Fear to Vote: Explosions, Salience, and Elections

(r) Juan F. Vargas, U. Rosario
Miguel E. Purroy, Harvard
Felipe Coy, Princeton
Sergio Perilla, World Bank
Mounu Prem, EIEF

EEA Meetings

August 30th, 2023

(r) Vargas, Purroy, Coy, Perilla, & Prem

⁽r): authors in random order.

Motivation

- Criminal groups, gangs, and rebel organizations recurrently resort to violence to achieve their goals.
 - Meticulously select the target and calibrate the timing, type and intensity of attacks.
- Key example: Violence perpetrated to shape electoral outcomes.
 - Timing, target and type of violence tuned up depending on the strategic aim (e.g., policy changes, government legitimacy, mobilize/discourage turnout, target swing voters, etc.)
- But the strategic use of violence makes it hard to disentangle the effect of a group's gambit from that of the *salience* of violence
 - In psychological research, a stimulus is *salient* if it involuntarily distorts the decision maker's decisions due to its prominence or surprising nature

This paper

- We identify the electoral effects of violence *per se*, separate from those of the strategic use of violence. We do so by studying **as-if random** violent events around elections
- We focus on the explosion of antipersonnel landmines
 - Strategic deployment (e.g., protect their strongholds or their illicit activities) but: i) not used to affect electoral outcomes and ii) no control over the precise *timing* of explosion
 - \blacktriangleright 110 million such explosives buried in ${\sim}60$ countries, with 26,000 victims per year
 - ► We explore this in Colombia, one of the most landmine-affected countries but where democratic elections are the norm

This paper

- We identify the electoral effects of violence *per se*, separate from those of the strategic use of violence. We do so by studying **as-if random** violent events around elections
- We focus on the explosion of antipersonnel landmines
 - Strategic deployment (e.g., protect their strongholds or their illicit activities) but: i) not used to affect electoral outcomes and ii) no control over the precise *timing* of explosion
 - \blacktriangleright 110 million such explosives buried in ${\sim}60$ countries, with 26,000 victims per year
 - ► We explore this in Colombia, one of the most landmine-affected countries but where democratic elections are the norm
- → **Identification:** Compare the electoral outcomes of voting polls close to where a landmine exploded *just before* the election, to those in which an explosion occurred *shortly afterward*

Preview of the findings

- 1. Landmine explosions deteriorate turnout by at least 13pp on average
 - Consistent with salience more than an information updating about the risk associated with explosions, we show that the main mechanism is related to fear and rule out that:
 - ★ Explosions prevented voters from accessing polls
 - ★ They led to more violence
 - ★ They change institutional trust
- 2. Among those who do vote, there is a large reduction in the vote share of left-wing parties and an increase in the vote share of parties with ties with paramilitary groups
 - Consistent with literature on violence-driven negative reciprocity, we show suggestive evidence that most of this effect comes from a change in preferences rather than:
 - $\star\,$ A change in the composition of voters given by the decrease in turnout
 - $\star\,$ A change in the campaigning strategy of specific parties/candidates

Contribution

Outline

Context

Data

- Empirical strategy
- Results
- Mechanisms
- Conclusions

Violence and landmines in Colombia

- Colombia's civil war started in the 1960s with the formation of FARC and ELN
- Right-wing paramilitary groups were armed by the state in the early 1970s and trained as self-defense organizations. In 1997, joined forces under the AUC
- One salient strategy of the guerrillas to secure the strongholds and protect illegal crops is the employment of anti-personnel landmines.
 - In 2008, FARC launched Plan 'Renacer', mainly based on fabricating and planting mines throughout the country
 - Colombia is the country with the highest number of victims of improvised landmines.
- While armed groups have tried to influence or disrupt elections, **no evidence** that placing landmines is a strategy for that (very inefficient tool)

Outline

Context

• Data

- Empirical strategy
- Results
- Mechanisms
- Conclusions

Data

• Electoral data at the poll level

- Novel geo-coded data on electoral outcomes at the poll station level
- 4 presidential, 4 congress, and 5 mayoral elections (2003 to 2019)

