

# Supplemental Appendix to: Monitoring via the Courts: Judicial Oversight and Police Violence in India

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# Supplemental Appendix

## A Descriptive Statistics

In this section, we provide additional information on the variables employed in the empirical analyses reported in the main manuscript and in this Supplemental Appendix. Table A1 reports descriptive statistics for each of the variables.

Table A1: Descriptive Statistics

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
Death Not Remanded	562	1.753	3.842	0	0	0	1.8	34
Death Remanded	562	1.018	2.873	0	0	0	1	42
Total Death	562	2.770	5.587	0	0	1	3	53
Year	562	2,008.548	4.619	2,001	2,005	2,009	2,013	2,016
State PCA	562	0.420	0.494	0	0	0	1	1
District PCA	562	0.208	0.406	0	0	0	0	1
SSC	562	0.454	0.498	0	0	0	1	1
DGP Tenure	562	0.372	0.484	0	0	0	1	1
Officer Tenure	562	0.527	0.500	0	0	1	1	1
SILO	562	0.411	0.492	0	0	0	1	1
PEB	562	0.562	0.497	0	0	1	1	1
SHRC	562	0.548	0.498	0	0	1	1	1
State PCA Year	562	0.053	0.225	0	0	0	0	1
Terrorist Events, <i>t-1</i>	562	12.336	27.921	0	0	1	6	180
Religion	562	0.904	0.295	0	1	1	1	1
Party	562	0.509	0.500	0	0	1	1	1
Party 2006	562	0.463	0.499	0	0	0	1	1
Binding State PCA	562	0.130	0.336	0	0	0	0	1
Women's Media Exposure	467	70.854	15.945	27.000	61.000	74.000	84.000	97.000
Literacy	559	71.926	10.596	47.000	64.700	70.500	81.200	94.000

As noted in our manuscript, the Indian Supreme Constitutional Court's ruling in *Prakash Singh and Others v. Union of India and Others* called for implementation of other directives aside from the creation of Police Complaints Authorities (PCAs). Several of the variables in Table A1 are associated with those directives, as follows:

- SSC: State Security Commissions
- DGP Tenure: Two-year tenure for the Director General of Police
- Officer Tenure: Two-year tenure for police officers
- SILO: Separation of the investigative and law and order functions of the police
- PEB: Police Establishment Board

Other variables listed in Table A1 are described our main manuscript or as part of the robustness checks below.

Figure A1 shows changes in police custodial death as reported by NCRB over time.

Figure A1: Count of Deaths in Police Custody by Year

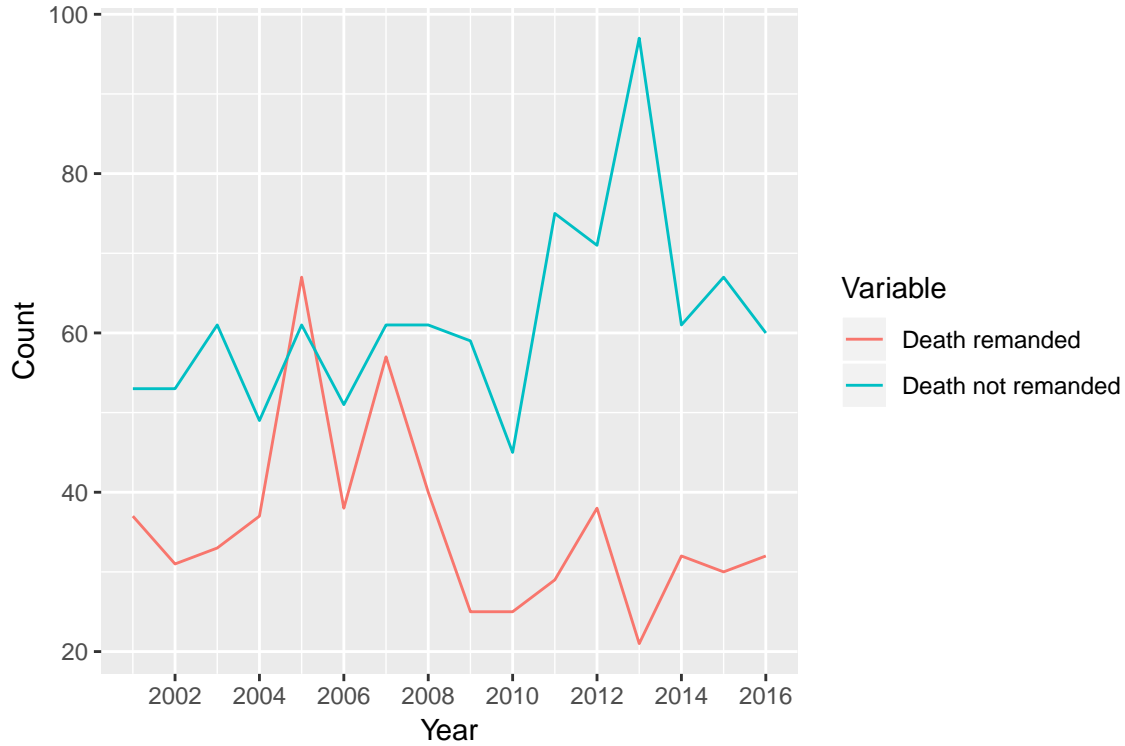


Table A2 and Figure A2 provide information about the timing of PCA implementation across Indian states and union territories (UTs).

