

ONLINE APPENDIX TO WORKING PAPER 276

Devesh Kapur and Milan Vaishnav. 2011. "Quid Pro Quo: Builders, Politicians, and Election Finance in India." CGD Working Paper 276, updated 3-23-13. Washington, D.C.: Center for Global Development. <http://www.cgdev.org/content/publications/detail/1425795>

Summary statistics

Variable	Obs	Mean	Std. Dev	Min	Max
Election	3060	0.02	0.13	0	1
Scheduled Election	3060	0.01	0.12	0	1
Lok Sabha Election	3060	0.03	0.16	0	1
Scheduled Lok Sabha Election	3060	0.02	0.13	0	1
Dual Election	3060	0.00	0.06	0	1
Log Cement Consumption	3060	5.97	0.87	2.59	7.76
Log Cement Production	2802	5.38	1.76	1	8.07
Urban	3060	0.53	0.50	0	1
Margin	3060	0.00	0.02	0	0.26
Low Margin	3036	0.00	0.07	0	1
Med Margin	3036	0.01	0.10	0	1
High Margin	3036	0.00	0.05	0	1
Sum Projects	3060	6.32	11.28	0	176
Public Projects	2021	1.82	2.56	0	26
Private Projects	2021	7.74	11.37	0	161
IIP	2958	189.73	51.62	116.45	302.77

Coding Details

Election: Indicator variable that equals one during the month state elections are held. We use the following protocol for coding the month of elections. We use the date voters cast their ballots as the “date of the election.” In those cases where elections occur in multiple phases (a common occurrence in larger states), we use the date on which voters in the first phase cast their ballots. If the election date occurs before the 15th of the month, we code the prior month as the election month. If the election date occurs after the 15th of the month, we code that month as the election month. Source: Election Commission of India.

Scheduled Election: Indicator variable that equals one during the month state elections are held according to schedule. Source: Election Commission of India.

Lok Sabha Election: Indicator variable that equals one during the month parliamentary elections are held. Source: Election Commission of India.

Scheduled Lok Sabha Election: Indicator variable that equals one during the month parliamentary elections are held according to schedule. Source: Election Commission of India. Source: Election Commission of India.

Dual Election: Indicator variable that equals one during the month state and parliamentary elections are held concurrently. Source: Election Commission of India.

Log Cement Consumption: Natural log of cement purchases (measured in metric tons) recorded by CMA in a given state-month. Source: Cement Manufacturers’ Association of India.

Log Cement Production: Natural log of cement produced (measured in metric tons) recorded by CMA in a given state-month. Source: Cement Manufacturers’ Association of India.

Urban: Indicator variable that equals one if state is classified as urban. To classify states, we use population figures provided in the 1991 and 2001 census. We use the urban/rural population figures from the 1991 census to create an indicator for urban/rural states for the years 1995-2000. Using the 2001 census, we do the same for the years 2001-2010. We code states as urban if their urban population is above the all-India median, and rural otherwise. Source: Census of India.

Margin: Simple average of the margin of victory across constituencies in a given state. Source: Election Commission of India.

High Margin: Indicator variable that equals one if average margin of victory across constituencies in a given state is greater than, or equal to, 15 percentage points. Source: Election Commission of India.

Medium Margin: Indicator variable that equals one if average margin of victory across constituencies in a given state is greater than, or equal to, 10 percentage points but less than 15 percentage points. Source: Election Commission of India.

Low Margin: Indicator variable that equals one if average margin of victory across constituencies in a given state is greater than, or equal to, 15 percentage points. Source: Election Commission of India.

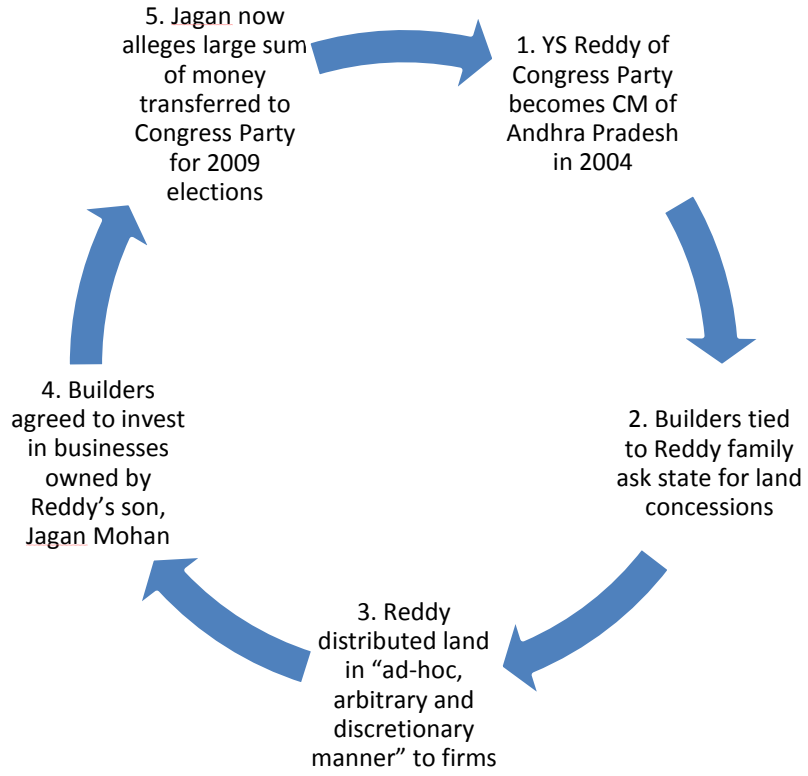
Sum Projects: Sum of total capital investment project announcements in a given state-month. Source: CMIE CAPEX database.

Public Projects: Sum of public sector capital investment project announcements in a given state-month. Source: CMIE CAPEX database.