• Landmine explosions

- GPS geo-referenced coordinates from 2003 to 2019
- ▶ Focus on explosions close to voting polls (buffer of 4km) and within a 90 days window
- \rightarrow Sample: 543 polls in 173 municipalities (\sim 16% of all municipalities), affected by 520 explosions (\sim 10% of all landmine explosions)

Landmine Explosions and Voting polls in Colombia: 2003-2019



In-sample overlap

(r) Vargas, Purroy, Coy, Perilla, & Prem

Outline

- Context
- Data
- Empirical strategy
- Results
- Mechanisms
- Conclusions

Empirical strategy

- \bullet OLS comparison likely biased because incidence of conflict/territorial control (\to landmine deployment) not random
- Instead, RDD using as running variable, x_i, the day of explosion relative to the election day
- \rightarrow Treatment:

$$T_{i} = \begin{cases} T_{i} = 0 & \text{if } x_{i} > 0 \\ T_{i} = 1 & \text{if } x_{i} < 0 \end{cases}$$
(1)

Empirical strategy

• (Within a radius of 4Km from polling station) estimate:

$$y_{impe} = \alpha_{e} + \beta \times T_{i} + \gamma_{1} \times f(x_{i}) + \gamma_{2} \times T_{i} \times f(x_{i}) + \varepsilon_{impe}$$

- where y_{impe} is an outcome at election e, in municipality m, in poll station p, and associated with explosion i
- \blacktriangleright T_i denotes a treatment status, i.e. exploded before the election
- $f(x_i)$ is a linear or quadratic polynomial
- Optimal bandwidth using Calonico et al (2014) method and use a triangular kernel as well as voting poll size as weights
- ▶ Robust standard errors following Calonico et al (2014) and Kolesár and Rothe (2018)

- O No manipulation of the timing of a landmine accident
- Ø No manipulation of the proximity of a landmine accident •
- So manipulation of timing of a landmine placement
- Balance around cutoff •

Outline

- Context
- Data
- Empirical strategy
- Results
- Mechanisms
- Conclusions

1. Landmine explosions reduce electoral participation

	(1)	(2)	(3)	(4)				
		Turnout						
Explosion before	-0.126***	-0.134**	-0.373***	-0.358***				
Robust p-value	0.004	0.017	0.000	0.000				
CI 95%	[-0.252, -0.048]	[-0.283, -0.028]	[-0.540, -0.267]	[-0.571, -0.198]				
[1] p-value	0.023	0.008	0.000	0.000				
[2] p-value	0.047	0.020	0.000	0.000				
Election fixed effects	Yes	Yes	Yes	Yes				
Control for Log potential	No	Yes	No	Yes				
Observations	1136	1136	1136	1136				
Bandwidth obs.	396	396	223	223				
Mean	0.597	0.597	0.590	0.590				
Bandwidth	32.0	31.4	19.6	19.9				
(Local) polynomial order	1	1	2	2				

Comparison of effect size



▶ Different bandwidth

▶ Different radii

2. Landmine explosions change composition of cast votes

	(1) (2) Incumbent votes over		(3) (4) Left-wing votes over		(5) (6) Paramilitary votes over	
	Potential	Votes	Potential	Votes	Potential	Votes
Explosion before	-0.028	-0.032	-0.217***	-0.314***	0.028*	0.087***
Robust p-value	0.121	0.400	0.000	0.002	0.054	0.000
CI 95%	[-0.095, 0.011]	[-0.127, 0.051]	[-0.323, -0.124]	[-0.556, -0.121]	[-0.000, 0.053]	[0.043, 0.144]
[1] p-value	0.191	0.406	0.000	0.000	0.068	0.000
[2] p-value	0.263	0.431	0.000	0.000	0.112	0.002
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1136	1136	1136	1136	1136	1136
Bandwidth obs.	278	253	121	138	409	323
Mean	0.148	0.180	0.089	0.173	0.009	0.013
Bandwidth	21.8	20.9	11.4	12.7	32.4	26.9
(Local) polynomial order	1	1	1	1	1	1

• Persuasion rate (Della Vigna and Kaplan, 2007): Explosions convinced 8.6% of past left voters to vote different or not to vote (3.05% for paramilitaries).