Table A2: Timing of PCA Creation

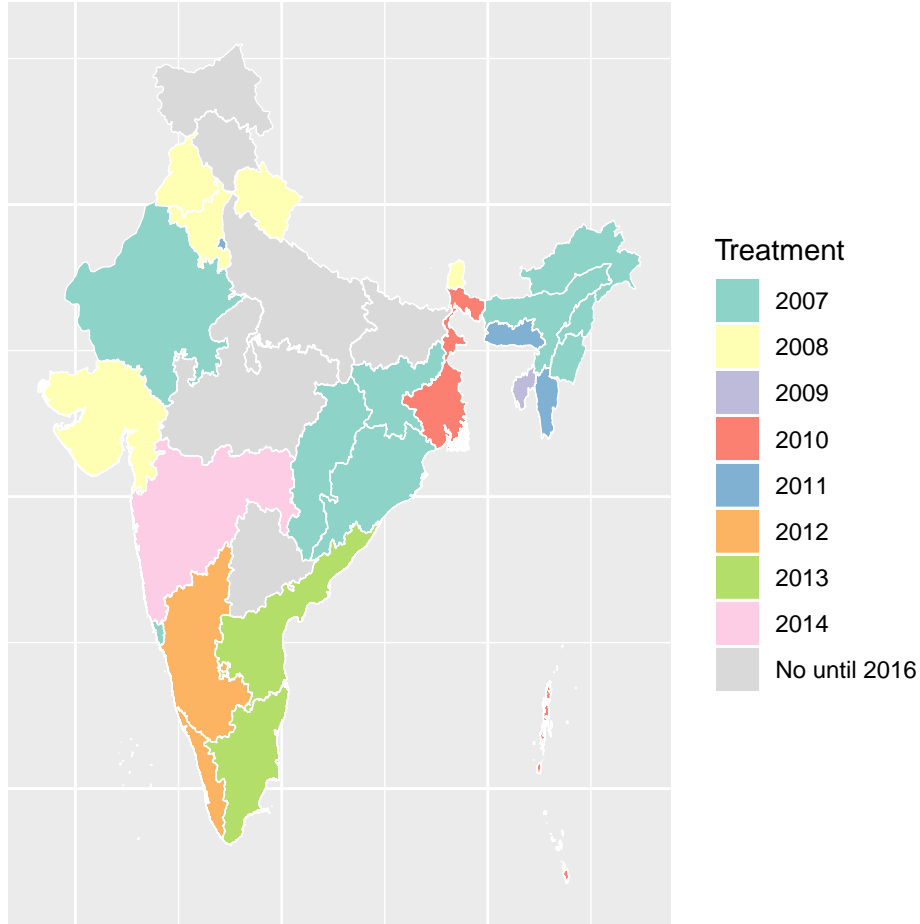
Year	States and UTs
2007	Arunachal Pradesh, Assam, Chhattisgarh, Goa, Jharkhand, Manipur, Nagaland, Rajasthan
2008	Gujarat, Haryana, Punjab, Sikkim, Uttarakhand
2009	Tripura
2010	West Bengal, A & N Islands, Chandigarh, D & N Haveli, Daman & Diu, Lakshadweep, Puducherry
2011	Meghalaya, Mizoram
2012	Karnataka, Kerala
2013	Andhra Pradesh, Tamil Nadu
2014	Maharashtra
Not yet	Bihar, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh, Uttar Pradesh
Existed	Orissa (Odisha), Delhi

Table A3 provides information on the sum of total deaths in police custody from 2001 to 2006 by Indian state and UT. Table A4 shows the sum of deaths in police custody in 2006, the year of the Court's directive, by Indian state and UT.

## B Multiple Imputation

In this section, we provide additional information on the variables employed in the imputation model that we used to impute missing values on GDP and Head Transfer, our measures of State Capacity and State Desire, respectively. Table A5 reports descriptive statistics. Year, State and

Figure A2: Timing of PCA Creation



UT, and State PCA Creation Type (i.e., whether a State PCA is created by government order or state act) are also included in our imputation model. We created five imputed datasets for the imputed models reported in the main manuscript.

## C Placebo Tests

Table A6 shows the robustness of our placebo test to the inclusion of our main control variables using OLS (Columns 1-4) and Poisson (Columns 5-8). Although the OLS model results are not significant at traditional levels of statistical significance, the sign of the effects is correct. Our results achieve traditional levels of statistical significance in Columns 3 and 4. Figure A3 plots the effect of State PCA using the results presented in Column 4 of Table A6.

