

# Spatial Variation in the ‘Muslim Vote’ in Gujarat and Uttar Pradesh, 2014

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In this paper, we propose to reconcile the controversial debate on Muslim “vote banks” in India by shifting the spatial focus from statewide assessments to the level of constituencies. At the example of Gujarat and Uttar Pradesh in the 2014 general elections, and using an innovative booth-level ecological inference model, we show that Muslims might indeed vote en bloc for or against certain parties, but they tend to do so in a much more localised way than previously assumed. While public Muslim support for the BJP did not translate into electoral support in most places, there are important exceptions to this trend – and at least in the case of Uttar Pradesh, their support for competing parties followed a fairly complex spatial pattern. We further explore this spatial variation in Muslim vote pattern by looking at the moderating impact of minority concentration, violent communal history, and ethnic coordination and conclude with a call for more disaggregated research.

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**H**ow do Muslims vote? This pervasive question in Indian politics gained additional momentum during the 16th Lok Sabha elections, both politically and ethically. The elevation of the chief minister of Gujarat, Narendra Modi of the Bharatiya Janata Party (BJP), to prime minister of India ensured a steady debate on the dichotomy of the BJP’s rise under Modi: inclusive economic development on the one hand – but on the other hand the shadow of Hindu-Muslim riots in Gujarat in 2002 during BJP rule and in Muzaffarnagar, Uttar Pradesh (UP), in 2013, the latter ostensibly linked to the BJP’s political aspirations in the state. Given the legacy of the party and its leader, would Muslims vote *en bloc* against the BJP? Or would they prioritise economic development over religious antagonism, as some commentators speculated?

Academically, explaining the Muslim vote is crucial in gaining insight into ethnic voting behaviour for minority ethnic groups. The assumption of the bloc vote – a bloc being a group of voters with the same preference ordering – is not per se implausible, especially in contexts with high ethnic polarisation and/or low party fractionalisation. It is founded on the premise of harnessing greater political control for a minority elector group, if electors in the group vote together in a particular way (e.g., Penrose 1946; Chandra 2007a; 2007b). Recent scholarship however departs from this assumption (e.g., Devasher 2014), and there is substantial disagreement over whether “vote banks” empirically exist at all in India – they certainly do not exist in the sense of uniform voting. But what about strong trends?

In this paper, we propose to reconcile the debate to some extent by shifting the spatial focus from statewide assessments to the level of constituencies. We show that Muslims might indeed vote en bloc for or against certain parties, but they tend to do so in a much more localised way than previously assumed.

To explore this spatial variation, we have to move beyond scientific poll surveys, because these only allow robust inference on a statewide level given their limited sample size and overall design. The 2014 National Election Survey (NES) conducted by Centre for the Study of Developing Societies (CSDS – arguably the best available survey – for instance sampled their respondents from only 56 booths in 14 assembly segments across 12 of 26 constituencies in Gujarat and from 164 booths in 41 assembly segments across 38 of 80 constituencies in UP (Lokniti Team 2014). If Muslim en bloc voting would indeed be localised and not add up to a statewide trend, the NES would miss it. More generally, surveys can be biased in contexts where political dissent is disapproved. Survey responses in states like

Gujarat and UP with their respective histories of endemic and intermittent ethnic strife are likely to suffer from the social desirability bias, with minorities voicing a socially favourable response to avoid disapproval. The NES elicits information on voting preferences through an anonymous ballot-type method, an unobtrusive method which potentially decreases social desirability, but continues to be limited by the inability to spatially disaggregate.

Fortunately, recent e-governance and open-data initiatives of the Election Commission of India and advances in big data analytics open up methodological alternatives, in particular robust and spatially fine-grained ecological inference models. In this paper, we use one such model to systematically explore the spatial variation in Muslim vote pattern in the 2014 general elections in two key states: Gujarat and UP. These not only happen to be the states for which our own ethnographic expertise is most substantial, they also provide us with the methodological advantage of varying levels of Muslim population and political fractionalisation. In Gujarat, with its bipolar electoral competition and riot-prone history, it is plausible to expect en bloc Muslim voting in favour of the Congress. In UP, post Hindu-Muslim rioting in Muzaffarnagar in 2013, the state's multiparty polity could suggest en bloc Muslim voting against the BJP – but the question then arises to which of the competing parties did the Muslim vote go? The principal questions we ask are thus: did Muslims vote more for certain parties than others? How did their voting preferences vary across or even within constituencies? And what might explain this variation?

## Methodology

Our analysis is based on an original data set compiled on polling booth level, comprising 45,350 data points in Gujarat and 138,763 data points in UP.<sup>1</sup> Election results were tabulated from Form 20 submissions while religious demography was estimated through a linguistic algorithm that exploits the religious connotations of electors' and their relatives' names as recorded in the electoral rolls (Susewind, forthcoming);<sup>2</sup> the rolls also provided age and gender distributions of the electorate as control variables. Based on this data set, we intend to see whether booths with more electors bearing Muslim-sounding names tend to vote more for specific parties.

There is one key obstacle to such ecological inference, however: one could normally not tell whether such a correlation occurs because it were indeed Muslims who vote for specific parties (a so-called compositional interpretation), since it could also be the case that non-Muslims consolidate their votes in the presence of larger numbers of Muslims (a so-called contextual interpretation; see Voss 2004). Much media commentary on Muslim "vote banks" which draws conclusions based on electoral outcomes in minority-concentrated districts fails to distinguish these two contrary possibilities and thus falls into the trap of a so-called ecological fallacy. Similarly flawed arguments are also used to good effect by political leaders to project their electoral support; the BJP, for example, projected a figure of "20-25%" Muslim vote in Gujarat's 2012 assembly polls (*CNN-IBN*, 18 August 2013) and "14-15%" in UP in the 2014 general elections (*The Economic Times*, 25 May 2014), presumably on the basis of their electoral successes in districts

with strong Muslim population concentration. These successes could however as likely have been caused by non-Muslim vote consolidation in times of communal tension, as demonstrated after the Gujarat riots of 2002 (Dhattiwala and Biggs 2012).

Fortunately, a peculiarity of our data set allows us to work around the pitfalls of ecological inference by ruling out contextual interpretations on theoretical grounds. Contextual interpretations hinge on the assumption that non-Muslims are exposed to a certain level of Muslim presence in their everyday life, which leads them to consolidate their votes. Our data set is however so fine-grained that we can limit ourselves to variation between multiple booths within each physical polling station,<sup>3</sup> all of which serve the same rather small spatial unit. Consequently, electors in all these booths are exposed to the same level of Muslim presence in their everyday lives, even though vote pattern as well as booth composition differ.<sup>4</sup> Since invariants cannot explain variation, we can safely assume that any association of intra-station vote pattern with intra-station variation in the number of Muslim electors is indeed caused by Muslims' electoral preferences (i.e., by compositional factors) rather than by a consolidation of non-Muslim votes in the presence of Muslims (i.e., by contextual factors) – because the latter does not vary within stations.

Looking only at intra-station variation has the additional benefit of implicitly controlling for a range of factors that we cannot include in our statistical model for lack of appropriately fine-grained data. Electors in all booths within one station are, for instance, subject to similar levels of campaigning, experience similar levels of infrastructural development, etc, which

**Table 1: Characteristics of Multi-booth Stations in Gujarat**

PC	Coverage of Multi-booth Stations			Demography and Votes in Multi-booth Stations			
	N	Booths %	Electors %	Muslims %	BJP %	INC %	AAP %
Whole state	31,027	69	73	10	61	31	1
Kachchh (1)	1,101	60	70	16	62	31	2
Banaskantha (2)	998	57	61	10	60	32	1
Patan (3)	1,201	66	70	13	54	40	0
Mahesana (4)	1,269	79	80	6	58	37	0
Sabarkantha (5)	946	44	49	10	51	43	0
Gandhinagar (6)	1,627	92	93	7	68	25	2
Ahmedabad East (7)	1,495	91	92	9	65	31	1
Ahmedabad West (8)	1,390	94	95	16	64	31	2
Surendranagar (9)	1,119	59	64	9	57	34	1
Rajkot (10)	1,281	76	81	9	62	33	1
Porbandar (11)	1,151	69	72	9	64	0	1
Jamnagar (12)	947	57	61	16	59	35	1
Junagadh (13)	1,232	73	75	14	56	39	2
Amreli (14)	1,194	70	74	9	54	34	2
Bhavnagar (15)	1,168	68	71	7	61	27	6
Anand (16)	1,386	88	89	11	51	44	0
Kheda (17)	1,346	77	79	12	59	35	0
Panchmahal (18)	1,170	62	65	13	53	39	1
Dahod (19)	1,003	61	63	6	55	33	1
Vadodara (20)	1,351	85	89	11	73	24	1
Chhota Udaipur (21)	718	36	43	10	57	38	2
Bharuch (22)	831	48	55	18	55	38	0
Bardoli (23)	1,058	56	60	7	57	37	1
Surat (24)	1,324	89	90	12	77	18	2
Navsari (25)	1,611	89	90	9	71	22	1
Valsad (26)	1,110	67	66	6	59	34	1

greatly increases the robustness of our estimates. Likewise, we can assume that the difference in voter turnout between Muslim and non-Muslim electors remains stable across all booths within one station.<sup>5</sup>

Our identification strategy has one major drawback, however: it excludes polling stations with only one single booth, that is, 31% of booths in Gujarat and 50% in UP. These also tend to be more rural stations, which leads to an urban bias in our analysis. Overall, however, 73% of all electors and 82% of all Muslim electors in Gujarat, and 52% of all electors and 61% of all Muslim electors in Uttar Pradesh do cast their vote in stations with multiple booths; our analysis thus still covers a considerable part of the electorate (see Table 1 (p 100) and Table 4 (p 104) for a detailed breakdown of coverage and characteristics of multi-booth as opposed to single-booth stations).