suasion 🕩 Quadratic 🕩 RD plots 🕩 Buffer radius 🕩 Bandwidth 🔶 Right

Other robustness

- **1** Topographic distance instead of euclidean distance to compute buffers
- ② Use log of votes as dependent variable instead of turnout rate
- Orop weight by voters' potential or use uniform kernel instead of triangular
- Exclude control units "close" to a treated explosion on same election
- **(2)** Use only the closest explosion to the election day in each voting poll
- **O** Use only polls with one explosion within 60 days of the election
- **②** Add rainfall and (LASSO-selected) controls at the poll and municipal level
- Otential problems of using RD with discrete running variable
 - ▶ Large number of explosions days around the election (104/120)
 - Optimized RD: numerical optimization instead of local linear reg (Imbens and Wagner, 2019).
 - Local randomization instead of RDD (Cattaneo et al., 2020)

Outline

- Context
- Data
- Empirical strategy
- Results
- Mechanisms
- Conclusions

Mechanisms: \downarrow Turnout

- Fear to (go to) vote
 - A. Show that information updating is an unlikely driver of the results igodot
 - B. Using survey data, we show that landmine explosions are correlated with the decision not to vote and with the feeling of fear •
 - C. Drop in mobility after explosions using Facebook data 💽
 - D. Humanitarian demining leads to more turnout 💽
 - E. No heterogeneous effects by type of victim (civilian vs. armed forces) or type of election 💽
- Access to vote
 - A. No heterogeneous effects by proximity of the explosions to roads 💽
 - B. No heterogeneous effects by explosion on roads directly connected to voting poll 💽
- S Explosions lead to more pre-electoral violence
 - A. No increase in geo-coded homicides after explosion 💽
- Institutional trust
 - A. No change in institutional trust using survey data 💽

Mechanisms: Δ Vote composition

- 1. \downarrow Turnout differentially affected left-wing supporters
 - A. Turnout as a bad control in specification of partisan support 💽
 - B. Turnout as a mediator using g-sequential estimation (Acharya et al., 2016) 💽
 - C. Differential participation by left wing voters 🕐
- 2. Differential campaigning strategies following the explosion
 - A. No change in the use of landmine/conflict related tweets
 - B. No change in the incidence of electoral offences 💽
- \Rightarrow Violence-driven negative reciprocity
 - Landmine explosions change the electoral preferences of voters
 - Punishment of democratic left for actions of the illegal left

Outline

- Context
- Data
- Empirical strategy
- Results
- Mechanisms
- Conclusions

Conclusions

- Violence is rarely random \rightarrow hard to disentangle the effect of the perpetrator's objective from the pure salience of the violence stimulus.
- Overcome this challenge s by studying accidental explosions of landmines in rural Colombia in an RDD setting
 - Neither the timing of explosions nor the distance of explosion sites to voting polls is manipulated
- Landmine accidents create fear among exposed individuals, making them inadvertently change their behavior in ways that are consistent with survival considerations and negative reciprocity
 - Reduce people's mobility and hence, when they occur on the verge of elections, they depress political participation
 - Change in political preferences as voters seek to punish the alleged perpetrator
- Worrisome potential consequences for the consolidation of democracies in places affected by conflict.

THANKS!

Contribution

- Violence affects electoral outcomes [Condra et al., 2018; Daniele and Dipoppa, 2017; De Feo and De Luca, 2017; Collier and Vicente, 2012; Acemoglu et al., 2013; Montalvo, 2011; Robinson and Torvik, 2009; Berberri and Klor, 2008]
 - Show that violence can also have large electoral effects even when its deployment timing is fortuitous.
- Fear and political participation [Mansour et al., 2022; Bautista et al., 2022; Campante et al., 2020; Young, 2018; Vasilopoulos et al., 2018]
 - Show that salience and fear affects both political participation and voting behavior
- Salience triggered by priming, reminding, and informing people [Bordalo et al, (2012, 2013, 2020, 2022), Chen et al. (2016), Dessaint and Matray (2017)]
 - Show how salience can affect electoral outcomes
- Consequences of landmine exposure [Prem et al, 2022; Chiovelli et al., 2019; Lin, 2020; Riaño and Valencia-Caicedo, 2020; Dell et al., 2018; Miguel and Roland, 2011]
 - Show that political consequence of landmines likely hampers the reconstruction of democracy in conflict-affected areas