Table A3: Total Deaths in Police Custody Prior to 2006

State/UT	Remanded Death	Unremanded Death
Andhra Pradesh	76	45
Arunachal Pradesh	3	1
Assam	10	2
Bihar	2	1
Chhattisgarh	10	4
Goa	1	1
Gujarat	28	35
Haryana	1	5
Himachal Pradesh	5	0
Jammu & Kashmir	1	1
Jharkhand	0	0
Karnataka	2	6
Kerala	0	7
Madhya Pradesh	6	6
Maharashtra	46	68
Manipur	0	1
Meghalaya	2	0
Mizoram	5	6
Nagaland	0	0
Orissa	0	4
Punjab	6	5
Rajasthan	7	18
Sikkim	0	0
Tamil Nadu	2	29
Tripura	0	4
Uttar Pradesh	11	24
Uttarakhand	1	0
West Bengal	18	52
A & N Islands	0	0
Chandigarh	0	0
D & N Haveli	0	0
Daman & Diu	0	0
Delhi	0	3
Lakshadweep	0	0
Puducherry	0	0

## D Additional Time-Variant Covariates

In Tables A7 and A8 we show that our results are also robust to two additional measures of STATE DESIRE. These robustness checks, along with the design of our empirical tests, provides evidence that PCAs decrease police violence in spite of the fact that there may be selection by which PCAs are more likely to be established in states where compliance is the least difficult.

First, states that experience insurgency and terrorism may experience the most police violence and also be subject to the politicization of the PCA; some governments (e.g., in Jammu and Kashmir and Assam) that face insurgency have gone so far as to seek exemption from the directive to create a PCA entirely. Table A7 shows the robustness of our results to the inclusion of a control for terrorist events using OLS (Columns 1 and 2) and Poisson (Columns 3 and 4). We used terrorist event data from Global Terrorism Database (GTD). Terrorist event is a count variable that counts the number of terrorist incidents at state/UT-year level from the Global Terrorism Database (?).

Second, we employ a measure of religion. In states that have diversity of religion, political competition is more intensive compared to states that are predominately Hindu. More intensive political competition leads to lack of desire to implement PCAs. Religion is coded 1 if Hindu is the most populous religion and as 0 otherwise using data from the 2001 and 2011 census. Because we only have data for 2001 and 2011, years between 2001 and 2011 are coded the same as 2001; any year after 2011 is coded the same as 2011. Table A8 shows the robustness of our results to the inclusion of a control for religion using OLS (Columns 1 and 2) and Poisson (Columns 3 and 4).

Table A4: Total Deaths in Police Custody in 2006

State/UT	Remanded Death	Unremanded Death
Andhra Pradesh	17	11
Arunachal Pradesh	0	0
Assam	0	0
Bihar	0	0
Chhattisgarh	0	1
Goa	0	0
Gujarat	1	7
Haryana	0	1
Himachal Pradesh	0	0
Jammu & Kashmir	1	0
Jharkhand	0	0
Karnataka	0	2
Kerala	0	1
Madhya Pradesh	1	1
Maharashtra	9	9
Manipur	0	0
Meghalaya	0	0
Mizoram	0	0
Nagaland	0	0
Orissa	0	0
Punjab	0	0
Rajasthan	2	2
Skiim	0	0
Tamil Nadu	2	4
Yripura	0	1
Uttar Pradesh	0	6
Uttarakhand	1	0
West Bengal	4	4
A & N Islands	0	0
Chandigarh	0	0
D & N Haveli	0	0
Daman & Diu	0	0
Delhi	0	1
Lakshadweep	0	0
Puducherry	0	0

Table A5: Descriptive Statistics for Imputation

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
Year	563	2,008.535	4.626	2,001	2,005	2,009	2,013	2,016
death Remanded	562	1.018	2.873	0.000	0.000	0.000	1.000	42.000
Death Not Remanded	562	1.753	3.842	0.000	0.000	0.000	1.750	34.000
State PCA	563	0.419	0.494	0	0	0	1	1
District PCA	563	0.208	0.406	0	0	0	0	1
SC Order	563	0.686	0.465	0	0	1	1	1
Committee	563	0.561	0.497	0	0	1	1	1
GDP	515	202,532.000	291,377.500	1,082.000	16,971.500	88,550.000	262,539.000	2,188,532.000
Religion	563	0.904	0.295	0	1	1	1	1
Head Transferred	544	0.760	1.854	0.000	0.000	0.389	0.750	25.500

## E Additional Robustness Checks

In this section, we describe the results of the robustness checks referenced in the main manuscript. Our results are robust to almost all specifications, as described below.

### E.1 OLS Results With and Without Logged DV

Table A9 shows the robustness of our results to Ordinary Least Squares (OLS) Regression (Columns 1 and 2) and the use of a logged dependent variable (Columns 3 and 4). Log Death (Not remanded) is calculated as  $\text{Ln}(\text{Death not remanded} + 1)$ .

### E.2 Alternative IV: Unlagged PCA Creation

Table A10 shows the robustness of our results to not lagging PCA Creation using OLS (Columns 1 and 2) and Poisson (Columns 3 and 4).

