				-1.108	-1.130	-0.483
				(0.595)	(0.566)	(0.778)
Pop	-0.245	0.403	0.597	-0.117	0.567	0.719
	(0.919)	(0.859)	(0.782)	(0.962)	(0.807)	(0.747)
RelPol	5.808***	5.478***	5.901***	5.800***	5.460***	5.892***
	(0.001)	(0.003)	(0.003)	(0.001)	(0.003)	(0.003)
Literacy		0.035**	0.033*		0.036**	0.033*
		(0.046)	(0.056)		(0.043)	(0.056)
Urban		-0.003	-0.003		-0.004	-0.003
		(0.856)	(0.856)		(0.838)	(0.846)
Gini H			-0.838			-0.682
			(0.815)			(0.853)
Gini M			-3.440*			-3.329
			(0.092)			(0.123)
BJP LS seatshare	0.700	0.713	0.738	0.694	0.708	0.730
	(0.204)	(0.146)	(0.131)	(0.216)	(0.154)	(0.139)
Log-Likelihood	-4,850.79	-4,726.48	-4,662.41	-4,843.12	-4,717.37	-4,659.73
Number of observations	225	225	225	225	225	225

Table 3. The Effect of Hindu and Muslim Expenditures on Regional Conflict: Poisson FE regressions (excluding the region containing Ahmedabad). *Sources and Notes.* Varshney-Wilkinson dataset on religious riots, *National Sample Survey* 38th, 43rd, 50th, 55th and 61st rounds. All counts over a five-year period starting immediately after the expenditure data. Dependent variable is regional casualties (killed+injured). Robust standard errors clustered by region; corresponding p-values in parentheses. Time dummies included in all regressions. *significant at 10% **significant at 5% ***significant at 1%

columns 4–6 in Table 1. A column-by-column comparison of Tables 1 and 3 depicts the analogy in the core patterns. Additionally, the significance on the expenditure ratio terms is much enhanced here. In all the three regressions (columns 4–6) the coefficient on the Muslim-to-Hindu expenditure ratios are highly significant. Simple eye-balling also suggests that the magnitude of the effects are also larger — judging by the size of the coefficients in all the six regressions — but we refrain from making a definitive claim without further empirical testing.

Next, we report results for urban households (and conflict) alone while excluding all observations from the region containing Ahmedabad.

	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**
H pce	-3.420***	-4.076***	-3.460**			
	(0.007)	(0.003)	(0.015)			
M pce	1.662**	1.793**	2.010*			
	(0.027)	(0.025)	(0.053)			
M/H				1.874***	2.097***	2.051**
				(0.008)	(0.003)	(0.019)
Average Per-Capita Exp.				-2.266**	-2.772**	-2.419
				(0.027)	(0.023)	(0.139)
Pop	0.240	1.141	1.156	0.333	1.246	1.251
	(0.831)	(0.294)	(0.281)	(0.768)	(0.249)	(0.241)
RelPol	2.306**	3.745***	3.732***	2.122*	3.551***	3.574***
	(0.038)	(0.000)	(0.000)	(0.070)	(0.000)	(0.001)
Primary Edu.		0.087***	0.087***		0.088***	0.089***
		(0.006)	(0.007)		(0.005)	(0.005)
Gini H			-2.213			-1.699
			(0.520)			(0.593)
Gini M			-1.406			-0.317
			(0.551)			(0.896)
BJP LS seatshare	1.260**	1.637***	1.621***	1.319**	1.705***	1.710***
	(0.037)	(0.003)	(0.003)	(0.032)	(0.002)	(0.002)
Log-Likelihood	-4,875.09	-4,361.15	-4,325.55	-4,784.98	-4,259.42	-4,247.07
Number of observations	224	224	224	224	224	224

Table 4. The Effect of Hindu and Muslim Expenditures on Regional Conflict: Poisson FE regressions (Urban households, excluding the region containing Ahmedabad). *Sources and Notes.* Varshney-Wilkinson dataset on religious riots, *National Sample Survey* 38th, 43rd, 50th, 55th and 61st rounds. All counts over a five-year period starting immediately after the expenditure data. Dependent variable is regional casualties (killed+injured). Robust standard errors clustered by region; corresponding p-values in parentheses. Time dummies included in all regressions. *significant at 10% **significant at 5% ***significant at 1%

Table 4 is the exact counterpart of Table 2. A column-by-column comparison between the two tables tells us that the core patterns are *nearly* identical. We use the term "nearly" since there is one notable exception: the coefficient on BJP's share of Lok Sabha seats in Table 4 is positive and significant in *all* specifications. We shall return to this issue shortly.

In sum, the economic effects seem to be more robust — both in terms of statistical significance and in magnitude — in the sample of regions excluding Ahmedabad. It is not hard to understand why. After all, Ahmedabad is one of the hotbeds of Hindu-Muslim violence and if anything this feature has intensified in the 21st century. If primordialism is at play *anywhere*, Ahmedabad would be a contender. Therefore, removing Ahmedabad from the sample facilitates in shifting the focus from innate hatreds to the systematic — but no less pernicious — role of economic forces.