To estimate Muslim electoral preferences from this data set, we use a Seemingly Unrelated Regression (SUR) model. SURs estimate the impact of various coefficients on vote shares in separate sub-models for each party but assume shared variation in error terms, which makes them most suitable to the analysis of multiparty electoral contests (Tomz, Tucker and Wittenberg 2012). More specifically, we estimate how the difference in the number of Muslim voters from station mean, the difference in percentage of female electors from station mean and the difference in average age of the electorate from station mean impact the difference in vote share of major parties from station mean. In Gujarat, we look at vote shares of the BJP, the Indian National Congress (INC) and – given its novelty and public visibility – the Aam Aadmi Party (AAP); in the case of UP, we additionally look at the two major regional rivals, the Bahujan Samaj Party (BSP) and the currently ruling Samajwadi Party (SP), and combine the vote shares of BJP and Congress with those of their respective pre-poll alliance partners Apna Dal (AD) and Rashtriya Lok Dal (RLD). To arrive at a spatially disaggregated picture, we run this model across each state, but also separately for each parliamentary constituency and each assembly segment.<sup>6</sup>

## Gujarat

The Muslim vote in Gujarat was subject to unprecedented scrutiny in the period post 2009. This was the year when the BJP, after assuming power in the state in 1995, began a historic rapprochement with the Sunni Muslims of Gujarat, providing them political representation in the party. Between 2009 and 2013 (with the exception of the assembly elections in 2012), the BJP nominated 297 Muslim candidates – many Sunnis – for various local body elections, of which 142 (48%) won. The BJP's "sadbhavana" campaigns to bridge the party's divide with the Muslim community followed. While the BJP's projection of inclusivity was conceivable in light of Modi's political aspirations, it was puzzling to see a simultaneous surge in Muslim public support for the party. After all, barely a decade passed

since Gujarat witnessed an anti-Muslim pogrom in 2002, perceived by many to have been orchestrated by the ruling BJP. On the whole, the Sunnis who formed the majority of Gujarat's Muslim population had thus shunned electoral support to the BJP in the past, unlike the Shias; a BJP supporter within the Sunnis was perceived as a defector and support for the BJP, if at all, was tacit. Ethnographic interviews conducted in the weeks proximate to municipal, assembly and general elections in 2010, 2012 and 2013 respectively in Ahmedabad however revealed an astonishing degree of pro-BJP sentiment; even the absence of co-ethnic candidates in the BJP in Gujarat's 2012 assembly election brought little change in the pro-BJP stance of interviewees (Dhattiwala 2014).

By the 2014 elections, there was thus a widespread perception that Muslims had electorally moved towards the BJP. Political statements by party leaders and prominent Muslim clerics (*The Economic Times*, 17 May 2014) on the generous Muslim electoral support to the BJP were, consequently, barely contested. A rudimentary analysis of 101 booths in Ahmedabad for the 2012 assembly elections in Gujarat however challenged this perception (Dhattiwala 2014), as did the NES, which estimated that only 8% of Gujarat's Muslims voted for the BJP – not many more than the 7% of earlier general elections in 1998, 1999 and 2004 (Sanjay Kumar, *BBC News*, 30 May 2014). Our data (Table 1), too, shows a widespread rejection of the BJP by Muslims: there is a considerable gap between publicly voiced and electorally measured support.

The first three columns show the absolute number and relative share of booths as well as share of the electorate covered

**Table 2: Model Estimates for Gujarat**

PC	R <sup>2</sup>	BJP Votes by			INC Votes by			AAP Votes by		
		Muslims	Age Avg	Women %	Muslims	Age Avg	Women %	Muslims	Age Avg	Women %
Whole state	0,35	-0,61	6,08	3,71	0,84	-9,28	3,36	0,01	0,29	-0,08
Kachchh (1)	0,29	-0,46	2,54	0,23	0,8	-6,86	3,98	0,02	-0,24	0,17
Banaskantha (2)	0,21	-0,44	5,14	-1,96	0,76	-7	3,94	-0,01	0,29	-0,23
Patan (3)	0,25	-0,49	6,46	-1,17	0,73	-8,91	1,08			
Mahesana (4)	0,31	-0,72	11,42	-8,47	0,83	-21,56	15,53	0	0,09	-0,05
Sabarkantha (5)	0,39	-0,35	30,29	-0,96	0,89	-23,04	3,41			
Gandhinagar (6)	0,35	-0,62	26,5	5,57	0,77	-18,04	5,35	0,03	1,12	-0,01
Ahmedabad East (7)	0,29	-0,58	24,08	3,32	0,75	-16,4	2,69	0,01	0,09	0
Ahmedabad West (8)	0,48	-0,54	23,13	2,98	0,82	-10,14	5,21	0,02	0,89	-0,14
Surendranagar (9)	0,27	-0,51	14,79	5,25	0,77	-16,08	-0,32	-0,01	0,26	0,17
Rajkot (10)	0,29	-0,57	16,22	11,3	0,78	-17,96	-0,75	0	0,65	0,19
Porbandar (11)	0,3	-0,64	31,69	5,55				0	0,14	0,05
Jamnagar (12)	0,25	-0,23	23,74	6,64	0,7	-14	-2,98	0	0,12	0,16
Junagadh (13)	0,54	-0,76	5,44	8,05	0,92	-7,77	-2,28	0,01	0,61	-0,23
Amreli (14)	0,39	-0,57	4,97	1,49	0,85	-13,73	-4,84	0	0,19	0,34
Bhavnagar (15)	0,24	-0,54	6,67	0,02	0,76	-12,32	0,72	0,03	3,76	0,14
Anand (16)	0,41	-0,48	22,72	-1,12	0,72	-26,49	3,01	0	0,14	0,05
Kheda (17)	0,4	-0,59	6,86	5,87	0,82	-9,35	2,74	0	0,08	-0,01
Panchmahal (18)	0,56	-0,44	14,04	11,83	0,83	-13,86	3,94	0	-0,29	0,16
Dahod (19)	0,32	-0,71	14,02	5,26	0,79	-9,99	1,38	0	0,14	0,2
Vadodara (20)	0,49	-0,63	14,78	4,1	0,86	-12,46	3,37	0	0,42	-0,01
Chhota Udaipur (21)	0,54	-0,59	12,15	4,81	0,89	-12,69	-1,16	0	-0,22	-0,07
Bharuch (22)	0,56	-0,86	9,95	5,58	1	-7,24	0,98	0	-0,03	0,13
Bardoli (23)	0,21	-0,52	0,93	0,52	0,73	-11,24	8,54	0	-0,19	0,04
Surat (24)	0,37	-0,8	-10,39	12,75	0,93	0,05	-0,73	0,03	-0,19	0,17
Navsari (25)	0,35	-0,68	-6,96	10,6	0,91	-3,32	1,22	0,01	0,22	-0,19
Valsad (26)	0,25	-0,64	8,28	0,51	0,82	-10,03	6,92	0,01	0,27	-0,47

by multi-booth stations and thus by our analysis. The last four columns list the estimated share of Muslim electors and vote shares of major parties within those stations.

Specifically, we estimate that across all 26 constituencies taken together, the BJP’s vote falls by 0.61 votes with every additional Muslim voter in a polling booth while that of the Congress increases by an estimated 0.84 votes, controlling for age average and gender balance; there is no clear relationship between Muslim votes and the AAP’s vote share (Table 2, p 101). This finding remains pretty uniform if we spatially disaggregate: the strongest rejection of the BJP is seen in Bharuch constituency, where an additional Muslim voter in a booth is likely to reduce the party’s vote by 0.86 whereas the least rejection can be found in Jamnagar constituency where BJP vote is likely to decrease by only 0.23 with every additional Muslim voter in a booth – still a rejection, though.