Table A6: Placebo Test Results

	(1)	(2)	(3)	(4)
t-3	0.826 (0.910)	0.589 (0.750)	0.246 (0.177)	0.146 (0.149)
t-2	0.174 (0.561)	-0.082 (0.448)	-0.055 (0.194)	-0.150 (0.217)
t-1	0.704 (0.942)	0.494 (0.777)	0.064 (0.182)	-0.068 (0.184)
t	0.348 (0.691)	0.057 (0.646)	0.034 (0.238)	-0.098 (0.280)
t+1	-0.661 (0.487)	-0.961 (0.604)	-0.456** (0.210)	-0.625** (0.263)
t+2	-0.754** (0.368)	-1.057** (0.536)	-0.495*** (0.127)	-0.671*** (0.177)
t+3	-0.588 (0.403)	-0.784* (0.466)	-0.501* (0.272)	-0.538** (0.252)
GDP		2.606** (1.260)		0.586* (0.349)
Head Transferred		-0.064 (0.060)		-0.034 (0.030)

\* Note: State FE and Year FE are included in all models. P-values are two-tailed. Robust standard errors are clustered by state/UT. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01.

Table A7: Results Controlling for Terrorist Events

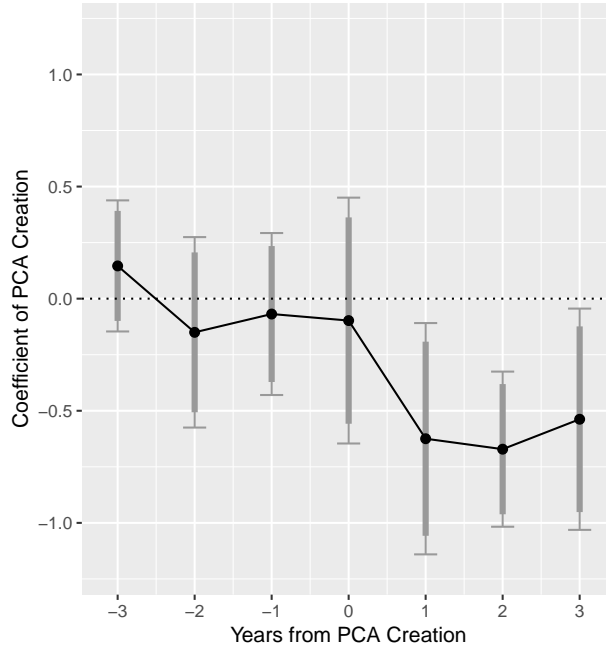
	(1)	(2)	(3)	(4)
PCA Creation, <i>t-1</i>	-1.562* (0.876)	-1.431* (0.763)	-0.591*** (0.162)	-0.566*** (0.157)
Terrorist Events, <i>t-1</i>	-0.0004 (0.007)	-0.0002 (0.007)	-0.002 (0.005)	-0.002 (0.005)
GDP		2.080** (1.060)		0.210 (0.299)
Head Transferred		-0.055 (0.057)		-0.028 (0.036)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 36 N = 562	State/UT = 36 N = 562	State/UT = 36 N = 562	State/UT = 36 N = 562

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01.

### E.3 Balanced Panel, Quasi-Poisson, Negative Binomial, the Deletion of Two New States, the Deletion of Maharashtra, and the Deletion of Andhra Pradesh and Maharashtra

Table A11 shows the robustness of our results to the use of a balanced panel (Column 1), the use of a Quasi-Poisson model (Column 2), the use of a negative binomial model (Column 3), the deletion of two new Indian states (Column 4), the deletion of Maharashtra (Column 5), and the deletion of Andhra Pradesh and Maharashtra (Column 6). To create a balanced panel, Telangana and UT Daman & Diu were deleted from the data; Telangana is a new state created in 2014, and Daman & Diu does not have death data in 2001. For results incorporating the deletion of two new states shown in Column 3, Telangana and Andhra Pradesh were deleted from the data because Telangana was separated from Andhra Pradesh in 2014.

Figure A3: Changes in Police Custodial Death Controlling for GDP and Head Transferred



#### E.4 Controlling for SHRC

Table A12 shows the robustness of our results to the inclusion of a control for State Human Rights Commissions (SHRCs) using OLS (Columns 1 and 2) and Poisson (Columns 3 and 4).

#### E.5 Controlling for Party

The relationship between state incumbent party and union government incumbent party might have effects on both the creation of State PCA and police violence. Here we use two variables to control the relationship between state incumbent party and union government incumbent party. Party is coded as 1 if the state incumbent party matches the union government incumbent party in a given year. Party 2006 is coded as 1 if the state incumbent party in a given year matches the union government incumbent party in 2006. Table A13 shows the robustness of our results to the inclusion of a control for Party using OLS (Columns 1 and 2) and Poisson (Columns 3 and 4). Table A14 shows the robustness of our results to the inclusion of a control for Party 2006 using OLS (Columns 1 and 2) and Poisson (Columns 3 and 4).

#### E.6 Controlling for Other Court Directives

The Indian Supreme Constitutional Court’s ruling in *Prakash Singh and Others v. Union of India and Others* called for implementation of other directives aside from the creation of Police Complaints Authorities (PCAs). Table A15 shows the correlation between each of these directives.