1. No manipulation of the timing of a landmine accident



Figure: Distribution of explosions across days to/from elections

- $\bullet\,$ No differential explosions before the elections $\to\,$ No strategic triggering of landmines to disrupt/shape elections
 - ▶ p-value: 0.72 (Cattaneo et al, 2018); 0.60 (Frandsen, 2017)

2. No manipulation of the proximity of a landmine accident

Figure: Distribution of explosions across distance to closest poll



- No difference in the distribution distance of the explosion to the voting poll, before and after the election (60 days) \rightarrow no strategic triggering of landmines closer to the polls to disrupt/shape elections
 - p-value: 0.38 (Cattaneo et al, 2018)

3. No manipulation of timing of a landmine placement

- Harder to test as location of unexploded landmines (and date of placement) are largely unknown.
- \checkmark No historical evidence of landmines being planted to disrupt elections
- ✓ No heterogeneous effects before and after December 2014, when FARC declared a permanent ceasefire that was followed by a peace agreement in 2016.



4. Balance around cutoff

Figure: Differential characteristics by treatment assignment



Back RDD Poll RDD Municipality

r Vargas, Purroy, Coy, Perilla, & Prem

Robustness: Buffer radius



▶ Back

Robustness: Bandwidth (day window)



▶ Back

Table: A. The Role of Past Exposure

Dep. Variable:	Turnout							
Z:	Explosions 3-9 Months Before		Explosions 3-12 Months Before		Explosions 3-15 Months Before		Latent	
	Dummy Total		Dummy	Total	Dummy Total		Risk	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Explosion Before \times Z	-0.121*	-0.005	-0.087	0.005	-0.078	0.001	0.006	
	(0.064)	(0.009)	(0.067)	(0.012)	(0.064)	(0.008)	(0.006)	
Explosion Before	-0.193***	-0.241***	-0.198***	-0.226***	-0.198***	-0.222***	-0.303***	
	(0.063)	(0.078)	(0.064)	(0.077)	(0.063)	(0.077)	(0.076)	
Z	-0.038	-0.009	-0.061	-0.018	-0.068	-0.013	-0.006	
	(0.042)	(0.009)	(0.045)	(0.012)	(0.041)	(0.008)	(0.005)	
Observations	204	204	204	204	204	204	204	
Mean Dep. Variable	0.580	0.580	0.580	0.580	0.580	0.580	0.580	



Mechanisms: \downarrow Turnout

B. Survey data

- Leverage individual level responses to the 2017 and 2021 *Encuesta de Cultura Política*, particularly questions on:
 - Voted in last elections (dependent variable)
 - Conditional on not having voted, main reason why so is fear (dependent variable)
 - Landmine accident before the election in the respondent's community (independent variable)
 - > Study as well a sub-sample of respondents that state to be exposed to conflict victimization

Fear to vote

B. Landmine explosions are correlated with the decision not to vote and with the feeling of fear

Sample:	(1)	(2) F	(3) ull	(4)	(5)	(6) Conflict	(7) affected	(8)
	Voted last election		Fear		Voted last election		Fear	
Explosions before	-0.043*** (0.013)	-0.039*** (0.013)	0.164*** (0.028)	0.158*** (0.028)	-0.049*** (0.016)	-0.043*** (0.016)	0.143*** (0.030)	0.142*** (0.029)
Observations	16,930	16,930	6,806	6,806	1,769	1,769	971	971
Mean dep variable	0.771	0.771	0.033	0.033	0.775	0.775	0.080	0.080
R-squared	0.586	0.587	0.024	0.029	0.547	0.553	0.045	0.075
Controls	No	Yes	No	Yes	No	Yes	No	Yes

Table: Explosions, electoral participation, and fear to vote.

▶ Back

Mechanisms: \downarrow Turnout

C. Landmine explosions depress local mobility



- Use Facebook data (2021-II to 2022-I) that captures individual mobility for $350 m^2$.
- Use 36 explosions.