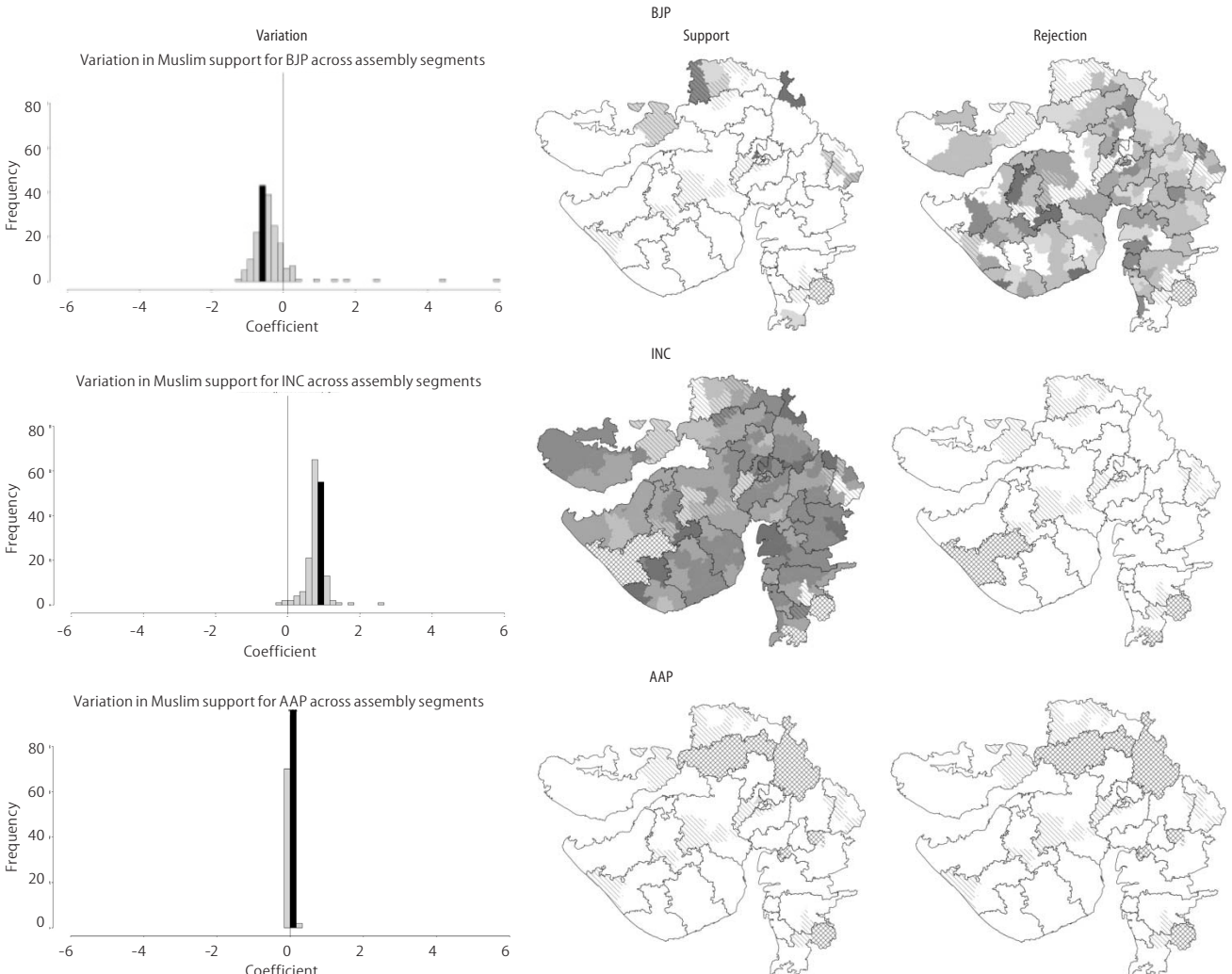
The first column shows the explanatory power ( $R^2$ ) of the overall SUR model, the next columns coefficient estimates for the impact of number of Muslim voters, average age and

percentage of female electors on number of votes for each of the three party sub-models.

These estimates have to be weighed against the model’s explanatory power, which again varies spatially: across Gujarat, our model explains 35% of the intra-station variation in vote pattern, but this varies from 21% to 56% across parliamentary constituencies (with a median of 35%) and from 1% to 77% across assembly segments (with a median of 32%; see Table 2). While part of this variation in explanatory power can be attributed to differences in Muslim population share (where there are only a few Muslim voters, even strong electoral preferences among them will not explain the overall outcome very well), this is not the whole story: the strength of “vote bank” politics genuinely varies across the state. Even with this qualification, however, there is no single parliamentary constituency where Muslims would on average have supported the BJP.

Could we, subsequently, infer a bloc vote against the BJP by Gujarat’s Muslim voters? Not quite: if we examine the spatial vote pattern at the level of the assembly segment, we can

**Figure 1: Variation in Muslim Support of Major Parties in Gujarat**



Visualisation of the coefficients for Muslim support of major parties as they vary across assembly segments. The histograms show the frequency variation of these coefficients across assembly segments from rejection on the left to support on the right, with the bin containing the state-wide coefficient coloured in black. The maps visualise this variation spatially, with darker colours signifying stronger support or rejection respectively. In lined areas, our model has particularly low explanatory power ( $R^2$  below .1) while hashed areas indicate missing values and/or coverage so limited that the model could not run successfully. Geodata from MapMyIndia and Susewind (2014).



discover some pockets where Muslims did indeed prefer the BJP over the Congress: in 21 of 181 (12%) assembly segments covered, the number of votes polled for the BJP is estimated to increase with every additional Muslim voter (Figure 1, p 103).

Most of these assembly segments where Muslims did support the BJP are either poor urban localities (e.g., parts of West Ahmedabad constituency) or fringe areas of the state bordering Rajasthan (e.g., parts of Kachchh constituency) or Madhya Pradesh (e.g., parts of Dahod constituency, sites of intense rioting in 2002). Moreover, the proportion of Muslim voters in these 21 assembly segments is lower than elsewhere (around 5% rather than the statewide average of 10%). It thus seems that Muslims are less likely to vote for the BJP, or might even on average support the party, where their proportion in the electorate is particularly low, where they are more remote from the centre of state politics, or where they live in less privileged urban neighbourhoods and under higher threat of communal violence.

In light of wider literature on ethnic voting, this finding does not really surprise: it has been empirically demonstrated in a mix of contexts that the assertion of minorities vis-à-vis majorities varies with the proportion of each group in the general population (e.g., Blumer 1955; Blalock 1967; Massey, Hodson and Sekulic 1999; Biggs and Knauss 2012). Where minority groups live as a clear numerical minority in a heterogeneous or majority-dominant neighbourhood, they are more likely to share the majority group's preferences, plausibly a consequence of the contact hypothesis (Allport 1954) or fear of disapproval or even violent retribution from the majority (Dhattiwala 2014; also Massey et al 1999).

A different mechanism occurs with minorities living as numerically stronger or even dominant majorities in a neighbourhood. They are likely to be more assertive because localised majorities experience contesting intolerance, a distrust of the external majority, which encourages them to emphasise ethnic solidarity as a way to subvert the political and cultural influence of the external majority (Massey et al 1999). The poorer sections of the electorate are more vulnerable to patron-client forms of access to state resources, where the citizen's vote is directly exchanged in return for either direct payments or access to public goods and services, including physical security (e.g., Stokes 2007; Berenschot 2012). This might explain why assembly segments with underprivileged

Muslims, concentrated in small numbers, are less likely to reject the BJP than assembly segments where Muslims are affluent and/or in greater numbers.

To test this hypothesis further, we constructed an extended statewide SUR model with additional contextual moderators for the extent of Muslim support to the three parties. The first moderator is the percentage of Muslim electors in the assembly segment under which a given booth falls, to test the hypothesis that Muslims reject the BJP more if they are in a more robust minority position. The second and third moderators intend to capture an assembly segment's history of Hindu-Muslim violence by counting the number of deaths in communal riots since independence until the mid-1990s (Varshney and Wilkinson 2006) as well as in 2002 (Dhattiwala and Biggs 2012).<sup>7</sup>

The estimates provided by this extended model explain the observed spatial variation in Muslim vote pattern only marginally better than our original model, but they still differentiate our analysis and indicate avenues for further research (Table 3). Firstly, they confirm that the rejection of the BJP by Muslims and their preference for the Congress indeed grows stronger in areas with higher Muslim percentage in the electorate. Secondly, a long history of communal violence tends to slightly decrease Muslim support for the BJP in the 2014 elections – but communal violence in 2002 paradoxically had the opposite effect. This is counter-intuitive and departs from ethnographic evidence collected from riot-affected neighbourhoods of Ahmedabad, where many Muslims publicly expressed a deep antagonism towards Modi and the BJP. Yet further enquiry reveals that places particularly affected in 2012 were also places where Muslims were in a smaller minority. Again, subordinated groups when in too small a minority are less likely to be able to shape their own group interests and, subsequently, are more vulnerable to social approval – so that the experience of direct violence does not necessarily translate into reduced voting for the BJP. It is possible that the present anxiety of daily living outweighs the effect of past trauma – or that the anxiety of future violence triggers a security mechanism of allying with the government that the voters view as their perpetrators. Either way, this is a good illustration of interview evidence not matching behavioural evidence, providing ample reason to complement the former with the latter.

In sum, the example of Gujarat demonstrates three important points. First, while the relevance of Muslims' electoral choices as well as the strength of "vote bank" politics and thus the explanatory power of our model varies spatially, we see an almost uniform rejection of the BJP and strong support of the Congress by Muslims across the state. This indicates that the much publicised Muslim support of the BJP in the media and, to an extent, in pre-poll surveys, did not translate into strong support at the ballot box. Second, however, the broad spatial uniformity cracks when one disaggregates further to the level of assembly segments, indicating that "vote bank" politics operate even below the level of parliamentary constituencies – and that Muslim rejection of the BJP is weaker or even reverses into support in areas with a very limited Muslim presence, which also tend to be underprivileged areas, subject

**Table 3: Extended Model Estimates for Gujarat**

	BJP	INC	AAP
Age average	6,091	-9,276	0,287
Female percentage	3,732	3,339	-0,081
Number of Muslims	-0,577	0,789	-0,002
– moderated by Muslim elector percentage in assembly segment	-0,002	0,003	0,001
– moderated by riot deaths in assembly segment prior to 2002	-0,001	0,000	0,000
– moderated by riot deaths in assembly segment in 2002	0,003	-0,001	0,000

Coefficient estimates for the impact of average age, percentage of female electors and number of Muslim voters on number of votes for each of the three party sub-models, the latter further moderated by Muslim elector percentage per assembly segment and number of riot deaths per assembly segment prior to as well as in 2002 (SUR R<sup>2</sup> 0.35).

to higher levels of communal violence, or in remote fringes of the state.