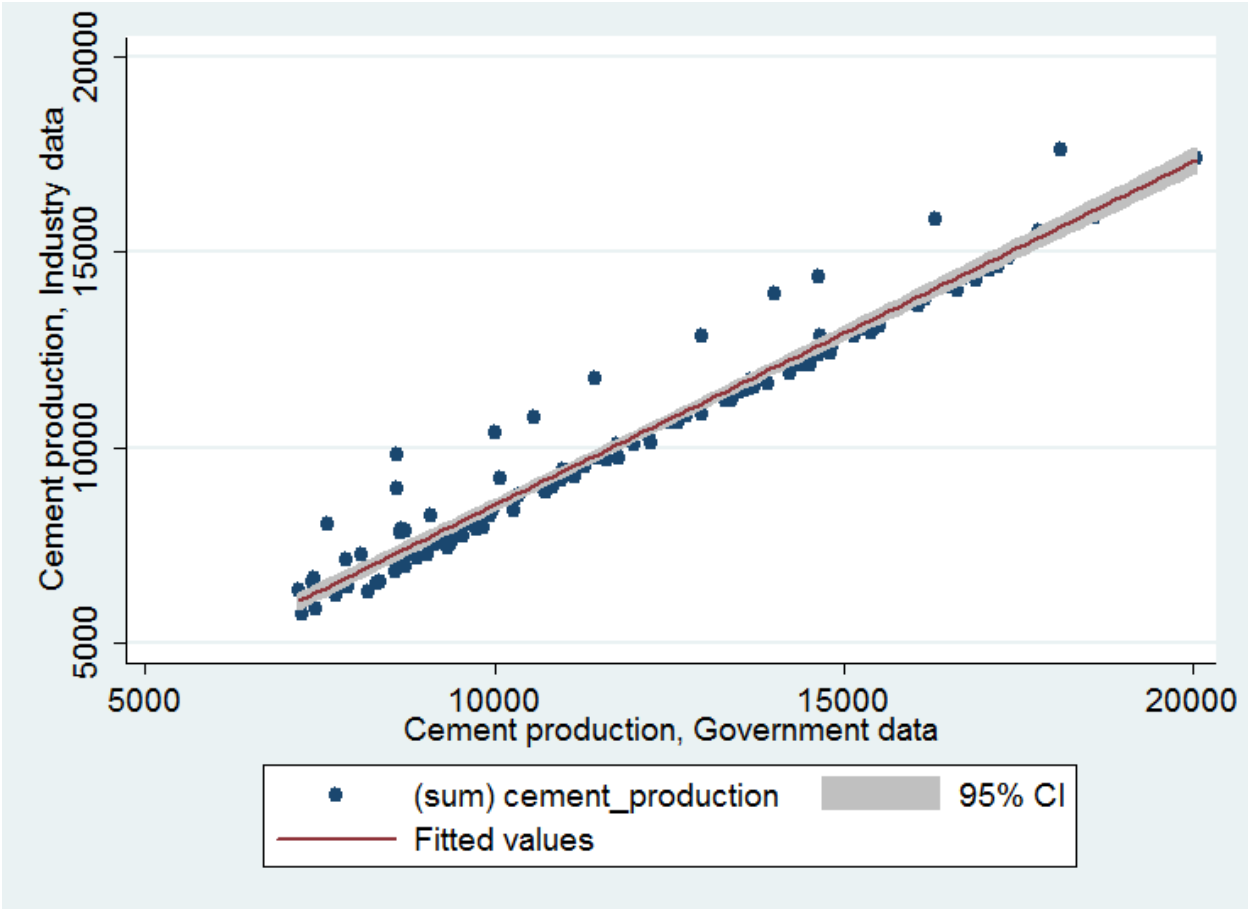
Private Projects: Sum of private sector capital investment project announcements in a given state-month. Source: CMIE CAPEX database.

IIP: Index of industrial production, an aggregate statistic that represents the status of production in the industrial sector for a given period of time compared to a previous reference period. Source: Ministry of Programme Statistics and Implementation, Government of India.

Appendix Figure 1: Flow chart of the Andhra Pradesh “land scam”

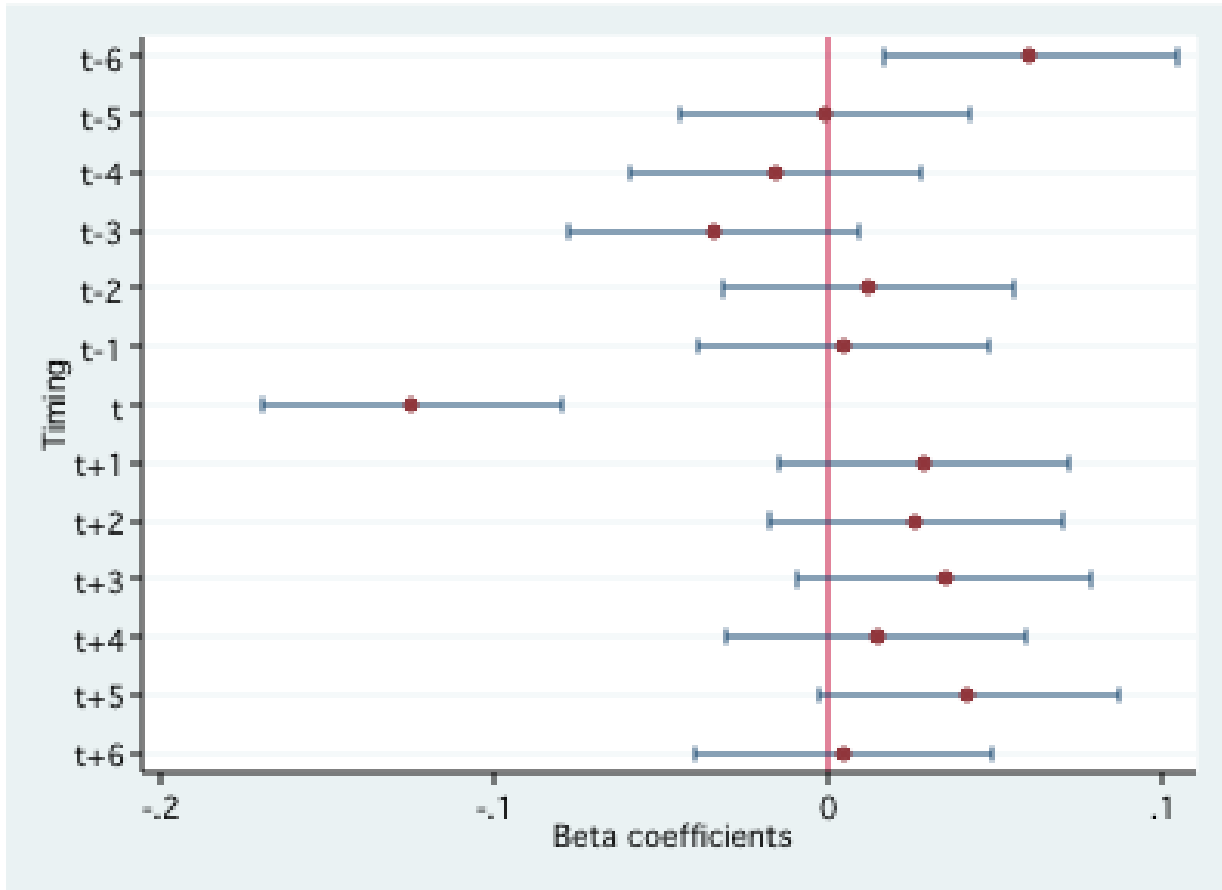


Appendix Figure 2: Scatterplot of monthly cement production reported by CMA and Government of India