▶ Back
Fear to vote

D. Humanitarian demining seems to increase turnout

	(1)	(2)	(3)	(4)	(5)	(6)
	All	grids	Exposed	Exposed to landmines		nd landmines
Panel A						
Cumulative demining events	0.007***	0.004***	0.003**	0.005***	0.004**	0.005***
	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Panel B						
Far from cumulative demining events	0.008***	0.004***	0.004**	0.005***	0.004***	0.005***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Near to roads cumulative demining events	-0.000	-0.001	-0.005	0.002	-0.004	0.002
	(0.004)	(0.006)	(0.004)	(0.007)	(0.004)	(0.008)
Observations	380,880	379,500	8,260	7,940	7,210	6,980
R-squared (Panel A)	0.590	0.713	0.622	0.716	0.622	0.717
Grid fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Municipality-year fixed effect	No	Yes	No	Yes	No	Yes
Mean dep variable	0.608	0.607	0.566	0.563	0.566	0.561

 Run a regression at the grid level 5x5km using as treatment the cumulative number of humanitarian demining events in the grid and as outcome the average turnout in the grid across poll stations.

Fear

E. Heterogeneous effects by victim and election types

Dependent variable: Turnout rate									
	(1)	(2)	(3)						
7.	Baseline	Civilian	Local						
۲.	Dasenne	victim	election						
Explosion before \times Z		-0.018	-0.037						
		(0.069)	(0.161)						
Explosion before	-0.282***	-0.266***	-0.284***						
	(0.055)	(0.075)	(0.056)						
Z		0.043							
		(0.058)							
Observations	204	204	204						
Mean dep. variable	0.580	0.580	0.580						
Election-year fixed effect	Yes	Yes	Yes						

Table: Heterogeneous effects

Note: Estimated by OLS with triangular kernel near cutoff within RD optimal bandwidth.

- 2. Access to vote
 - \checkmark Heterogeneous effects to explore whether turnout reduction exacerbated by landmine blasts near road network

Dependent variable: Turn	Dependent variable: Turnout rate								
Z:	(1) Baseline	(2) Distance to a road	(3) Distance to a road Primary	(4) Distance to a road Secondary	(5) Distance to a road Tertiary				
Explosion before \times Z		0.026 (0.039)	-0.024 (0.023)	-0.014 (0.036)	-0.017 (0.023)				
Explosion before	-0.282***	-0.291***	-0.262***	-0.263***	-0.261***				
	(0.055)	(0.054)	(0.059)	(0.057)	(0.055)				
Z		0.025	0.017	-0.015	-0.010				
		(0.034)	(0.019)	(0.023)	(0.021)				
Observations	204	204	204	204	204				
Mean dep. variable	0.580	0.580	0.580	0.580	0.580				
Election-year fixed effect	Yes	Yes	Yes	Yes	Yes				

Table: Heterogeneous effects

Note: Estimated by OLS with triangular kernel near cutoff within RD optimal bandwidth.

(r) Vargas, Purroy, Coy, Perilla, & Prem

- 2. Access to vote
 - $\checkmark\,$ Exclusion of blasts in a road directly connected to voting poll

Table: Explosions, voting behaviour, and access to voting polls

	(1)	(2)	(2) (3)		(5)	(6) (7)	
	Turnout	Incumbet	Incumbet votes over		votes over	Paramilitary votes over	
		Potential	Votes	Potential	Votes	Potential	Votes
Panel A: Excludes	directly connect	ted explosions u	ıp to 50 meters	from the road			
Explosion before	-0.283***	-0.039*	-0.005	-0.218***	-0.314***	0.028**	0.089***
Robust p-value	0.000	0.055	0.614	0.000	0.002	0.037	0.000
CI 95%	[-0.417, -0.195]	[-0.105, 0.001]	[-0.128, 0.076]	[-0.334, -0.134]	[-0.559, -0.120]	[0.002, 0.056]	[0.049, 0.150]
Observations	1128	1128	1128	1128	1128	1128	1128
Bandwidth obs.	203	222	183	121	138	406	325
Mean	0.56	0.099	0.211	0.089	0.173	0.010	0.014
Bandwidth	17.0	19.7	15.1	11.4	12.5	32.2	27.3