**Uttar Pradesh**

With 80 parliamentary constituencies and a Muslim population share of 18%, UP is often seen as the classic blackboard of electoral arithmetic. Unlike bipolar competition in Gujarat, political fractionalisation in UP and the advent of coalition politics in the centre – in which regional parties from UP play a considerable role – provides more complex choices for Muslims (Rehman 2013). From voting for the Congress until the 1990s, Muslim electors veered towards regional parties, first to the SP in the aftermath of the Babri Masjid demolition in 1992 and later, following the SP-BJP alliance in 2009, to the BSP. Moreover, much of this changing vote preference was said

to be borne of the Muslim voter’s suspicion of the BJP’s attempts at arousing communal tensions (Verniers 2014). Many commentators also attributed SP’s overwhelming victory in the 2012 assembly elections to a return of the Muslim vote, even though post-poll surveys once more could not confirm this (CSDS 2012). Multiparty politics clearly meant that Muslims had the choice to move across parties, even if they eventually voted en bloc against the BJP.

The elections in 2014 were particularly crucial for the revival of the BJP as a national party, and its biggest challenge was to consolidate non-Muslim votes in UP, a state where Muslim electors were likely to vote for rival parties. In June 2013, the BJP thus began its makeover in UP under the leadership of Amit Shah, former home minister of Gujarat state, formally accused of ordering extrajudicial killings of Muslims in Gujarat. In

**Table 4: Characteristics of Multi-Booth Stations in Uttar Pradesh**

PC	Coverage of Multi-booth Stations			Demography and Votes in Multi-booth Stations					
	N	Booths (%)	Electors (%)	Muslims (%)	BJP-AD (%)	INC-RLD (%)	BSP (%)	SP (%)	AAP (%)
Whole state	69,535	50	52	22	45	10	18	21	1
Saharanpur (1)	834	53	54	39	38	40	15	5	0
Kairana (2)	724	48	50	36	48	3	12	34	0
Muzaffarnagar (3)	874	57	62	33	54	1	26	17	0
Bijnor (4)	873	56	60	35	42	2	19	33	0
Nagina (5)	864	56	60	42	34	0	23	37	0
Moradabad (6)	1,151	68	71	41	40	2	13	39	0
Rampur (7)	716	50	54	46	32	20	7	40	0
Sambhal (8)	1,009	60	61	42	31	2	24	38	0
Amroha (9)	1,184	76	76	33	45	1	15	37	0
Meerut (10)	1,423	86	86	26	48	4	27	19	1
Baghpat (11)	808	55	54	24	43	18	13	23	1
Ghaziabad (12)	2,017	93	94	18	57	15	12	7	7
Gautam buddh Nagar (13)	1378	73	76	17	52	1	15	25	3
Bulandshahr (14)	1,107	65	64	21	58	7	17	14	1
Aligarh (15)	1,038	59	63	24	47	6	18	26	1
Hathras (16)	708	37	41	14	53	6	21	18	1
Mathura (17)	986	57	62	10	60	19	14	3	1
Agra (18)	1,432	77	79	13	56	4	28	8	1
Fatehpur Sikri (19)	915	52	56	7	47	3	26	19	0
Firozabad (20)	951	52	54	14	41	1	11	45	0
Mainpuri (21)	445	23	26	11	27	0	14	55	1
Etah (22)	620	37	42	17	51	0	16	29	0
Badaun (23)	857	47	51	25	35	0	15	46	0
Aonla (24)	687	39	42	26	40	14	17	27	0
Bareilly (25)	899	55	52	31	49	10	8	29	0
Pilibhit (26)	828	47	50	28	47	3	20	26	1
Shahjahanpur (27)	662	30	32	21	47	3	23	22	0
Kheri (28)	1,147	69	70	23	38	19	24	14	0
Dhaurahra (29)	613	40	43	24	35	18	20	22	0
Sitapur (30)	664	42	43	30	39	3	38	16	0
Hardoi (31)	781	44	46	17	37	3	28	29	0
Misrikh (32)	668	36	37	18	43	3	31	19	0
Unnao (33)	543	25	27	15	47	18	15	14	0
Mohanlalgarh (34)	803	43	45	21	42	5	25	24	1
Lucknow (35)	1,601	99	99	23	55	27	6	5	4
Raebareilly (36)	912	55	59	14	21	65	7	0	1
Amethi (37)	947	59	61	22	33	48	6	0	3
Sultanpur (38)	471	31	31	12	41	5	27	21	1
Pratapgarh (39)	787	52	54	16	42	16	23	13	1

PC	Coverage of Multi-booth Stations			Demography and Votes in Multi-booth Stations					
	N	Booths (%)	Electors (%)	Muslims (%)	BJP-AD (%)	INC-RLD (%)	BSP (%)	SP (%)	AAP (%)
Farrukhabad (40)	762	44	47	19	45	16	12	17	0
Etawah (41)	457	30	34	13	50	1	17	28	1
Kannauj (42)	318	17	21	17	46	0	12	39	0
Kanpur (43)	1,425	96	96	21	57	30	6	3	1
Akbarpur (44)	1,032	63	66	11	56	10	18	12	1
Jalaun (45)	1,016	46	47	14	51	8	23	15	0
Jhansi (46)	866	44	48	12	49	9	14	23	1
Hamirpur (47)	1,039	58	62	14	48	9	17	17	1
Banda (48)	774	47	49	13	44	5	25	19	1
Fatehpur (49)	981	52	55	19	45	5	30	16	0
Kaushambi (50)	481	28	29	17	35	4	17	39	0
Phulpur (51)	907	52	55	19	55	9	14	19	1
Allahabad (52)	611	40	45	20	41	13	14	27	1
Barabanki (53)	643	35	36	25	40	28	14	13	0
Faizabad (54)	540	31	31	22	46	15	14	20	0
Ambedkar Nagar (55)	284	17	17	20	42	2	25	25	0
Bahraich (56)	1,127	74	71	31	45	3	9	38	1
Kaimganj (57)	1,067	63	62	23	39	6	15	34	0
Shrawasthi (58)	689	40	40	28	36	2	17	31	0
Gonda (59)	843	51	52	26	40	12	13	22	0
Domariyaganj (60)	702	37	39	32	33	8	19	18	0
Basti (61)	565	30	31	19	38	3	23	30	1
Sant Kabir Nagar (62)	609	29	30	23	34	2	23	23	1
Maharajganj (63)	779	47	46	18	46	6	21	19	0
Gorakhpur (64)	1,342	70	72	15	53	4	16	22	1
Kushi Nagar (65)	1,093	66	66	19	39	31	13	11	0
Deoria (66)	1,008	57	58	18	52	4	24	14	1
Bansgaon (67)	695	38	39	11	51	5	24	15	1
Azamganj (68)	863	53	54	18	37	2	25	28	1
Azamgarh (69)	1,006	60	61	20	30	2	28	34	0
Ghosi (70)	654	36	34	24	36	2	20	15	0
Salempur (71)	521	31	37	16	50	6	16	18	0
Ballia (72)	635	36	39	15	40	2	15	19	0
Jaunpur (73)	802	44	44	17	39	5	21	17	5
Machhlishahr (74)	796	43	46	14	46	4	24	19	1
Ghazipur (75)	916	54	55	15	32	2	24	26	1
Chandauli (76)	1,039	66	66	15	44	3	26	20	2
Varanasi (77)	1,397	87	87	20	57	7	5	4	21
Bhadoli (78)	875	50	51	14	41	3	25	25	0
Mirzapur (79)	861	50	49	14	46	16	20	10	0
Robertsganj (80)	588	35	38	14	48	10	18	13	2

August, two months after the BJP's aggressive campaigning in UP under Shah, Muzaffarnagar district in western UP witnessed Hindu-Muslim riots that claimed at least 60 lives. Ostensibly, these were politically orchestrated to cleave the region's historic Jat-Muslim alliance; the BJP was understood to be the biggest potential beneficiary of a consolidated Jat vote, which in previous elections was dispersed across the BJP, SP and RLD (*Tehelka*, 8 September 2013; *Live Mint*, 10 April 2014).<sup>8</sup> The ethnocentric momentum continued: the BJP in UP nominated three candidates officially accused of inciting the Muzaffarnagar riots; talks of the Ayodhya temple campaign were revived; cases against the Jats accused were promised to be withdrawn; and Jat voters were urged to take "revenge" for the Muzaffarnagar riots, by voting in favour of the BJP – a strategy reminiscent of Modi's hate speeches on the eve of the Gujarat polls in 2002.

The first three columns show the absolute number and relative share of booths as well as share of the electorate covered by multi-booth stations and thus by our analysis. The last six columns list the estimated share of Muslim electors and vote shares of major parties within those stations.