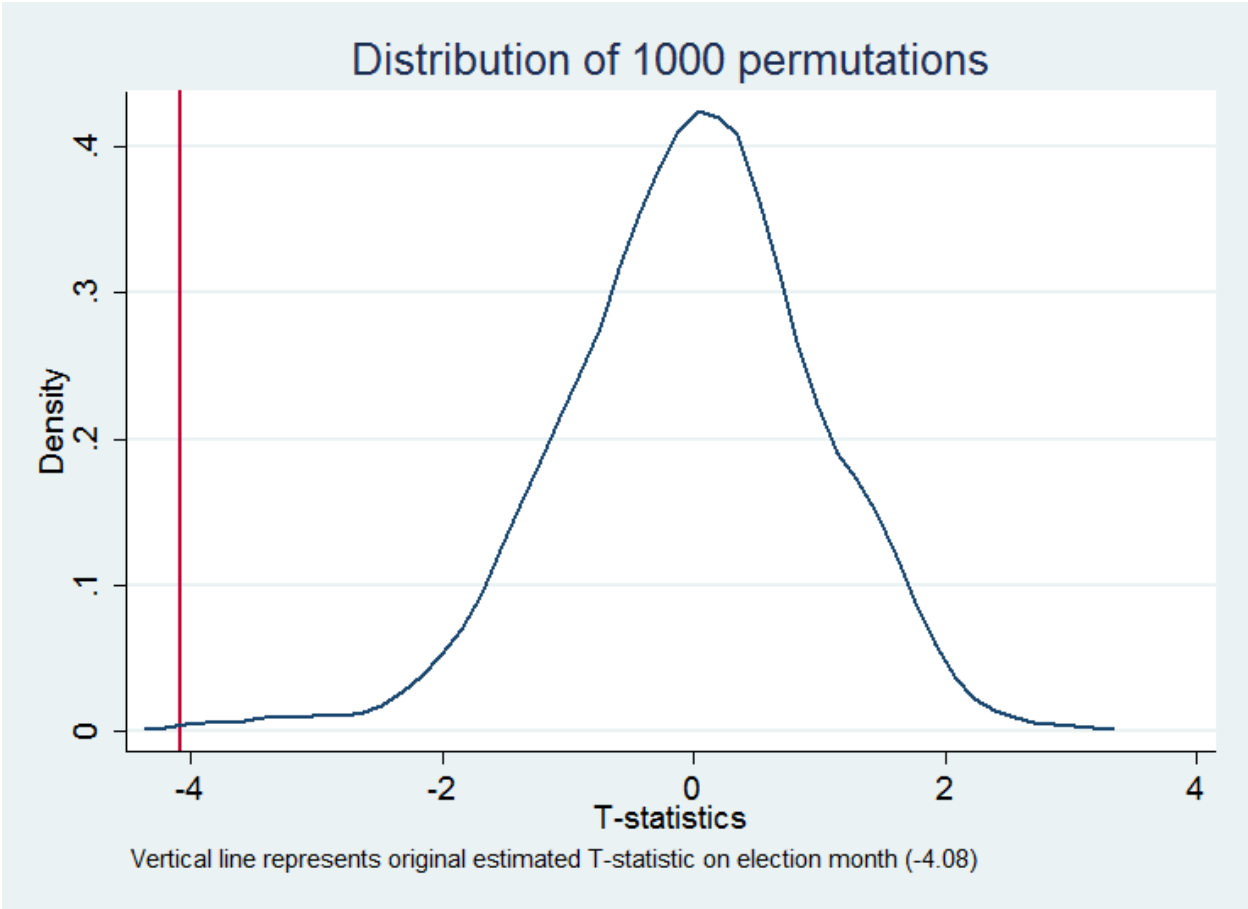
Note: The y-axis represents monthly cement production, as reported by CMA. The x-axis represents monthly cement production data, as reported by the Government of India. The data are at the all-India level and span the period between April 1999 and March 2010.

Appendix Figure 3: Coefficient plot of election cycle effect



Note: Baseline model used to obtain original estimated t-statistic adapted from Column 4 of Table 2.

Appendix Figure 4: Randomization test results



Note: Baseline model used to obtain original estimated t-statistic adapted from Column 4 of Table 2. The difference in t-statistics reported there and in this figure is due to the fact that we do not use panel-corrected standard errors when conducting the randomization test. Otherwise, the underlying models are identical.

Appendix Table 1: Wooldridge test for auto-correlation in linear panel data

Wooldridge test: H0 is no first order autocorrelation

F(1,16)	=	59.125
P>F	=	0

Note: Test statistic obtained using the Stata command, *-xtserial-*.

Appendix Table 2: AIC test for optimal lag length

State	AIC	Optimal Lag
Andhra Pradesh	0.916	4
Assam	0.504	4
Bihar	-0.624	4
Delhi	-1.532	3
Gujarat	-0.660	1
Haryana	-1.450	4
Jammu & Kashmir	-0.388	4
Karnataka	-1.698	3
Kerala	-1.598	4
Madhya Pradesh	-0.826	3
Maharashtra	-1.499	3
Orissa	-0.363	1
Punjab	-1.592	3
Rajasthan	-0.854	4
Tamil Nadu	-1.312	3
Uttar Pradesh	-1.352	3
West Bengal	-0.923	2

Note: Akaike's information criterion (AIC) based on test statistics calculated using the Stata `-varsoc-` command.

Appendix Table 3: Im, Pesaran and Shin (IPS) test for unit roots

Lags	Time trend?	W-t-bar	p-value
3	Yes	-16.8215	0
4	Yes	-14.8001	0

Note: IPS test statistic obtained using the Stata command, *-ipshin-*. Based on the mean of the individual Dickey-Fuller t-statistics of each unit in the panel, the IPS test assumes that all series are non-stationary under the null hypothesis.