Table A16 shows the robustness of our results to the inclusion of controls for other directives using OLS (Columns 1-4) and Poisson (Columns 5-8). Table A17 shows the same results and adds controls for GDP and Head Transferred. As shown in Column (1) in each table, the



Table A8: Results Controlling for Religion

	(1)	(2)	(3)	(4)
PCA Creation, $t-1$	-1.563*	-1.432*	-0.598***	-0.575***
	(0.856)	(0.747)	(0.164)	(0.157)
Religion	0.335	-0.110	-0.430***	-0.562**
	(0.319)	(0.167)	(0.161)	(0.286)
GDP		2.088**		0.202
		(1.052)		(0.275)
Head Transferred		-0.055		-0.028
		(0.057)		(0.036)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 36	State/UT = 36	State/UT = 36	State/UT = 36
	N = 562	N = 562	N = 562	N = 562

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Table A9: OLS Results With and Without Logged DV

	(1)	(2)	(3)	(4)
PCA Creation, $t-1$	-1.564*	-1.432*	-0.212**	-0.202**
	(0.856)	(0.746)	(0.087)	(0.082)
GDP		2.080**		0.166
		(1.053)		(0.134)
Head Transferred		-0.055		-0.010
		(0.057)		(0.010)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 36	State/UT = 36	State/UT = 36	State/UT = 36
	N = 562	N = 562	N = 562	N = 562

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

effect of State PCA is robust after controlling District PCA. In Column (2) and (6) in each table, the effect of State PCA is not significant. Because SILO and PEB are implemented at the same place and time as State PCA, we interacted State PCA with SILO and PEB in Column (3) and (4), also Column (7) and (8). Column (3) and (7) in each table show that the effect of State PCA is significant when there is no SILO. Column (8) in Table A16 and Column (4) and (8) in Table A17 show that the effect of State PCA is significant when there is no PEB, although Column (4) in Table A16 does not show significant results.

## E.7 Binding PCA Recommendations

Our main hypothesis is that the creation of a Police Complaints Authority decreases police violence. Prior to this point, we have assumed that all PCAs are the same, and as such, we operationalized the creation of a PCA as a binary variable indicating whether a state created an institution in a given year or not. In this section, we conduct an empirical test of an additional implication of our theory and investigate the effect of the creation of a PCA with enforcement

Table A10: Results Not Lagging PCA Creation

	(1)	(2)	(3)	(4)
PCA Creation, $t$	-1.322 (0.881)	-1.270 (0.819)	-0.505** (0.217)	-0.500** (0.205)
GDP		2.165* (1.142)		0.291 (0.258)
Head Transferred		-0.064 (0.058)		-0.032 (0.033)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 36 N = 5632	State/UT = 36 N = 562	State/UT = 36 N = 562	State/UT = 36 N = 562

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Table A11: Results for Balanced Panel, Quasi-Poisson, Negative Binomial, New States Deleted, Maharashtra Deleted, and Andhra Pradesh and Maharashtra Deleted

	(1)	(2)	(3)	(4)	(5)	(6)
PCA Creation, $t-1$	-0.557*** (0.186)	-0.560*** (0.187)	-0.542*** (0.192)	-0.631*** (0.156)	-0.477*** (0.185)	-0.546*** (0.155)
State/UT FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
	State/UT = 34 N = 544	State/UT = 36 N = 562	State/UT = 36 N = 562	State/UT = 34 N = 543	State/UT = 35 N = 546	State/UT = 34 N = 530

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01.

power on reducing police violence. There is a variance in the enforcement power of state PCAs: some PCAs have the power of binding recommendation, and some do not. We expect state PCAs that can make binding recommendations to have a greater effect on reducing police violence as compared to state PCAs with no such qualities.

To test this expectation, we recode our main independent operationalization of our independent variable into three nominal categories: BINDING PCA CREATION, REGULAR PCA CREATION, and NO PCA CREATION. PCAs are coded as binding if the state act or government order that creates the PCA gives the institution the power to make binding recommendations. PCAs are coded as regular if the state act or government order that creates the PCA does not explicitly mention the power to issue binding recommendations. We include each of these variables in our empirical model. We set the reference group as REGULAR PCA CREATION to directly compare BINDING PCA CREATION and REGULAR PCA CREATION.<sup>1</sup> As above, we use reports published by CHRI to recode our main independent variable as above.

Table A18 shows the results of this additional test. As expected, the results show that the creation of a binding PCA leads to greater reduction in unremanded police custodial deaths as compared to the creation of a PCA without such powers. In Column (1) (no controls), the creation of a binding PCA leads to -0.587 log of the ratio of expected counts—a 44% more reduction in deaths as compared to states with regular PCA. The implementation of a non-binding PCA

<sup>1</sup> Note that these measures still represent de jure—not de facto—powers delegated to PCAs.