Whereas Muslims were consequently expected to shun the BJP at least in western UP as well as the ruling SP for their failure to ensure security during the violence, some commentators believed that the agenda of economic development that, purportedly, veered Muslims towards the BJP in Gujarat would also work for Muslims in the rest of UP. So when the BJP made headlines with its unprecedented victory at the ballot, winning 71 of 80 seats in UP, some quickly concluded that Muslims must have overwhelming voted for the BJP. This included prominent Shia and Sunni Muslim clerics of UP who called the BJP victory a consequence of the "disenchantment" of Muslims with secular parties like the Congress (*The Economic Times*, 17 May 2014) and SP leader Azam Khan to whom "(Muslims) were trapped into believing false promises (of the) BJP" (*India Today*, 19 May 2014). Once more, the NES did not confirm such claims, though, and estimated at best a "marginal shift" in the Muslim voter towards the BJP on a statewide level (Sanjay Kumar, *BBC News*, 30 May 2014).

While our analysis supports this general contention, our ability to disaggregate really turns into a methodological advantage in UP. Given the state's larger geographical size and its nature of political contestation with four rather than two major parties in the fray (Table 4, p 104), the Muslim vote indeed shows considerable spatial variation: Muslims do have discernable preferences in most constituencies, but these do not add up to a clear statewide picture. Consequently, our model only explains 13% of the intra-station variation in vote pattern across the whole state, but its explanatory power rises with each step of spatial disaggregation: on constituency level, it explains up to 43% of the variation (with a median of 17%), and in some assembly segments even up to 76% of the variation (with a median of 20%; see Table 5, p 107). Again, part of this variation in explanatory power can be attributed to differences in Muslim population share; the model is strongest in western and northern UP, where Muslims are more numerous and "vote bank" politics more entrenched, but weaker in the south and east of the state.

Across the state, the BJP's vote falls by an estimated 0.28 votes with every additional Muslim voter in a polling booth, controlling for age average and gender balance – but this figure varies from an estimated loss of 0.65 votes in constituencies such as Muzaffarnagar to a gain of 0.54 votes in Robertsganj: Muslims in the north-west rejected the BJP most consistently, while one can find pockets of BJP support in the rest of the state. Compared to Gujarat, Muslims' rejection of the BJP is also less pronounced, though actual support remains rare, and only forms a trend in 15 constituencies (19%). Again, we also found considerable variation within constituencies: Muslim electoral preferences are a highly localised affair, in UP as much as in Gujarat (Figure 2, p 106).

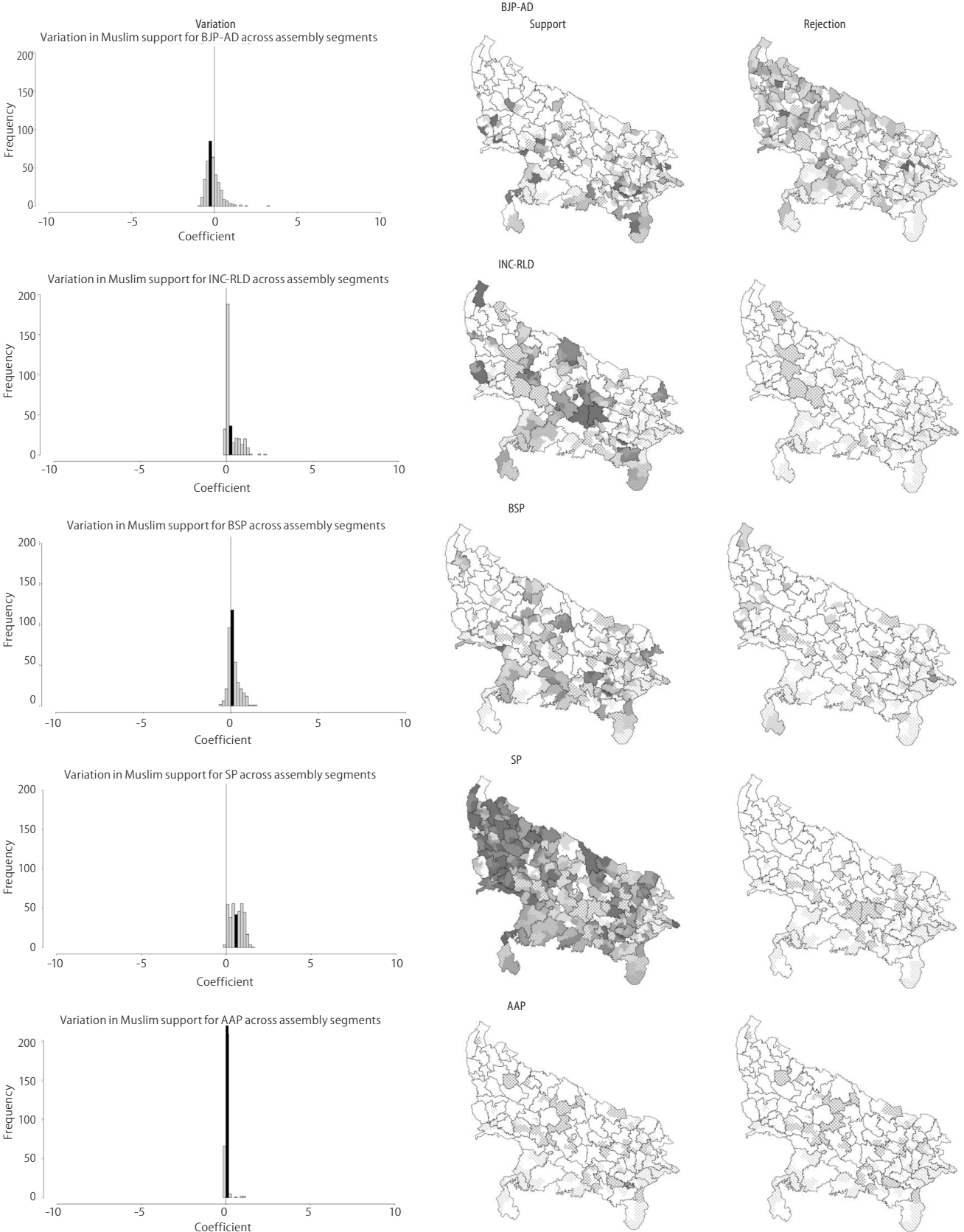
While Muslims' rejection of the BJP has cracks in UP's east, there is no single constituency or assembly segment where Muslims rejected the Congress or SP, even though the degree of support varies. Across the state, SP scores an estimated 0.65 votes for each additional Muslim voter in a polling booth, while Congress wins an estimated 0.27 votes. As Figure 2 shows, Muslim support for the latter is also fairly concentrated in Awadh (including the cities of Lucknow and Kanpur as well as the Gandhi family's home turf in Raebareli and Amethi) and a few additional constituencies, often those in which senior leaders stood for election (Saharanpur, Mathura, Farrukhabad, Kheri, Mirzapur and Khushinagar). In contrast, the SP managed to win more uniform Muslim support, though it fared strongest in western UP, and lost to Congress in the places just mentioned. The other major regional party, the BSP, has more scattered support among Muslims with an estimated statewide gain of 0.10 votes for each additional Muslim voter, with strong support only in Sitapur, Pratapgarh and, interestingly, Etawah, the stronghold of SP and its leader Mulayam Singh Yadav.

The AAP finally has rather limited support among Muslims, with one important exception: in Varanasi, the AAP contender to Modi and party convenor, Arvind Kejriwal, drew considerable Muslim support, with an estimated gain of 0.97 votes for each additional Muslim voter (Table 5). Indeed, the strong rejection of Modi and the BJP by Muslims in Varanasi (an estimated loss of 0.49 votes for each additional Muslim voter) led almost exclusively to support for AAP, while SP, BSP and Congress fared much less well.

The first column shows the explanatory power ( $R^2$ ) of the overall SUR model, the next columns coefficient estimates for the impact of number of Muslim voters, average age and percentage of female electors on number of votes for each of the five party sub-models.

How can this complex pattern of Muslim electoral preferences in UP be understood? Besides reiterating that bloc voting happens on a very local level given the fractured nature of presumably uniform "vote banks", we again developed an extended SUR model to test three over-arching hypotheses: the moderating impact of relative population share on the formation of electoral preferences (as argued in the case of Gujarat), the moderating impact of communal violence, and finally the role of ethnic coordination, that is the preference of Muslims for a certain party if that party nominates a Muslim candidate

**Figure 2: Variation in Muslim Support of Major Parties in Uttar Pradesh**



Visualisation of the coefficients for Muslim support of major parties as they vary across assembly segments. The histograms show the frequency variation of these coefficients across assembly segments from rejection on the left to support on the right, with the bin containing the statewide coefficient coloured in black. The maps visualise this variation spatially, with darker colours signifying stronger support or rejection respectively. In lined areas, our model has particularly low explanatory power ( $R^2$  below .1) while hashed areas indicate missing values and/or coverage so limited that the model could not run successfully. Geodata from MapMyIndia and Susewind (2014).