Appendix Table 4: Cement consumption and state elections, adding lags and leads

DV:	(1) Log cement consumption	(2) Log cement consumption	(3) Log cement consumption	(4) Log cement consumption	(5) Log cement consumption	(6) Log cement consumption
Log cement consumption _{t-1}	0.34*** [10.73]	0.33*** [10.63]	0.33*** [10.54]	0.33*** [10.47]	0.33*** [10.28]	0.33*** [10.02]
Log cement consumption _{t-2}	0.21*** [6.35]	0.22*** [6.46]	0.21*** [6.39]	0.22*** [6.39]	0.21*** [6.30]	0.22*** [6.33]
Log cement consumption _{t-3}	0.16*** [5.04]	0.16*** [4.96]	0.16*** [5.06]	0.16*** [5.08]	0.16*** [5.09]	0.16*** [4.94]
Election _{t-6}						0.06*** [2.69]
Election _{t-5}					-0.00 [-0.04]	-0.00 [-0.03]
Election _{t-4}				-0.01 [-0.66]	-0.01 [-0.62]	-0.02 [-0.69]
Election _{t-3}			-0.03 [-1.39]	-0.03 [-1.43]	-0.03 [-1.55]	-0.03 [-1.55]
Election _{t-2}		0.01 [0.46]	0.01 [0.48]	0.01 [0.53]	0.01 [0.50]	0.01 [0.55]
Election _{t-1}	0.00 [0.10]	0.00 [0.09]	0.00 [0.13]	0.00 [0.15]	0.00 [0.20]	0.00 [0.21]
Election	-0.12*** [-5.46]	-0.12*** [-5.46]	-0.12*** [-5.45]	-0.12*** [-5.48]	-0.12*** [-5.47]	-0.12*** [-5.44]
Election _{t+1}	0.03 [1.42]	0.03 [1.43]	0.03 [1.42]	0.03 [1.49]	0.03 [1.34]	0.03 [1.29]
Election _{t+2}		0.03 [1.39]	0.03 [1.32]	0.03 [1.26]	0.03 [1.22]	0.03 [1.17]
Election _{t+3}			0.04 [1.56]	0.03 [1.49]	0.03 [1.54]	0.04 [1.56]
Election _{t+4}				0.01 [0.46]	0.01 [0.53]	0.01 [0.63]
Election _{t+5}					0.04* [1.72]	0.04* [1.82]
Election _{t+6}						0.00 [0.20]
Fixed effects	Time & State-Month	Time & State-Month	Time & State-Month	Time & State-Month	Time & State-Month	Time & State-Month
Observations	2,992	2,975	2,958	2,924	2,890	2,856
R-squared	0.97	0.97	0.97	0.97	0.97	0.97
Number of states	17	17	17	17	17	17

Note: Z statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. All models include three lags of the dependent variable, time fixed effects, and fixed effects for each state-month combination. Models are estimated using OLS with panel-corrected standard errors. Dependent variable is natural log of cement consumption.

Appendix Table 5: Cement consumption and national elections, adding lags and leads

DV:	(1) Log cement consumption	(2) Log cement consumption	(3) Log cement consumption	(4) Log cement consumption	(5) Log cement consumption	(6) Log cement consumption
Log cement consumption _{t-1}	0.34*** [11.17]	0.33*** [11.06]	0.33*** [10.99]	0.33*** [10.93]	0.33*** [10.56]	0.33*** [10.31]
Log cement consumption _{t-2}	0.19*** [5.87]	0.19*** [5.89]	0.19*** [5.88]	0.20*** [6.00]	0.20*** [5.97]	0.20*** [5.98]
Log cement consumption _{t-3}	0.16*** [5.25]	0.16*** [5.21]	0.16*** [5.20]	0.16*** [5.21]	0.16*** [5.24]	0.16*** [5.05]
Lok Sabha Election _{t-6}						-0.01 [-0.34]
Lok Sabha Election _{t-5}					0.02 [0.71]	0.01 [0.60]
Lok Sabha Election _{t-4}				0.05** [2.01]	0.05** [2.20]	0.05** [2.01]
Lok Sabha Election _{t-3}			0.01 [0.57]	0.02 [1.00]	0.02 [0.98]	0.02 [0.88]
Lok Sabha Election _{t-2}		-0.01 [-0.29]	0.00 [0.04]	0.01 [0.62]	0.01 [0.58]	0.01 [0.48]
Lok Sabha Election _{t-1}	-0.05** [-2.09]	-0.05** [-2.11]	-0.05* [-1.81]	-0.04 [-1.48]	-0.04 [-1.46]	-0.04 [-1.50]
Lok Sabha Election	-0.06** [-2.43]	-0.06** [-2.47]	-0.05** [-2.19]	-0.05** [-1.98]	-0.05** [-1.96]	-0.05** [-2.01]
Lok Sabha Election _{t+1}	-0.05** [-2.10]	-0.05** [-2.13]	-0.04* [-1.76]	-0.03 [-1.37]	-0.03 [-1.41]	-0.04 [-1.48]
Lok Sabha Election _{t+2}		-0.01 [-0.30]	-0.00 [-0.01]	0.01 [0.39]	0.01 [0.35]	0.01 [0.26]
Lok Sabha Election _{t+3}			0.05* [1.89]	0.07*** [2.81]	0.07*** [2.71]	0.06** [2.56]
Lok Sabha Election _{t+4}				0.03 [1.47]	0.04 [1.53]	0.03 [1.40]
Lok Sabha Election _{t+5}					-0.00 [-0.14]	-0.01 [-0.23]
Lok Sabha						-0.00

Election_{t+6}

[-0.11]

	Year & State- Month	Year & State- Month	Year & State- Month	Year & State- Month	Year & State- Month	Year & State- Month
Fixed effects						
Observations	2,992	2,975	2,958	2,924	2,890	2,856
R-squared	0.97	0.97	0.97	0.97	0.97	0.97
Number of states	17	17	17	17	17	17

Note: Z statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. All models include three lags of the dependent variable, year fixed effects, and fixed effects for each state-month combination. Models are estimated using OLS with panel-corrected standard errors. Dependent variable is natural log of cement consumption.