Table A12: Results Controlling for SHRC

	(1)	(2)	(3)	(4)
PCA Creation, $t-1$	-1.567*	-1.435*	-0.611***	-0.588***
	(0.860)	(0.750)	(0.174)	(0.167)
SHRC, $t-1$	0.229	0.164	0.143	0.167
	(0.523)	(0.507)	(0.401)	(0.386)
GDP		2.067**		0.222
		(1.053)		(0.271)
Head Transferred		-0.054		-0.028
		(0.057)		(0.036)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 36	State/UT = 36	State/UT = 36	State/UT = 36
	N = 562	N = 562	N = 562	N = 562

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table A13: Results Controlling for Party

	(1)	(2)	(3)	(4)
PCA Creation, $t-1$	-1.594*	-1.460*	-0.648***	-0.617***
	(0.859)	(0.748)	(0.140)	(0.135)
Party	-0.453	-0.494	-0.240**	-0.245**
	(0.364)	(0.343)	(0.119)	(0.112)
GDP		2.142**		0.248
		(1.087)		(0.285)
Head Transferred		-0.055		-0.021
		(0.054)		(0.029)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 36	State/UT = 36	State/UT = 36	State/UT = 36
	N = 562	N = 562	N = 562	N = 562

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

leads to -0.522 log of the ratio of expected counts—a 41% reduction in deaths compared to states with no PCA. Note, however, that even when we include BINDING PCA CREATION, REGULAR PCA CREATION still has a statistically and substantively significant effect on the reduction of unremanded deaths in police custody in India. It is not the case that only binding PCA constrain police violence. In sum, when we consider variance in the ability of PCAs to make binding recommendations, we find that although PCAs with more enforcement power are more effective in reducing police violence, even “toothless” PCAs help to limit the number of deaths that occur in Indian police custody.

## E.8 Media Exposure

Table A19 shows the robustness of our results to the inclusion of controls for media exposure using OLS (Columns 1 and 2) and Poisson (Columns 3 and 4). Our data on media exposure come from India’s National Family Health Survey (NFHS).<sup>2</sup> In the nationally representative survey,<sup>3</sup> media exposure is measured by asking whether respondents read a newspaper or magazine,

<sup>2</sup>For additional information, please refer to <http://rchiips.org/nfhs/>.

<sup>3</sup>During our temporal domain, NFHS surveys were conducted in 1998, 2005, and 2015. Only ever-married women were surveyed in 1998, while a representative sample of women from age 15 to 49 were surveyed in 2005 and 2015. We use these data on women’s media exposure across all three rounds of the survey, assuming that both ever-married women’s media exposure—and women’s media exposure generally—is a reasonable proxy for media exposure more broadly. We code years between 2001 and 2004 using data from the 1998 survey, years between 2005 and 2014 using data from the 2005 survey; and years between 2015 and 2016 using data from the 2015 survey.

Table A14: Results Controlling for Party 2006

	(1)	(2)	(3)	(4)
PCA Creation, $t-1$	-1.594*	-1.463*	-0.610***	-0.603***
	(0.858)	(0.747)	(0.156)	(0.153)
Party 2006	-0.459*	-0.386	-0.270*	-0.272
	(0.266)	(0.282)	(0.152)	(0.179)
GDP		1.983*		0.037
		(1.055)		(0.306)
Head Transferred		-0.056		-0.033
		(0.059)		(0.036)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 36	State/UT = 36	State/UT = 36	State/UT = 36
	N = 562	N = 562	N = 562	N = 562

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table A15: Correlations of Directives

	SSC, $t-1$	DGP Tenure, $t-1$	Officer Tenure, $t-1$	SILO, $t-1$	PEB, $t-1$	State PCA, $t-1$	District PCA, $t-1$
SSC, $t-1$	1	0.724	0.781	0.711	0.793	0.736	0.573
DGP Tenure, $t-1$	0.724	1	0.744	0.732	0.698	0.551	0.577
Officer Tenure, $t-1$	0.781	0.744	1	0.660	0.938	0.705	0.502
SILO, $t-1$	0.711	0.732	0.660	1	0.743	0.591	0.506
PEB, $t-1$	0.793	0.698	0.938	0.743	1	0.714	0.471
State PCA, $t-1$	0.736	0.551	0.705	0.591	0.714	1	0.329
District PCA, $t-1$	0.573	0.577	0.502	0.506	0.471	0.329	1

watch television, listen to the radio at least once a week, or visit a cinema/theatre at least once a month. We include in our supplementary models the state-level percentage of participants who report not being regularly exposed to any of the above media sources.

## E.9 Literacy

It is possible that citizens in states with a more literate population are more likely to seek remedy via a PCA and that civil society organizations are likely to mobilize around such institutions. In Table A20, we control for literacy using OLS (Columns 1 and 2) and Poisson (Columns 3 and 4). To measure literacy, we use data from the 2001 and 2011 Indian census.<sup>4</sup> Because we only have data for 2001 and 2011, years between 2001 and 2011 are coded the same as 2001; years after 2011 are coded the same as 2011.

## E.10 Alternative DV: Total (Remanded and Unremanded) Death in Custody

Table A21 shows the robustness of our results to the use of total (i.e., remanded and unremanded) death as the dependent variable using OLS (Columns 1 and 2) and Poisson (Columns 3 and 4).