Table 5: Model Estimates for Uttar Pradesh

PC	R <sup>2</sup>	BJP-AD Votes by			INC-RLD Votes by			BSP Votes by			SP Votes by			AAP Votes by		
		Muslims	Age Average	Women %	Muslims	Age Average	Women %	Muslims	Age Average	Women %	Muslims	Age Average	Women %	Muslims	Age Average	Women %
Whole state	0,13	-0,28	4,04	3,22	0,27	-0,04	0,08	0,10	-0,87	0,14	0,65	0,51	-0,40	0,04	0,01	-0,16
Saharanpur (1)	0,39	-0,17	11,79	13,95	1,10	-2,69	-0,36	-0,24	-4,65	-8,97	0,12	-0,10	3,01	0,00	0,06	0,12
Kairana (2)	0,43	-0,43	7,90	12,79	0,00	0,86	1,26	0,05	-0,63	-3,72	1,07	-1,92	-4,97	0,00	0,03	0,03
Muzaffarnagar (3)	0,28	-0,56	6,66	15,48	0,00	0,60	0,26	0,51	-8,60	-8,92	0,54	-1,43	0,21	0,00	-0,11	0,17
Bijnor (4)	0,42	-0,46	15,32	14,04	0,00	1,23	1,24	-0,01	-4,04	3,05	1,10	-3,16	-3,31	0,00	0,08	0,08
Nagina (5)	0,32	-0,32	14,02	12,04				-0,08	-5,83	-9,27	0,89	-2,05	0,06	0,01	0,05	0,15
Moradabad (6)	0,40	-0,36	7,58	8,10	0,03	-0,06	0,20	0,00	-1,26	0,12	0,97	-1,69	-0,08	0,00	-0,01	0,08
Rampur (7)	0,36	-0,44	-0,30	-1,00	0,37	-0,57	-0,11	-0,07	0,60	-1,34	0,77	-2,68	1,72	0,00	0,02	0,03
Sambhal (8)	0,33	-0,30	5,08	-0,69	0,01	0,11	-0,13	0,07	-0,77	-1,39	0,95	-5,11	2,91			
Amroha (9)	0,41	-0,44	8,45	1,07	0,00	0,55	0,16	0,03	-2,53	-1,23	1,16	-5,39	-1,11	0,00	-0,01	0,07
Meerut (10)	0,16	-0,21	12,32	13,09	0,02	0,98	1,05	0,30	-6,78	-6,91	0,71	-1,17	2,23	0,00	0,73	0,25
Baghpat (11)	0,36	-0,25	10,90	4,38	0,00	12,28	3,70	-0,15	-10,77	-6,93	1,18	0,36	1,15	0,00	0,33	0,10
Ghaziabad (12)	0,14	-0,23	8,88	8,23	0,66	0,34	-1,04	0,03	-2,20	0,08	0,33	0,73	0,15	0,11	-0,09	0,88
Gautam buddh Nagar (13)	0,19	-0,30	5,37	1,17	0,00	0,05	-0,09	0,05	0,16	-0,18	1,01	6,01	-1,22	0,02	0,25	0,52
Bulandshahr (14)	0,16	-0,44	18,11	5,81	0,30	2,02	0,71	-0,13	-13,68	-9,13	0,75	-2,34	-2,33	0,01	0,35	0,35
Aligarh (15)	0,24	-0,29	7,84	3,83	0,04	0,82	-0,11	-0,12	-5,33	-1,80	0,97	-4,28	-4,96	0,01	0,05	0,04
Hathras (16)	0,12	-0,15	9,36	8,34	0,01	0,74	-0,27	0,03	-7,26	0,18	1,04	1,44	-1,95	0,01	-0,03	-0,06
Mathura (17)	0,12	-0,46	-0,29	7,52	1,11	2,83	-0,93	-0,05	-6,75	3,55	0,18	0,43	0,04	0,00	0,33	0,45
Agra (18)	0,07	-0,23	3,25	6,45	0,07	0,53	0,63	0,59	-2,93	-1,53	0,32	0,53	0,24	0,00	0,14	0,22
Fatehpur Sikri (19)	0,05	-0,16	4,11	-0,22	0,00	0,89	-0,55	0,19	1,47	-0,76	0,92	2,88	0,33	0,01	0,03	0,08
Firozabad (20)	0,20	-0,44	5,04	0,31	0,01	0,08	0,10	-0,08	-1,08	1,54	1,03	-2,80	1,36	0,00	0,07	-0,01
Mainpuri (21)	0,18	-0,20	2,10	4,44				-0,06	1,12	0,60	0,72	4,11	3,24	0,00	-0,09	-0,02
Etah (22)	0,20	-0,46	8,18	0,18				0,20	-2,95	-3,59	0,95	-2,58	-1,42	0,00	0,06	-0,02
Badaun (23)	0,27	-0,29	1,08	-2,10				0,04	-0,29	-1,64	0,95	-2,50	-2,89	0,00	-0,01	-0,01
Aonla (24)	0,20	-0,30	2,73	4,37	0,51	-0,50	-1,76	-0,11	-1,49	3,19	0,63	-1,35	-1,97	0,00	-0,01	0,12
Bareilly (25)	0,41	-0,59	3,52	5,14	0,16	0,94	-0,41	0,05	0,13	0,17	1,02	-1,77	1,19	0,00	0,09	0,06
Pilibhit (26)	0,31	-0,45	7,21	1,52	0,01	0,58	0,34	0,31	0,50	0,83	0,84	-0,55	-0,18	0,00	0,00	0,12
Shahjahanpur (27)	0,17	-0,22	6,78	3,14	0,02	0,36	0,02	0,40	1,19	-1,50	0,75	1,33	0,39	0,01	0,01	0,08
Kheri (28)	0,27	-0,29	0,83	5,89	0,91	1,64	-0,17	-0,06	0,15	1,92	0,13	0,99	-1,34	0,00	0,05	0,02
Dhaurahra (29)	0,17	-0,40	1,20	5,42	0,40	2,09	-0,04	0,10	0,60	-1,28	0,44	2,59	-1,15			
Sitapur (30)	0,34	-0,29	-0,92	6,12	0,01	-0,65	0,06	0,81	-2,98	-4,45	0,28	1,58	-1,31	0,00	0,01	0,01
Hardoi (31)	0,14	-0,19	6,23	2,24	0,10	0,18	-0,18	0,45	0,43	-0,36	0,66	4,03	0,11	0,00	0,03	0,01
Misrikh (32)	0,14	0,15	3,89	1,01	0,07	0,39	0,59	0,50	0,62	-2,61	0,60	3,07	-0,58			
Unnao (33)	0,15	-0,23	6,84	-4,45	0,78	0,59	-0,48	0,18	-1,96	-1,13	0,35	2,30	-2,59	0,00	0,05	-0,26
Mohanlalganj (34)	0,09	0,05	3,16	-0,71	0,13	-0,15	0,27	0,36	4,44	6,02	0,48	5,09	0,78	0,01	-0,12	0,02
Lucknow (35)	0,25	-0,21	5,53	5,90	0,98	0,06	-1,85	0,04	-1,06	-0,54	0,09	-0,19	-0,81	0,07	0,75	1,33
Raebareli (36)	0,24	0,09	-0,71	4,87	1,20	-1,76	0,49	0,03	-0,40	0,78				0,00	-0,01	-0,06
Amethi (37)	0,42	-0,11	0,35	1,18	1,09	-1,83	2,99	0,01	-0,44	2,08				0,02	-0,09	0,41
Sultanpur (38)	0,18	0,11	-0,94	8,61	0,03	0,85	-0,60	0,07	1,00	7,36	1,45	-1,92	-4,21	0,01	0,03	0,34
Pratapgarh (39)	0,12	-0,06	1,07	-4,25	0,24	-3,30	-1,22	0,82	-2,66	4,48	0,11	-2,18	-0,19	0,01	-0,19	-0,02
Farrukhabad (40)	0,27	-0,42	1,57	5,05	1,01	-1,01	-0,63	0,00	-0,92	0,02	0,12	-0,06	-1,09	0,01	0,00	0,13
Etawah (41)	0,17	-0,31	3,37	19,75	0,05	0,08	0,37	0,15	-1,78	-1,03	1,03	-0,71	-4,32	0,01	0,04	0,02
Kannauj (42)	0,18	-0,16	5,87	5,88				-0,02	-0,87	3,48	0,98	7,64	-5,40	0,00	-0,05	-0,11
Kanpur (43)	0,34	-0,26	6,97	7,22	1,04	0,69	-0,90	0,01	-1,56	-1,64	0,06	-0,01	-0,03	0,01	0,25	0,29
Akbarpur (44)	0,07	-0,14	8,37	3,10	0,58	2,56	-1,99	0,12	-1,04	-3,16	0,28	1,05	-1,35	0,01	0,31	0,29
Jalaun (45)	0,09	0,41	5,41	2,90	0,39	-0,27	0,77	0,42	-3,82	0,49	0,47	-0,06	0,39	0,00	0,00	0,09
Jhansi (46)	0,15	-0,42	4,05	-6,04	0,31	3,87	2,06	-0,03	-4,88	-0,30	0,80	1,74	-0,59	0,00	0,05	-0,11
Hamirpur (47)	0,10	-0,24	9,99	-0,16	0,39	1,49	-0,09	0,03	-1,15	-0,50	0,57	-2,90	1,78	0,00	-0,44	0,15
Banda (48)	0,08	0,19	5,49	-15,52	0,12	0,92	-1,19	0,49	-0,91	6,23	0,58	1,42	2,21	0,01	0,19	-0,17
Fatehpur (49)	0,16	-0,22	4,77	-2,58	0,00	0,42	-0,57	0,61	-2,42	3,27	0,48	2,38	-3,35	0,00	0,05	-0,08
Kaushambi (50)	0,11	-0,18	5,74	-5,40	0,14	0,31	-0,01	0,24	1,30	3,68	0,68	1,23	-2,59	0,01	0,02	0,00
Phulpur (51)	0,11	-0,09	5,35	-3,43	0,33	0,56	0,69	0,05	0,68	1,48	0,77	1,15	-3,22	0,01	0,15	0,20
Allahabad (52)	0,21	-0,28	1,27	-2,20	0,18	0,84	0,64	0,03	0,14	-0,07	0,83	4,47	-0,59	0,01	0,01	-0,12
Barabanki (53)	0,24	-0,16	8,37	5,71	0,91	0,22	0,76	0,03	-0,09	5,20	0,20	1,38	-2,20	0,00	0,17	0,00
Faizabad (54)	0,16	-0,09	3,35	-0,66	0,56	0,75	-0,82	-0,01	1,51	0,67	0,41	1,81	0,56	0,01	0,12	0,03
Ambedkar Nagar (55)	0,20	-0,04	5,17	-5,72	0,04	0,59	0,49	0,26	3,41	4,58	0,94	2,89	3,43	0,01	0,19	-0,07
Bahraich (56)	0,43	-0,32	6,19	6,70	0,01	0,33	0,10	0,02	0,81	0,87	1,13	-0,42	-1,42	0,00	0,17	0,04
Kaiserganj (57)	0,25	-0,11	3,10	5,06	0,05	0,10	-0,27	0,04	1,32	2,36	0,89	-0,79	-2,41	0,00	0,07	-0,07