Appendix Table 6: Cement consumption and state elections, adding 12-month lags and leads

DV:	(1) Log cement consumption	(2) Log cement consumption	(3) Log cement consumption	(4) Log cement consumption	(5) Log cement consumption	(6) Log cement consumption
Log cement consumption _{t-1}	0.33*** [9.91]	0.33*** [9.76]	0.31*** [9.24]	0.28*** [8.34]	0.40*** [12.04]	0.39*** [12.43]
Log cement consumption _{t-2}	0.22*** [6.32]	0.22*** [6.24]	0.20*** [5.59]	0.27*** [7.79]	0.22*** [6.20]	0.23*** [6.81]
Log cement consumption _{t-3}	0.16*** [4.85]	0.16*** [4.82]	0.22*** [6.67]	0.18*** [5.61]	0.14*** [4.38]	0.15*** [4.61]
Election _{t-12}						0.01 [0.27]
Election _{t-11}					0.02 [0.75]	0.02 [1.08]
Election _{t-10}				0.01 [0.48]	0.01 [0.34]	0.01 [0.57]
Election _{t-9}			0.00 [0.19]	0.00 [0.14]	0.00 [0.09]	0.00 [0.18]
Election _{t-8}		0.01 [0.26]	0.00 [0.20]	0.01 [0.26]	0.01 [0.23]	0.00 [0.11]
Election _{t-7}	0.02 [0.87]	0.02 [0.86]	0.02 [0.79]	0.02 [0.76]	0.01 [0.63]	0.02 [0.81]
Election _{t-6}	0.06** [2.54]	0.05** [2.31]	0.05** [2.29]	0.05** [2.33]	0.05** [2.32]	0.05** [2.32]
Election _{t-5}	-0.00 [-0.17]	-0.00 [-0.06]	-0.00 [-0.10]	-0.00 [-0.16]	-0.01 [-0.30]	-0.01 [-0.61]
Election _{t-4}	-0.02 [-0.73]	-0.02 [-0.74]	-0.01 [-0.51]	-0.01 [-0.58]	-0.01 [-0.51]	-0.01 [-0.71]
Election _{t-3}	-0.03 [-1.54]	-0.03 [-1.55]	-0.04* [-1.72]	-0.04 [-1.62]	-0.04 [-1.50]	-0.04* [-1.94]
Election _{t-2}	0.01 [0.58]	0.01 [0.51]	0.01 [0.46]	0.01 [0.38]	0.03 [1.17]	0.02 [1.00]
Election _{t-1}	0.00 [0.13]	0.00 [0.07]	0.00 [0.05]	0.00 [0.15]	0.00 [0.06]	0.01 [0.71]
Election	-0.12*** [-5.39]	-0.12*** [-5.39]	-0.12*** [-5.36]	-0.12*** [-5.44]	-0.13*** [-5.57]	-0.04** [-2.19]
Election _{t+1}	0.03 [1.25]	0.03 [1.24]	0.03 [1.25]	0.02 [1.08]	0.01 [0.25]	0.01 [0.37]
Election _{t+2}	0.03 [1.16]	0.03 [1.17]	0.02 [1.00]	0.01 [0.49]	0.01 [0.43]	0.01 [0.68]
Election _{t+3}	0.04 [1.57]	0.04 [1.55]	0.02 [1.07]	0.02 [1.05]	0.02 [1.02]	0.02 [1.19]
Election _{t+4}	0.01 [0.65]	0.01 [0.46]	0.01 [0.46]	0.01 [0.43]	0.01 [0.39]	0.01 [0.54]
Election _{t+5}	0.04* [1.96]	0.04* [1.95]	0.04** [1.96]	0.04* [1.93]	0.04* [1.92]	0.03 [1.29]

Election _{t+6}	0.00 [0.19]	0.01 [0.24]	0.01 [0.28]	0.01 [0.34]	0.01 [0.47]	0.01 [0.47]
Election _{t+7}	-0.02 [-1.02]	-0.02 [-1.01]	-0.02 [-1.08]	-0.02 [-0.85]	-0.02 [-0.90]	-0.03 [-1.53]
Election _{t+8}		-0.01 [-0.30]	-0.00 [-0.15]	-0.00 [-0.18]	0.00 [0.07]	-0.00 [-0.08]
Election _{t+9}			-0.02 [-0.67]	-0.01 [-0.56]	-0.01 [-0.52]	-0.01 [-0.57]
Election _{t+10}				-0.01 [-0.45]		-0.01 [-0.46]
Election _{t+11}					-0.01 [-0.52]	-0.01 [-0.69]
Election _{t+12}						-0.03 [-1.20]
	Time & State-	Time & State-	Time & State-	Time & State-	Time & State-	Time & State-
Fixed effects	Month	Month	Month	Month	Month	Month
Observations	2,822	2,788	2,754	2,720	2,686	2,652
R-squared	0.97	0.97	0.97	0.97	0.98	0.98
Number of states	17	17	17	17	17	17

Note: Z statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. Models include time fixed effects and fixed effects for each state-month combination. Models are estimated using OLS with panel-corrected standard errors. Dependent variable is natural log of cement consumption.

Appendix Table 7: Cement consumption and state elections, four lags of the dependent variable

DV:	(1) Log cement consumption	(2) Log cement consumption	(3) Log cement consumption	(4) Log cement consumption
Sample	All	All	Urban	Rural
Log cement consumption _{t-1}	0.31*** [9.34]	0.31*** [9.37]	0.29*** [5.77]	0.34*** [8.31]
Log cement consumption _{t-2}	0.19*** [5.49]	0.19*** [5.48]	0.16*** [3.04]	0.23*** [5.22]
Log cement consumption _{t-3}	0.12*** [3.47]	0.12*** [3.49]	0.14*** [2.58]	0.10** [2.25]
Log cement consumption _{t-4}	0.12*** [3.69]	0.12*** [3.68]	0.15*** [3.07]	0.09** [2.23]
Election _{t-6}	0.06*** [2.71]	0.06*** [2.79]	0.09*** [3.14]	0.06 [1.58]
Election _{t-5}	-0.00 [-0.01]	-0.00 [-0.02]	0.00 [0.16]	0.01 [0.35]
Election _{t-4}	-0.01 [-0.64]	-0.01 [-0.62]	0.03 [1.07]	-0.06* [-1.75]
Election _{t-3}	-0.03 [-1.51]	-0.03 [-1.52]	-0.04 [-1.38]	-0.03 [-0.81]
Election _{t-2}	0.00 [0.21]	0.00 [0.20]	-0.01 [-0.36]	0.03 [0.86]
Election _{t-1}	0.00 [0.06]	0.00 [0.05]	0.00 [0.05]	-0.01 [-0.24]
Election	-0.13*** [-5.53]		-0.16*** [-5.26]	-0.11*** [-2.99]
Scheduled Election		-0.15*** [-5.63]		
Election _{t+1}	0.03 [1.28]	0.03 [1.26]	0.05* [1.85]	-0.01 [-0.16]
Election _{t+2}	0.02 [0.97]	0.02 [0.99]	0.05 [1.62]	-0.01 [-0.25]
Election _{t+3}	0.03 [1.32]	0.03 [1.32]	0.06** [1.98]	0.01 [0.38]
Election _{t+4}	0.03 [1.30]	0.03 [1.30]	0.04 [1.26]	0.03 [0.93]
Election _{t+5}	0.04* [1.90]	0.04* [1.95]	0.06* [1.87]	0.02 [0.43]
Election _{t+6}	0.01 [0.29]	0.01 [0.29]	0.02 [0.72]	-0.00 [-0.11]
Fixed effects	-	Time	State-Month	Time & State-Month
Observations	2,856	2,856	1,512	1,344
R-squared	0.97	0.97	0.95	0.98
Number of states	17	17	9	8