3. Explosions do not lead to more violence

Dep. Variable:		Homicides							
Sample:		Full sample		Bar	ndwidth san	nple			
	Total	Dummy	Log	Total	Dummy	Log			
	(1)	(2)	(3)	(4)	(5)	(6)			
A. Two-way Fixed Effect									
Post Explosion	0.002	-0.019	-0.006	0.007	-0.014	-0.002			
	(0.025)	(0.014)	(0.013)	(0.024)	(0.013)	(0.012)			
B. De Chaisenm	artin and	d'Haultfo	euille (20	20)					
Post Explosion	-0.013	-0.030	-0.015	-0.000	-0.017	-0.006			
	(0.025)	(0.023)	(0.016)	(0.018)	(0.012)	(0.010)			
Observations	2961	2961	2961	2961	2961	2961			
Mean Dep. Var.	0.025	0.022	0.016	0.025	0.021	0.016			
Treated	110	110	110	110	110	110			
Never Treated	434	434	434	434	434	434			

Table: Homicides After Landmine Explosions

• Using geocoded homicide data from 2014 to 2019, we estimate the change in the number of homicides after an explosion in the 2 months before an election.

🕨 Back

Dep. Variable:	Trust in						
	Ma	iyor	Gov	Governor		d Governor	
	Total	Total Dummy		Total Dummy		Dummy	
	(1)	(2)	(3)	(4)	(5)	(6)	
Explosions Before	0.003 (0.022)	0.008 (0.011)	0.042* (0.023)	0.007 (0.011)	0.024 (0.021)	0.001 (0.012)	
Observations R-squared Controls	11,631 0.017 Yes	11,335 0.013 Yes	11,631 0.016 Yes	11,631 0.016 Yes	11,631 0.019 Yes	11,631 0.017 Yes	

Table: 4. Explosions and Trust

1. Voters' composition

A. Adding turnout as a bad control

	(1) (2) Incumbent votes with		(3) Left-wing	(4) votes with	(5) (6) Paramilitary votes with	
	No control	Bad control	No control	Bad control	No control	Bad control
Explosion before	-0.028	0.005	-0.217***	-0.201***	0.028*	0.039***
Robust p-value	0.121	0.406	0.000	0.001	0.054	0.007
CI 95%	[-0.095, 0.011]	[-0.034, 0.083]	[-0.323, -0.124]	[-0.353, -0.095]	[-0.000, 0.053]	[0.010, 0.063]
 p-value 	0.191	0.377	0.000	0.000	0.068	0.024
[2] p-value	0.263	0.401	0.000	0.000	0.112	0.038
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1136	1136	1136	1136	1136	1136
Bandwidth obs.	278	278	121	121	409	409
Mean	0.148	0.148	0.089	0.089	0.009	0.014
Bandwidth	21.8	21.8	11.4	11.4	32.4	32.4
(Local) polynomial order	1	1	1	1	1	1

Table: The effect of explosions on voting behavior controlling for turnout



1. Voters' composition

B. Turnout as a mediator



Figure: Mediation analysis



B. Explosions do not lead electoral offenses

	(1) Avg control	(2) Difference in average	(3) RDD estimate
Any moving votes	0.24	0.11	0.19
	(0.43)	(0.12)	[-0.16, 0.68]
Any vote buying	0.32	-0.00	0.19
	(0.47)	(0.12)	[-0.66, 0.15]
Any electoral offense	0.93	-0.09	0.07
-	(0.26)	(0.07)	[-0.48, 0.91]

Table: Difference in electoral offenses by treatment status



Access

B. No differential participation by voters' income

	(1)	(2)	(3)	(4)
	Surv	ey: Full	Survey: Co	onflict-affected
	Voted la	ast election	Voted la	ast election
Explosions before $ imes$ Housing quality	0.008	0.005	0.012	0.006
	(0.016)	(0.017)	(0.019)	(0.019)
Explosions before	-0.034*	-0.032*	-0.048**	-0.052**
	(0.019)	(0.019)	(0.023)	(0.023)
Housing quality	-0.006*	0.002	-0.006	0.005
	(0.003)	(0.023)	(0.010)	(0.048)
Observations	16,967	16,930	1,771	1,769
Mean dep variable	0.770	0.771	0.775	0.775
R-squared	0.000	0.035	0.003	0.059
Controls	No	Yes	No	Yes

Table: Explosions and electoral participation by voter's housing quality

• Housing quality: share of utilities available at the house



Access

C. No differential participation based on civic capital

Dependent variable: Turn	out rate		
	(1)	(1)	(2)
		Civic capital	Civic capital
Z:	Baseline	turnout t-1	turnout t-1
		poll	municipal
Explosion before $\times Z$		0.113	0.317
		(0.191)	(0.195)
Explosion before	-0.282***	-0.068	-0.346***
	(0.055)	(0.144)	(0.109)
Z		0.344**	0.212
		(0.169)	(0.186)
Observations	204	137	197
Mean dep. variable	0.580	0.610	0.580
Election-year fixed effect	Yes	Yes	Yes

Table: Heterogeneous effects

Note: Estimated by OLS with triangular kernel near cutoff within RD optimal bandwidth.