Continued

Table 5: Model Estimates for Uttar Pradesh (Continued)

PC	R <sup>2</sup>	BJP-AD Votes by			INC-RLD Votes by			BSP Votes by			SP Votes by			AAP Votes by		
		Muslims	Age Average	Women %	Muslims	Age Average	Women %	Muslims	Age Average	Women %	Muslims	Age Average	Women %	Muslims	Age Average	Women %
Shrawasti (58)	0,28	-0,20	0,70	-2,82	0,01	0,11	0,04	-0,08	0,92	0,96	0,92	-3,21	1,44	0,00	0,03	0,02
Domariyaganj (60)	0,06	-0,15	5,35	1,80	0,06	1,21	0,46	0,21	1,84	2,06	0,27	-0,32	1,54	0,00	0,09	0,07
Basti (61)	0,25	-0,18	6,84	5,17	0,03	0,49	0,04	0,06	3,68	3,19	0,94	2,25	-1,78	0,00	0,36	0,17
Sant kabir Nagar (62)	0,06	-0,02	-0,73	-2,58	0,02	-0,08	0,19	0,13	-0,06	-1,49	0,46	-0,17	-2,33	0,02	0,01	-0,05
Maharajganj (63)	0,17	-0,18	0,96	-2,55	0,12	1,12	-0,67	0,07	2,36	7,50	0,81	-2,68	-1,15	0,00	-0,02	0,04
Gorakhpur (64)	0,17	-0,18	1,11	1,44	0,09	0,11	0,49	0,03	-2,18	0,85	0,97	1,30	-0,17	0,03	0,08	0,19
Kushi Nagar (65)	0,18	0,06	3,30	0,62	0,83	0,80	-0,05	0,02	0,16	1,89	0,20	1,41	0,88	0,00	0,08	0,04
Deoria (66)	0,13	-0,10	3,26	6,32	0,05	0,01	0,69	0,80	-2,25	2,74	0,27	0,63	-0,94	0,01	0,10	0,08
Bansgaon (67)	0,05	0,31	8,34	0,86	0,21	0,26	0,17	0,36	-4,99	-2,59	0,35	2,64	0,28	0,01	-0,11	0,10
Lalganj (68)	0,13	-0,19	-0,59	-6,05	0,02	-0,05	0,20	-0,14	-5,24	15,16	0,76	-1,08	0,34	0,01	0,11	0,25
Azamgarh (69)	0,10	-0,16	2,83	-1,11	0,01	0,21	0,01	0,30	-3,30	3,59	0,57	-0,53	0,05	0,00	0,06	0,00
Ghosi (70)	0,05	-0,05	3,42	-2,03	0,01	0,10	0,08	-0,04	3,48	0,75	0,17	1,37	4,09	0,00	0,05	0,07
Salempur (71)	0,05	0,08	4,05	-5,67	0,26	0,78	-0,55	0,13	1,84	1,11	0,34	0,25	4,83	0,00	0,01	0,03
Ballia (72)	0,00	-0,01	-0,65	-1,08	0,01	0,06	0,03	-0,01	-1,59	1,28	0,12	1,86	0,33	0,00	-0,05	-0,06
Jaunpur (73)	0,07	0,20	6,73	-0,12	0,30	0,66	0,77	0,24	-2,49	7,97	0,42	3,10	-0,82	0,10	2,80	0,10
Machhlishahr (74)	0,07	0,19	10,69	-3,01	0,10	0,60	-0,47	0,42	-1,86	2,15	0,55	1,27	0,60	0,01	0,27	0,05
Ghazipur (75)	0,02	0,15	0,98	-7,17	0,05	-0,10	0,22	0,07	-3,95	3,84	0,36	0,51	-4,00	0,01	0,00	-0,30
Chandauli (76)	0,06	0,05	12,91	1,83	0,13	0,77	-0,68	0,42	-3,32	3,22	0,42	0,20	-1,79	0,09	-0,16	0,09
Varanasi (77)	0,29	-0,49	1,58	5,96	0,15	1,12	-0,17	0,01	-0,48	0,44	0,02	0,69	-0,38	0,97	1,23	-2,41
Bhadohi (78)	0,11	0,01	2,79	4,92	0,13	0,83	-0,91	0,24	-0,27	8,83	0,78	3,80	-0,06			
Mirzapur (79)	0,12	-0,19	-5,10	2,18	0,93	0,87	0,41	0,06	-5,43	0,37	0,17	-1,10	-1,74	0,01	-0,04	0,04
Robertsganj (80)	0,07	0,54	-1,88	0,01	0,31	0,78	2,57	0,36	-0,86	1,88	0,58	1,28	0,56	0,04	0,18	0,02

(a factor which played no role in Gujarat, but might be more relevant in UP).<sup>9</sup> This extended model follows the same basic logic as in the case of Gujarat, but supplemented the number of deaths in communal riots since independence until the mid-1990s (Varshney and Wilkinson 2006) with a district-wise number of communal incidents recorded by the police in the 10 weeks after the 2014 elections (*The Indian Express*, 9 August 2014) to have at least some crude measure for the recent communalisation trend.<sup>10</sup> As was the case in Gujarat, the rise in explanatory power thanks to these additional moderators remains modest (R<sup>2</sup> rises only to 15%; see Table 6), so that the following discussion is best understood as a road map for future research.

Table 6: Extended Model Estimates for Uttar Pradesh

	BJP-AD	INC-RLD	BSP	SP	AAP
Age average	4,203	-0,037	-0,779	0,332	0,027
Female percentage	3,161	0,071	0,096	-0,336	-0,174
Number of Muslims	-0,016	0,385	0,243	0,477	0,080
– moderated by Muslim elector percentage in assembly segment	-0,009	-0,005	-0,008	0,002	-0,001
– moderated by riot deaths in assembly segment	0,000	0,000	0,000	-0,001	0,000
– moderated by communal incidents in district	-0,002	-0,004	0,001	-0,001	-0,001
– moderated by Muslim candidate		0,312	0,195	0,361	-0,005

Coefficient estimates for the impact of average age, percentage of female electors and number of Muslim voters on number of votes for each of the five party sub-models, the latter further moderated by Muslim elector percentage per assembly segment, number of riot deaths per assembly segment (until mid-1990s), communal incidents per district (2014 post-elections), and the fact that a party's candidate was Muslim (SUR R<sup>2</sup> 0.15).

As in Gujarat, a higher Muslim share in the electorate in UP tends to swing the Muslim vote away from the BJP, but also from Congress, AAP, and especially BSP – and towards the SP. Whether this truly explains – or merely masks for – the diverging vote pattern in western and eastern UP has to be seen in more thorough studies, though – one competing explanation for the west-east-divide would be the impact of entrenched communal politics, in particular after the BJP attempted to rake up the 2013 Muzaffarnagar riots (Pai 2014). Indeed, Muzaffarnagar itself saw among the strongest anti-BJP vote among Muslims (Table 5), but while most of the Muslim vote in western UP went to SP, Muzaffarnagar itself and especially Muzaffarnagar town went to the BSP. This was perhaps an outcome of the fact that both the BJP and the BSP nominated riot-accused candidates (Sanjeev Baliyan and Kadir Rana, respectively), creating a strategic clash of candidates and pitting divisive issues of one group against another, a competition in which the SP candidate was left behind. Another explanation is suggested by our next two moderating factors: while the BSP is the only party that won Muslim support in areas where the more recent attempts at communalisation culminated, the only party that really lost Muslim support in areas with a long history of violent communalism was the ruling SP, suggesting that Muslims expect the state to guarantee their safety – and thus punish the ruling party if it fails to deliver.

The rejection of certain parties does not explain support for others, though – unlike under conditions of a two-party contest in Gujarat, Muslims did have a choice in UP. Our extended model shows that this choice is strongly affected by ethnic coordination, that is, the tendency of Muslims to vote for a certain party if and where it nominated a Muslim candidate. This effect is particularly pronounced in the case of Congress and the SP, which

obtained almost double as strong a Muslim support if they nominated a Muslim candidate – another pattern which warrants closer examination, as the effect of ethnic coordination was much less visible for the BSP, and almost indiscernible in the case of AAP. The BJP did not nominate Muslim candidates at all.