Note: Z statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. All models include four lags of the dependent variable. Model (2) includes time fixed effects; Model (3) includes fixed effects for each

state-month combination; and Model (4) includes time and state-month fixed effects. Models are estimated using OLS with panel-corrected standard errors. Dependent variable is natural log of cement consumption.

Appendix Table 8: Cement consumption and national elections, four lags of the dependent variable

DV:	(1) Log cement consumption	(2) Log cement consumption
Log cement consumption _{t-1}	0.31*** [9.63]	0.31*** [9.66]
Log cement consumption _{t-2}	0.18*** [5.26]	0.18*** [5.30]
Log cement consumption _{t-3}	0.12*** [3.62]	0.12*** [3.60]
Log cement consumption _{t-4}	0.11*** [3.53]	0.11*** [3.54]
Lok Sabha Election _{t-6}	-0.00 [-0.08]	-0.00 [-0.03]
Lok Sabha Election _{t-5}	0.01 [0.35]	0.01 [0.36]
Lok Sabha Election _{t-4}	0.05* [1.95]	0.05** [2.02]
Lok Sabha Election _{t-3}	0.02 [0.93]	0.02 [0.87]
Lok Sabha Election _{t-2}	0.01 [0.57]	0.02 [0.64]
Lok Sabha Election _{t-1}	-0.03 [-1.36]	-0.04 [-1.40]
Lok Sabha Election	-0.05** [-2.10]	
Scheduled Lok Sabha Election		-0.09*** [-2.65]
Lok Sabha Election _{t+1}	-0.04 [-1.60]	-0.04 [-1.63]
Lok Sabha Election _{t+2}	0.00 [0.04]	-0.00 [-0.06]
Lok Sabha Election _{t+3}	0.06** [2.51]	0.06** [2.54]
Lok Sabha Election _{t+4}	0.04 [1.59]	0.04 [1.54]
Lok Sabha Election _{t+5}	0.00 [0.05]	0.00 [0.14]
Lok Sabha Election _{t+6}	0.00 [0.13]	0.00 [0.11]
Fixed effects	Year & State-Month	Year & State-Month
Observations	2,856	2,856
R-squared	0.97	0.97
Number of states	17	17

Note: Z statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. Model includes four lags of the dependent variable, year fixed effects, and fixed effects for each state-month combination. Models are estimated using OLS with panel-corrected standard errors. Dependent variable is natural log of cement consumption.

Appendix Table 9: Cement consumption and state elections, no lags of the dependent variable

DV:	(1) Log cement consumption	(2) Log cement consumption	(3) Log cement consumption	(4) Log cement consumption
<i>Sample:</i>	<i>All</i>	<i>All</i>	<i>Urban</i>	<i>Rural</i>
Election _{t-6}	0.08*** [2.90]	0.08*** [2.96]	0.11*** [2.91]	0.08* [1.92]
Election _{t-5}	0.04 [1.27]	0.04 [1.27]	0.04 [1.10]	0.06 [1.31]
Election _{t-4}	0.02 [0.64]	0.02 [0.66]	0.06* [1.71]	-0.02 [-0.40]
Election _{t-3}	-0.01 [-0.30]	-0.01 [-0.30]	0.00 [0.11]	-0.01 [-0.28]
Election _{t-2}	0.02 [0.67]	0.02 [0.67]	0.02 [0.53]	0.04 [0.87]
Election _{t-1}	0.01 [0.42]	0.01 [0.41]	0.02 [0.55]	0.00 [0.10]
Election	-0.12*** [-4.24]		-0.15*** [-3.84]	-0.10** [-2.39]
Scheduled Election		-0.15*** [-4.71]		
Election _{t+1}	-0.01 [-0.26]	-0.01 [-0.28]	0.01 [0.30]	-0.04 [-0.90]
Election _{t+2}	-0.00 [-0.10]	-0.00 [-0.07]	0.03 [0.72]	-0.04 [-1.03]
Election _{t+3}	0.01 [0.45]	0.01 [0.45]	0.05 [1.25]	-0.02 [-0.48]
Election _{t+4}	0.02 [0.61]	0.02 [0.62]	0.04 [0.89]	0.00 [0.08]
Election _{t+5}	0.05* [1.75]	0.05* [1.78]	0.08** [2.09]	0.00 [0.05]
Election _{t+6}	0.03 [0.87]	0.02 [0.86]	0.06 [1.61]	-0.02 [-0.34]
Fixed effects	-	Time	State-Month	Time & State-Month
Observations	2,856	2,856	1,512	1,344
R-squared	0.96	0.96	0.92	0.97
Number of states	17	17	9	8

Note: Z statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. Model (2) includes time fixed effects; Model (3) includes fixed effects for each state-month combination; and Model (4) includes time and state-month fixed effects. Models are estimated using OLS with panel-corrected standard errors. Dependent variable is natural log of cement consumption.