## E.11 Alternative DV: Remanded Death in Custody

Table A22 shows the robustness of our our results to the use of remanded death as the dependent variable using OLS (Columns 1 and 2) and Poisson (Columns 3 and 4).

<sup>4</sup>For additional information, please refer to [http://censusindia.gov.in/2011-prov-results/data\\_files/india/Final\\_PPT\\_2011\\_chapter6.pdf](http://censusindia.gov.in/2011-prov-results/data_files/india/Final_PPT_2011_chapter6.pdf).

Table A16: Results Controlling for Other Directives

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State PCA, <i>t-1</i>	-1.508*	-0.989*	-2.004**	-0.329	-0.716**	-0.423*	-0.901***	-0.005
	(0.793)	(0.600)	(0.919)	(0.592)	(0.282)	(0.218)	(0.315)	(0.349)
District PCA, <i>t-1</i>	-0.306	-0.074	-0.027	-0.069	0.185	0.314	0.386	0.317
	(0.500)	(0.674)	(0.647)	(0.673)	(0.355)	(0.395)	(0.396)	(0.395)
SSC, <i>t-1</i>		0.163	0.455	0.129		-0.042	-0.073	-0.048
		(0.612)	(0.614)	(0.619)		(0.379)	(0.315)	(0.383)
DGP Tenure, <i>t-1</i>		0.888	0.525	0.891		0.197	0.030	0.202
		(0.839)	(0.762)	(0.843)		(0.514)	(0.525)	(0.518)
Officer Tenure, <i>t-1</i>		-0.767	-0.693*	-0.401		-0.761***	-0.714***	-0.615***
		(0.540)	(0.397)	(0.646)		(0.232)	(0.205)	(0.195)
SILO, <i>t-1</i>		-0.996*	-1.799**	-0.975*		-0.350*	-0.616**	-0.346*
		(0.549)	(0.696)	(0.552)		(0.202)	(0.259)	(0.203)
PEB, <i>t-1</i>		-1.080	-0.792	-1.425		0.311	0.514**	0.164
		(1.687)	(1.557)	(1.844)		(0.276)	(0.233)	(0.252)
State PCA, <i>t-1</i> * SILO, <i>t-1</i>			1.494**				0.654*	
			(0.728)				(0.352)	
State PCA, <i>t-1</i> * Officer Tenure, <i>t-1</i>				-0.691				-0.424**
				(0.523)				(0.199)

\* Note: State FE and Year FE are included in all models. P-values are two-tailed. Robust standard errors are clustered by state/UT. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01. Number of observations dropped from 526 to 391. Column (1) - (4) are OLS models and column (5) - (8) are Poisson models.

## E.12 Independent PCA

In order to account for heterogeneity in PCA independence, we recode our main independent operationalization of our independent variable into three nominal categories: INDEPENDENT PCA CREATION, REGULAR PCA CREATION, and NO PCA CREATION. We set the reference group as REGULAR PCA CREATION to directly compare the effects of INDEPENDENT PCA CREATION and REGULAR PCA CREATION.<sup>5</sup> Following CHRI's report, PCAs are coded as independent when independent members are added to a panel prepared by the State Human Rights Commission/Lok Ayukta/State Public Service Commission. Table A23 shows the results of this additional test.

## E.13 NGO Activity/Presence

Table A24 shows the robustness of our results to the inclusion of controls for civil society organization or non-governmental organization (NGO) presence/activity. In order to proxy civil society organization, we use data from the 2004 and 2011 India Human Development Survey (IHDS),<sup>6</sup> which includes a question regarding whether anyone in the household belongs to a development group of NGO. Using this information, we calculated the percentage of households in which a respondent answered yes to this question for each state or union territory. We code all years between 2001 and 2011 using data from 2004; years after 2011 are coded using data from 2011.

<sup>5</sup>Note that these measures still represent de jure—not de facto—powers delegated to PCAs.

<sup>6</sup>IHDS is a large-scale and multi-topic survey of 42,152 households in 1,503 villages and 971 urban neighborhoods across India. For additional information, please refer to <https://www.ihds.umd.edu/>.

Table A17: Results Controlling for Other Directives with Controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State PCA, $t-1$	-1.286** (0.626)	-0.849* (0.435)	-1.583** (0.727)	-0.591 (0.426)	-0.684*** (0.262)	-0.383 (0.234)	-0.824** (0.354)	-0.046 (0.324)
District PCA, $t-1$	-0.670 (0.717)	-0.360 (0.806)	-0.302 (0.796)	-0.358 (0.805)	0.166 (0.337)	0.343 (0.400)	0.394 (0.398)	0.345 (0.399)
SSC, $t-1$		0.277 (0.520)	0.474 (0.546)	0.265 (0.523)		-0.090 (0.377)	-0.104 (0.327)	-0.095 (0.380)
DGP Tenure, $t-1$		0.610 (0.735)	0.374 (0.748)	0.612 (0.738)		0.198 (0.496)	0.046 (0.513)	0.203 (0.500)
Officer Tenure, $t-1$		-0.735 (0.551)	-0.679 (0.477)	-0.594 (0.627)		-0.685** (0.282)	-0.667** (0.267)	-0.568** (0.258)
SILO, $t-1$		-0.985** (0.457)	-1.558*** (0.523)	-0.977** (0.460)		-0.374* (0.217)	-0.591** (0.282)	-0.371* (0.219)
PEB, $t-1$		-0.871 (1.588)	-0.691 (1.492)	-1.004 (1.654)		0.198 (0.319)	0.410 (0.311)	0.080 (0.301)
GDP	2.411* (1.314)	2.195** (0.999)	2.015** (1.019)	2.190** (0.996)	0.179 (0.270)	-0.129 (0.300)	-0.057 (0.300)	-0.129 (0.300)
Head Transferred	-0.051 (0.059)	-0.063 (0.072)	-0.062 (0.071)	-0.062 (0.072)	-0.027 (0.035)	-0.040 (0.036)	-0.036 (0.036)	-0.039 (0.036)
State PCA, $t-1$ * SILO, $t-1$			1.066 (0.655)				0.591* (0.329)	
State PCA, $t-1$ * Officer Tenure, $t-1$				-0.271 (0.363)				-0.342* (0.189)