In sum, our analysis of the spatial pattern of Muslim votes in UP complements and qualifies our findings from Gujarat in three ways. First, we see an even higher variation in both the relative relevance of “vote bank” politics (more to the west than the east) and in substantial party preferences of Muslims, underlining the importance of disaggregated analyses. Second, the BJP was largely rejected by Muslims in UP as well, though not as clearly as in Gujarat. Finally, this could partly reflect the fact that Muslims not only reject the BJP but also the ruling party, in cases where the same does not properly guarantee their safety. In Gujarat, some Muslims might have reversed both trends because of their strongly marginalised and threatened position in certain assembly segments – but in UP, they have realistic electoral alternatives, and seem to make good use of them.

### Conclusion

The 16th Lok Sabha elections flagged the question of the Muslim vote more emphatically than ever before, primarily because of the political elevation of BJP leader Narendra Modi as the prime minister of India. The assumption that Muslims of India collectively vote as a bloc for a given party or candidate became pertinent in light of the Hindu-Muslim violence in Gujarat in 2002, during Modi's rule, and in Muzaffarnagar in UP in 2013. Did Muslims consequently vote en bloc against the BJP in 2014, too – and if so, which alternative did they prefer?

Election commentators and political pundits usually answer such questions by dissecting vote pattern in minority-concentrated districts. This is likely to produce spurious inferences, owing to the ecological fallacy. Scientific surveys in contrast provide better measures and generally refute “vote bank” hypotheses, but remain restricted by their inability to spatially disaggregate data. But what if all politics are local? To circumvent ecological fallacies and complement survey research with a more disaggregated perspective, we proposed a methodological alternative: a fine-grained ecological inference model run on intra-station variation in vote shares and Muslim demography, estimated from electors' names. Based on this alternative methodology, we make two main arguments: firstly, Muslim support for the BJP as reported in public is to be distinguished from electoral support. Second, there is no overarching statewide Muslim vote. Rather, Muslim voting preferences are more localised and spatially variable across and within constituencies.

The former argument is best illustrated in Gujarat, where we saw a surge of public Muslim support for the BJP in the period ahead of the election, but little actual electoral support for the party: there was no single parliamentary constituency where Muslims, on average, supported the BJP. To the contrary: across all 26 constituencies taken together, the BJP's vote falls by an estimated 0.61 votes with every additional Muslim voter in a polling booth while that of the Congress

increases by an estimated 0.84 votes, controlling for age average and gender balance. Upon disaggregation, there is little change in the finding: only in 21 of 181 assembly constituencies – notably characterised by economically disadvantaged and violently threatened Muslims in a very low proportion relative to Hindu-Muslims are likely to moderately support the BJP. While the state-level finding points to a total rejection of the BJP, spatial disaggregation thus allows a more nuanced reading of how voting preferences are localised and depend on more factors than merely the religious affiliation of the voter.

The fractionalised political arena of UP in turn opened up more choices for its Muslim electorate, reflected in even higher spatial variation. Similar to Gujarat, we found an overall rejection of the BJP: across all 80 constituencies, the BJP's vote falls by an estimated 0.28 votes with every additional Muslim voter in a polling booth, controlling for age average and gender balance. But this figure varies from an estimated loss of 0.65 votes in constituencies such as Muzaffarnagar to a gain of 0.54 votes in Robertsganj: the variation across constituencies is much wider than in Gujarat. Muslims in west UP are more likely to reject the BJP than those in the east, and largely preferred the SP, with the notable exception of Muzaffarnagar, where Muslims preferred the BSP. This is in line with the expectation that riot victims penalise the party in power that failed to ensure their physical security, and not just the BJP per se. Muslim support for the Congress finally is fairly concentrated in Awadh, BSP support limited and scattered, and support for the AAP only really relevant in Varanasi, where the party's Arvind Kejriwal challenged Narendra Modi.

For both states we further examined the moderating effect of violent communalisation. In Gujarat, we find that the BJP's rejection by Muslims is less pronounced in places where deaths were higher in 2002 – but these are also places where Muslims are in a smaller minority. While the effect of direct violence does not necessarily lead to the rejection of the BJP, the larger implication is that subordinated groups when too small a minority are less likely to be able to forge their own group interests and, subsequently, more vulnerable to socially conforming behaviours. In UP, the effect of the Muzaffarnagar riots was most strongly felt in the Muzaffarnagar town itself as discussed above – and largely led to a punishment of the ruling SP, besides a continued rejection of the BJP. Yet, the rejection of certain parties as an effect of communal violence does not explain whom the Muslims of UP did positively vote for, given the greater choice they bore unlike their counterparts in the bipolar political arena of Gujarat. One factor that partly explains support rather than rejection is ethnic coordination: Muslims were twice more likely to vote for the Congress and SP in places where the parties nominated a Muslim candidate.

In conclusion, we found that public Muslim support for the BJP did not translate into electoral support in most places. More importantly, however, we found tremendous spatial variation in Muslim vote pattern, especially in UP: Muslim voting preferences are localised and spatially variable across and within constituencies. Adding to this complexity, the explana-

tory power of our “vote bank” model also varies spatially: bloc voting matters in some areas but not in others – and in most, electoral choices depend much more on other factors than on religious identity. Fortunately, much more fine-grained analyses into these complexities are possible with the advent of recent

e-government and open data initiatives on the one hand and progress in big data analytics on the other. We hope that this paper and the simultaneous publication of our raw data set inspires further disaggregated inquiry into the only seemingly simple question: how do Muslims vote?

## NOTES

- Both raw data and statistical scripts for our models are available under a Creative Commons CC-BY-NC-SA 4.0 licence from <https://www.raphael-susewind.de/blog/2014/data-epw>. We explicitly encourage replication and further inquiry.
- To our knowledge, this linguistic algorithm is the only one available today to probabilistically infer religion from names in India, where official data on religion is handled fairly restrictive but name lists of various kinds are readily available. The algorithm primarily matches the names of electors and their named relatives against a master name list obtained from [indiachildnames.com](http://indiachildnames.com), consolidating spelling variants through fuzzy soundex technology. Names missing from this master name list were further classified by comparing their 3gram profiles to those of known names in the same assembly segment (cf Schnell et al 2013). To assess classification accuracy, we drew a random stratified sample of five names from each assembly segment in both states and manually classified them as Muslim or non-Muslim. Against this “gold standard”, the algorithm achieves positive and negative predictive values of 82% and 97%, respectively in Gujarat and of 87% and 96%, respectively in Uttar Pradesh; the accuracy of booth level estimates will improve further since errors in either direction cancel each other out during aggregation. The remaining tendency to slightly overestimate Muslim elector percentages remains inconsequential for our model since we have no reason to assume spatial variation in the extent of such overestimation.
- For this purpose, all booths with subsequent ID numbers which share the same station name (minus any numbers) were grouped, so that booths named “Primary school XYZ room 1”, “Primary school XYZ room 2”, etc, were considered to belong to the same physical polling station.
- Variation of Muslim percentage across booths within one physical polling station occurs for various reasons, including street-wise segregation within the area covered by this station (an average 300 metres circle in urban areas). Even though inter-ethnic relations depend greatly on street networks (e.g., Grannis 1998, 2009), most people in our ethnographic experience tend to attribute “Muslimness” to neighbourhoods or villages rather than to smaller spatial entities. Therefore, we assume that the experiential level of “Muslimness” only begins to differ from station to station and not within. Likewise, any deliberate manipulation of booth composition by the state, for instance the concentration of “vulnerable groups” in certain booths where they could be give police protection, is more likely to occur between polling stations than within them.
- To test this assumption, we ran a separate linear model which attempts to explain difference in turnout percentage compared to station mean through difference in Muslim electorate percentage to station mean. The  $R^2$  of this model remains below .01 in both Gujarat and Uttar Pradesh, and rarely rises above .05 in any assembly segment or constituency in either

- state, suggesting that Muslim and non-Muslim turnouts do not differ within the tight spatial bracket of a polling station.
- Since the number of multi-booth stations can shrink drastically in some assembly segments, we had to exclude a few such segments because our model could not successfully run anymore; this was the case for Dangs (assembly segment 173) in Gujarat, and for Kishani (109), Karhal (110), Purwa (167), Sarojini Nagar (170), Isauli (187), Sultanpur (188), Tirwa (197), Rasulabad (205), Sirathu (251), Manjhanpur (252), Phaphamau (254), Pratappur (257), Bara (264), Milkipur (273), Tanda (278), Alapur (279), Jalalpur (280), Gainsari (292), Mahadewa (311) and Chillupar (328) in Uttar Pradesh. Data from these assembly segments did however contribute to constituency- and statewide model estimates.
  - The original data sets list riot deaths on Census town level; these were spatially matched to the relevant assembly segment.
  - There is widely tested scholarship on the role of political elites in orchestrating violence in India, especially in close electoral races, where political parties can win votes by raising divisive symbolic issues related to ethnic identity (e.g., work on UP riots in Brass 2005; Wilkinson 2004).
  - The religious identity of candidates was manually coded as Muslim/non-Muslim.
  - Again, the original data sets were spatially matched to the relevant assembly segment.

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