Appendix Table 10: Cement consumption and state elections, no lags of the dependent variable

DV:	(1) Log cement consumption	(2) Log cement consumption
Lok Sabha Election _{t-6}	-0.00 [-0.12]	-0.00 [-0.10]
Lok Sabha Election _{t-5}	0.01 [0.36]	0.01 [0.36]
Lok Sabha Election _{t-4}	0.05** [1.97]	0.05** [2.02]
Lok Sabha Election _{t-3}	0.04 [1.60]	0.04 [1.52]
Lok Sabha Election _{t-2}	0.04 [1.56]	0.04 [1.60]
Lok Sabha Election _{t-1}	-0.01 [-0.40]	-0.01 [-0.47]
Lok Sabha Election	-0.04 [-1.61]	
Scheduled Lok Sabha Election		-0.07** [-2.30]
Lok Sabha Election _{t+1}	-0.04* [-1.78]	-0.04* [-1.86]
Lok Sabha Election _{t+2}	-0.01 [-0.55]	-0.02 [-0.69]
Lok Sabha Election _{t+3}	0.05** [2.08]	0.05** [2.06]
Lok Sabha Election _{t+4}	0.05** [2.07]	0.05** [2.00]
Lok Sabha Election _{t+5}	0.02 [0.90]	0.02 [0.95]
Lok Sabha Election _{t+6}	0.02 [0.68]	0.02 [0.63]
Fixed effects	Year & State-Month	Year & State-Month
Observations	2,856	2,856
R-squared	0.96	0.96
Number of states	17	17

Note: Z statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. Models include year fixed effects and fixed effects for each state-month combination. Models are estimated using OLS with panel-corrected standard errors. Dependent variable is natural log of cement consumption.

Appendix Table 11: Cement production and state elections, adding lags and leads

DV:	(1) Log cement production	(2) Log cement production	(3) Log cement production	(4) Log cement production	(5) Log cement production	(6) Log cement production
Log cement production _{t-1}	0.59*** [13.00]	0.59*** [12.84]	0.60*** [12.73]	0.58*** [12.18]	0.57*** [11.55]	0.57*** [11.28]
Log cement production _{t-2}	0.30*** [6.67]	0.31*** [6.72]	0.31*** [6.60]	0.32*** [6.68]	0.32*** [6.60]	0.33*** [6.49]
Election _{t-6}						-0.02 [-0.58]
Election _{t-5}					-0.03 [-0.85]	-0.03 [-0.79]
Election _{t-4}				-0.04 [-1.01]	-0.04 [-1.03]	-0.04 [-1.00]
Election _{t-3}			-0.05 [-1.23]	-0.05 [-1.25]	-0.05 [-1.23]	-0.05 [-1.25]
Election _{t-2}		0.04 [1.01]	0.04 [0.99]	0.04 [1.05]	0.04 [0.99]	0.04 [0.96]
Election _{t-1}	-0.05 [-1.14]	-0.05 [-1.11]	-0.05 [-1.12]	-0.04 [-1.09]	-0.04 [-1.06]	-0.05 [-1.10]
Election	0.03 [0.75]	0.03 [0.75]	0.03 [0.79]	0.03 [0.75]	0.03 [0.75]	0.03 [0.74]
Election _{t+1}	0.07* [1.72]	0.07* [1.71]	0.07* [1.68]	0.07* [1.67]	0.07 [1.60]	0.07* [1.67]
Election _{t+2}		-0.03 [-0.74]	-0.03 [-0.87]	-0.03 [-0.85]	-0.03 [-0.78]	-0.03 [-0.78]
Election _{t+3}			-0.02 [-0.59]	-0.02 [-0.60]	-0.02 [-0.55]	-0.02 [-0.57]
Election _{t+4}				0.01 [0.26]	0.01 [0.23]	0.01 [0.20]
Election _{t+5}					0.01 [0.13]	0.00 [0.07]
Election _{t+6}						0.00 [0.10]
Fixed effects	Time & State- Month	Time & State- Month	Time & State- Month	Time & State- Month	Time & State- Month	Time & State- Month
Observations	2,727	2,711	2,678	2,645	2,612	2,579
R-squared	0.99	0.99	0.99	0.99	0.99	0.99
Number of states	17	17	17	17	17	17

Note: Z statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. Models include two lags of the dependent variable, time fixed effects and fixed effects for each state-month combination. Models are estimated using OLS with panel-corrected standard errors. Dependent variable is natural log of cement production.

Appendix Table 12: Cement production and state elections, dropping Delhi and Haryana

DV:	(1) Log cement production	(2) Log cement production	(3) Log cement production	(4) Log cement production
Log cement production _{t-1}	0.53*** [4.41]	0.53*** [4.11]	0.59*** [12.13]	0.57*** [11.28]
Log cement production _{t-2}	0.46*** [3.85]	0.46*** [3.57]	0.34*** [7.17]	0.33*** [6.49]
Election _{t-6}	-0.01 [-0.15]	-0.02 [-0.43]	-0.02 [-0.50]	-0.02 [-0.58]
Election _{t-5}	-0.02 [-0.33]	-0.03 [-0.54]	-0.02 [-0.43]	-0.03 [-0.79]
Election _{t-4}	-0.01 [-0.16]	-0.02 [-0.31]	-0.05 [-1.30]	-0.04 [-1.00]
Election _{t-3}	-0.03 [-0.36]	-0.00 [-0.03]	-0.05 [-1.16]	-0.05 [-1.25]
Election _{t-2}	0.09 [1.27]	0.07 [1.05]	0.06 [1.48]	0.04 [0.96]
Election _{t-1}	0.01 [0.10]	-0.04 [-0.62]	-0.03 [-0.76]	-0.05 [-1.10]
Election	-0.03 [-0.38]	0.03 [0.48]	0.01 [0.20]	0.03 [0.74]
Election _{t+1}	0.21*** [2.86]	0.20*** [2.69]	0.05 [1.26]	0.07* [1.67]
Election _{t+2}	-0.04 [-0.98]	-0.05 [-0.96]	-0.02 [-0.40]	-0.03 [-0.78]
Election _{t+3}	-0.03 [-0.66]	-0.05 [-1.02]	0.01 [0.21]	-0.02 [-0.57]
Election _{t+4}	0.00 [0.08]	0.01 [0.15]	0.02 [0.59]	0.01 [0.20]
Election _{t+5}	-0.03 [-0.69]	-0.01 [-0.10]	0.01 [0.16]	0.00 [0.07]
Election _{t+6}	0.01 [0.13]	0.01 [0.12]	0.00 [0.03]	0.00 [0.10]
Fixed effects	-	Time	State-Month	Time & State-Month
Observations	2,579	2,579	2,579	2,579
R-squared	0.96	0.96	0.99	0.99
Number of states	17	17	17	17

Note: Z statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. All models include two lags of the dependent variable. Model (2) includes time fixed effects; Model (3) includes fixed effects for each state-month combination; and Model (4) includes time and state-month fixed effects. Models are estimated using OLS with panel-corrected standard errors. Dependent variable is natural log of cement production. Observations for Delhi and Haryana are dropped due to missing data.