\* Note: State FE and Year FE are included in all models. P-values are two-tailed. Robust standard errors are clustered by state/UT. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01. Number of observations dropped from 526 to 391. Column (1) - (4) are OLS models and column (5) - (8) are Poisson models.

Table A18: The Effect of Binding PCA Creation on Police Violence

Binding PCA Creation, $t-1$	-0.587*** (0.218)
No PCA Creation, $t-1$	0.522*** (0.196)
State/UT FE	Y
Year FE	Y
	State/UT = 36 N = 562

Note: p-values are two-tailed. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01. Robust standard errors are clustered by state/union territory.

Table A19: Results Controlling for Women's Media Exposure

	(1)	(2)	(3)	(4)
PCA Creation, $t-1$	-1.679* (0.952)	-1.570* (0.844)	-0.597*** (0.167)	-0.576*** (0.160)
Women's Media Exposure	0.024 (0.030)	0.007 (0.031)	0.012 (0.027)	0.013 (0.028)
GDP		2.431** (1.089)		0.187 (0.280)
Head Transferred		-0.055 (0.057)		-0.028 (0.035)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 30 N = 467	State/UT = 30 N = 467	State/UT = 30 N = 467	State/UT = 30 N = 467

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01.

Table A20: Results Controlling for Literacy

	(1)	(2)	(3)	(4)
PCA Creation, <i>t-1</i>	-1.580* (0.873)	-1.435* (0.764)	-0.594*** (0.170)	-0.567*** (0.164)
Literacy	-0.040 (0.073)	-0.005 (0.055)	0.014 (0.031)	0.019 (0.033)
GDP		2.076** (1.005)		0.227 (0.305)
Head Transferred		-0.056 (0.058)		-0.025 (0.038)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 35 N = 559	State/UT = 35 N = 559	State/UT = 35 N = 559	State/UT = 35 N = 559

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01.

Table A21: Results using Total Death in Custody as DV

	(1)	(2)	(3)	(4)
PCA Creation, <i>t-1</i>	-1.013 (0.775)	-1.031 (0.747)	-0.289 (0.182)	-0.295 (0.189)
GDP		-0.171 (1.025)		-0.062 (0.189)
Head Transferred		-0.050 (0.045)		-0.026 (0.017)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 36 N = 562	State/UT = 36 N = 562	State/UT = 36 N = 562	State/UT = 36 N = 562

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01.

Table A22: Results using Remanded Death in Custody as DV

	(1)	(2)	(3)	(4)
PCA Creation, <i>t-1</i>	0.551 (0.498)	0.401 (0.452)	0.346 (0.375)	0.271 (0.351)
GDP		-2.252*** (0.697)		-0.935** (0.431)
Head Transferred		0.005 (0.035)		-0.009 (0.051)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 36 N = 562	State/UT = 36 N = 562	State/UT = 36 N = 562	State/UT = 36 N = 562

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01.

Table A23: The Effect of Independent PCA Creation on Police Violence

Independent PCA Creation, <i>t-1</i>	-0.320 (0.343)
No PCA Creation, <i>t-1</i>	0.560*** (0.193)
State/UT FE	Y
Year FE	Y
	State/UT = 36 N = 562

Note: p-values are two-tailed. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01. Robust standard errors are clustered by state/union territory.

Table A24: Results Controlling for NGO Presence/Activity

	(1)	(2)	(3)	(4)
PCA Creation, <i>t-1</i>	-1.585* (0.885)	-1.465* (0.777)	-0.611*** (0.171)	-0.585*** (0.164)
NGO	0.599** (0.289)	0.424 (0.623)	1.644*** (0.386)	1.799*** (0.449)
GDP		2.180** (1.077)		0.244 (0.263)
Head Transferred		-0.056 (0.058)		-0.028 (0.036)
State/UT FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
	State/UT = 33 N = 527	State/UT = 33 N = 527	State/UT = 33 N = 527	State/UT = 33 N = 527

\* Note: P-values are two-tailed. Robust standard errors are clustered by state/UT. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01.