2.5. **The Role of Politics.** Here we briefly discuss the role the presence of the BJP has had on communal violence. The careful reader would have noticed that in each of the regressions in each of our tables (Tables 1–4), we have used BJP's share of Lok Sabha seats as a regressor. The coefficient on this variable is positive throughout. However, it is statistically significant only in some of the regressions; particularly, in the sample without Ahmedabad and when restricted to urban households (and conflict). This might suggest that the role of BJP vis-a-vis religious conflict is limited only to urban areas. While this may well be true, it is worthwhile to point out that in most of the other empirical specifications (NB and OLS) we have high statistical significance for the BJP variable.

So why might the "BJP effect" be more subdued when we *include* Ahmedabad? After all this is the place where primordialism should be *more* at play, obfuscating if not obliterating the economic channels. There are at least two explanations for this. First, it is clear that in the rest of India (i.e., without Ahmedabad) the BJP is not as dominant. There may be a threshold effect in operation — only in places where the BJP has less than a certain level of political presence, does additional BJP control wield any impact on religious violence. Secondly, it may be possible that the dynamics of rioting in Ahmedabad may rely more on the presence of the BJP in more localised government bodies; hence Lok Sabha presence may not be the appropriate measure to study. We leave such questions open to further probing.

3. Concluding Remarks

From our vantage point in the early 21st century, and equipped with extended data on religious conflict, is there good reason to alter our views on the dynamics of Hindu-Muslim violence in India? Based on our findings, we offer the following observations:

(i) There is a clear economic component to violence, especially if one excludes Ahmedabad, and it is roughly along the lines of Mitra and Ray (2014). So, increases in Muslim expenditures are followed by greater levels of religious casualties while increases in Hindu expenditures dampen such violence.

(ii) There is a new aspect which is assuming salience now — namely, a strong political component which is manifesting itself through the presence of BJP legislators. There is some evidence of a positive association between BJP's share of Lok Sabha seats in a region and the extent of Hindu-Muslim conflict therein.

(iii) Ahmedabad exemplifies the ascendancy of this political component. As discussed earlier, Ahmedabad has been a focal point for Hindu-Muslim violence and even more so in the last couple of decades. Additionally, there has been a concomitant rise in the dominance of the BJP in that region; hence the need to isolate Ahmedabad for a careful study of the economic and political forces shaping religious antagonisms.

References

BAGCHI, A. (1990), "Predatory Commercialization and Communalism in India," in S. Gopal (ed), *Anatomy of a Confrontation*, New Delhi: Penguin.

DAS, S. (2000), "The 1992 Calcutta Riots in Historical Continuum: A Relapse into 'Communal Fury'," *Modern Asian Studies* **34**, 301.

ENGINEER, A. (1984), "The Causes of Communal Riots in the Post-Partition Period in India," in A. Engineer (ed.), *Communal Riots in Post-Independence India*, Hyderabad: Sangam Books, 33–41.

ENGINEER, A. (1987), "Meerut: the Nation's Shame," *Economic and Political Weekly* **22**, June 20, 969–973.

ENGINEER, A. (1994), "Communal Violence in Kanpur," *Economic and Political Weekly*, February 26, 473–474.

IYER, S., AND A. SHRIVASTAVA (2018), "Religious Riots and Electoral Politics in India", *Journal of Development Economics, 131, March, pp. 104–122.*

JHA, S. (2013), "Trade, Institutions and Ethnic Tolerance: Evidence from India," *American Political Science Review, Vol. 107, No. 4, November 2013.*

KHAN, D. (1992), "Meerut Riots: An Analysis," in P. Kumar (ed.), *Towards Understanding Communalism*, Chandigarh: Centre for Research in Rural and Industrial Development, 465.

MITRA, A., AND D. RAY (2014), "Implications of an Economic Theory of Conflict: Hindu-Muslim Violence in India," *Journal of Political Economy, 122(4), 719–765.*

NELLIS, GARETH, MICHAEL WEAVER, AND STEVEN C. ROSENZWEIG. (2016), "Do Parties Matter for Ethnic Violence? Evidence from India". *Quarterly Journal of Political Science 11(3): 249–277.*

RAJGOPAL, P. (1987), *Communal Riots in India*, New Delhi: Uppal Publishing House/Centre for Policy Research.

UPADHYAYA, A. (1992), "Recent Trends in Communal Violence: A Case Study of Varanasi," *Proceedings of the International Conference on Conflict and Change*, Ulster/United Nations University, Portrush, Northern Ireland.

VARSHNEY, A. (2003), "Ethnic Conflict and Civil Life: Hindus and Muslims in India". *New Haven, CT: Yale University Press.*

VARSHNEY, A. AND STEVEN WILKINSON (2004), "Dataset on Hindu–Muslim Violence in India, Version 2." October 8, 2004.

WILKINSON, S. (2004), *Votes and Violence: Electoral Competition and Ethnic Riots in India*, Cambridge: Cambridge University Press.