Appendix Table 13: Cement consumption and state elections, dropping Delhi and Haryana and adding lags and leads

DV:	(1) Log cement production	(2) Log cement production	(3) Log cement production	(4) Log cement production	(5) Log cement production	(6) Log cement production
Log cement production _{t-1}	0.64*** [22.11]	0.63*** [21.84]	0.64*** [22.28]	0.63*** [21.56]	0.61*** [21.22]	0.62*** [21.33]
Log cement production _{t-2}	0.28*** [9.81]	0.28*** [9.89]	0.29*** [10.03]	0.30*** [10.27]	0.30*** [10.67]	0.31*** [10.75]
Election _{t-6}						-0.02 [-0.73]
Election _{t-5}					-0.04 [-1.42]	-0.04 [-1.31]
Election _{t-4}				-0.04 [-1.33]	-0.04 [-1.41]	-0.04 [-1.35]
Election _{t-3}			-0.06** [-2.02]	-0.06** [-2.08]	-0.06** [-2.17]	-0.06** [-2.18]
Election _{t-2}		0.05 [1.64]	0.05 [1.64]	0.05* [1.73]	0.05* [1.76]	0.05* [1.71]
Election _{t-1}	-0.05 [-1.61]	-0.04 [-1.56]	-0.05 [-1.61]	-0.04 [-1.54]	-0.04 [-1.54]	-0.04 [-1.56]
Election	0.03 [0.93]	0.03 [0.93]	0.03 [1.00]	0.03 [0.95]	0.03 [0.98]	0.03 [1.04]
Election _{t+1}	0.02 [0.55]	0.01 [0.53]	0.01 [0.51]	0.01 [0.47]	0.01 [0.41]	0.01 [0.47]
Election _{t+2}		-0.03 [-0.99]	-0.03 [-1.16]	-0.03 [-1.21]	-0.03 [-1.14]	-0.03 [-1.12]
Election _{t+3}			-0.02 [-0.62]	-0.02 [-0.64]	-0.02 [-0.60]	-0.02 [-0.60]
Election _{t+4}				0.02 [0.83]	0.02 [0.87]	0.02 [0.83]
Election _{t+5}					0.01 [0.43]	0.01 [0.37]
Election _{t+6}						-0.00 [-0.07]
	Time & State- Month	Time & State- Month	Time & State- Month	Time & State- Month	Time & State- Month	Time & State- Month
Fxed effects						
Observations	2,649	2,634	2,604	2,574	2,544	2,514
R-squared	0.99	0.99	0.99	0.99	0.99	0.99
Number of states	15	15	15	15	15	15

Note: Z statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. All models include two lags of the dependent variable. Model (2) includes time fixed effects; Model (3) includes fixed effects for each state-month combination; and Model (4) includes time and state-month fixed effects. Models are estimated using

OLS with panel-corrected standard errors. Dependent variable is natural log of cement production. Observations for Delhi and Haryana are dropped due to missing data.

Appendix Table 14: Cement consumption and state elections, controlling for IIP

DV:	-1 Log cement production	-2 Log cement production	-3 Log cement production	-4 Log cement production
Log cement consumption _{t-1}	0.52*** [16.79]	0.52*** [16.76]	0.34*** [10.89]	0.32*** [10.27]
Log cement consumption _{t-2}	0.27*** [7.96]	0.27*** [7.98]	0.22*** [6.41]	0.20*** [6.01]
Log cement consumption _{t-3}	0.19*** [6.13]	0.19*** [6.15]	0.17*** [5.51]	0.16*** [5.08]
IIP	0.00 [0.79]	-0.00 [-0.11]	0.00*** [10.55]	0.00** [2.46]
Lok Sabha Election _{t-6}	0.03 [0.73]	0.04 [0.90]	-0.02 [-0.83]	-0.00 [-0.03]
Lok Sabha Election _{t-5}	0.02 [0.45]	0.03 [0.66]	0.00 [0.06]	0.02 [0.67]
Lok Sabha Election _{t-4}	0.08** [1.98]	0.09** [2.07]	0.04 [1.52]	0.05** [2.16]
Lok Sabha Election _{t-3}	0.05 [1.31]	0.05 [1.12]	0.02 [0.75]	0.03 [1.04]
Lok Sabha Election _{t-2}	-0.02 [-0.41]	-0.02 [-0.41]	0.01 [0.28]	0.01 [0.57]
Lok Sabha Election _{t-1}	0.04 [1.01]	0.03 [0.75]	-0.04* [-1.71]	-0.04 [-1.44]
Lok Sabha Election	-0.10** [-2.53]	-0.10** [-2.36]	-0.05** [-2.18]	-0.05** [-2.00]
Lok Sabha Election _{t+1}	0.03 [0.86]	0.03 [0.62]	-0.03 [-1.43]	-0.03 [-1.22]
Lok Sabha Election _{t+2}	0.00 [0.07]	-0.00 [-0.06]	0.01 [0.24]	0.00 [0.17]
Lok Sabha Election _{t+3}	0.03 [0.67]	0.02 [0.49]	0.06** [2.56]	0.06** [2.39]
Lok Sabha Election _{t+4}	-0.04 [-1.11]	-0.05 [-1.06]	0.02 [0.90]	0.03 [1.09]
Lok Sabha Election _{t+5}	-0.05 [-1.32]	-0.05 [-1.25]	-0.02 [-0.79]	-0.01 [-0.55]
Lok Sabha Election _{t+6}	0.03 [0.64]	0.02 [0.52]	-0.01 [-0.45]	-0.00 [-0.19]
Fixed effects	Time & State-Month	Time & State-Month	Year & State-Month	Year & State-Month
Observations	2,856	2,856	2,856	2,856
R-squared	0.95	0.95	0.97	0.97
Number of states	17	17	17	17

Appendix Table 15: Randomization test statistics

Randomization test							
T(obs)	c	n	p=c/n	SE(p)	[95% Conf.	Interval]	
-4.08	1	1000	0.001	0.001	0.0000253	0.0055589	