Voters' composition

C. No differential participation of left wing voters

	(1) (2) Survey: Full		(3) Survey: Cor Voted la	(3) (4) Survey: Conflict-affected		
		election				
Explosions before $ imes$ Left wing	0.005	0.005	0.006	-0.001	0.018	
	(0.018)	(0.018)	(0.021)	(0.021)	(0.086)	
Explosions before	-0.055***	-0.051***	-0.047*	-0.052**	-0.283***	
	(0.020)	(0.020)	(0.024)	(0.024)	(0.056)	
Left wing	-0.034***	-0.029***	-0.034***	-0.022*	-0.037	
-	(0.003)	(0.003)	(0.011)	(0.011)	(0.075)	
Observations	13,178	13,155	1,480	1,478	204	
Mean dep variable	0.804	0.804	0.787	0.787	0.580	
R-squared	0.008	0.045	0.010	0.070		
Controls	No	Yes	No	Yes		

Table: Explosions and electoral participation by voter's ideology



...within sample



Size effect relative to the literature

Figure: Turnout decrease following other shocks





	(1)	(2)	(3)
	Avg	Difference in	RDD
	control	average	estimate
Ln potential voters	5.74	0.12	0.31
Turnout (pre)	0.47	-0.01	0.21
Political competition (pre)	0.46	0.02	0.04
Incumbent vote share (pre)	(0.26) 0.15	(0.03) -0.02	-0.00
Left vote share (pre)	(0.21)	(0.02)	[-0.19, 0.17]
	0.26	0.02	0.02
Right vote share (pre)	(0.30) 0.07	-0.02	-0.02
Paramilitaries vote share (pre)	(0.14)	(0.03)	[-0.12, 0.09]
	0.07	-0.05**	0.03
Population density	(0.15) 397.66	-129.03	[-0.08, 0.17] 174.57
Nighttime lights	(629.66)	(162.12)	[-58.34, 326.41]
	10.69	-3.70	2.42
Dist. to school	(14.20)	(3.49)	[-3.89, 6.80]
	0.69	-0.07	-0.16
Dist. to roads	(0.61)	(0.09) 0.13	[-0.66, 0.22] 0.26
Dist. to mun. capital	(1.64)	(0.26)	[-1.13, 1.87]
	1.35	0.01	-0.05
Dist. to closest village	(1.23)	(0.21)	[-1.23, 0.94]
	0.68	-0.04	0.09
Dist. to police station	(1.50)	(0.24)	[-0.87, 0.99]
	0.69	-0.07	-0.16
	(0.61)	(0.09)	[-0.66, 0.22]

Table: Difference in poll station characteristics by treatment status



Table: Difference in municipality characteristics by treatment status

	(1)	(2)	(3)
	Avg	Difference in	RDD
	control	average	estimate
Any FARC attack	0.71	0.01	0.12
	(0.45)	(0.07)	[-0.25, 0.43]
Any OAG attack	0.67	0.01	0.15
	(0.47)	(0.08)	[-0.14, 0.63]
Any FARC attack (election day)	0.01	0.00	-0.06
	(0.08)	(0.01)	[-0.14, 0.02]
Any OAG attack (election day)	0.01	-0.00	-0.00
	(0.08)	(0.01)	[-0.03, 0.03]
Any FARC demobilized	0.46	0.05	0.34
	(0.50)	(0.09)	[-0.15, 0.54]
Any OAG demobilized	0.50	-0.02	0.13
	(0.50)	(0.08)	[-0.26, 0.28]
Police stations	0.09	0.01	0.01
	(0.06)	(0.01)	[-0.06, 0.03]
Ln potential voters	9.92	-0.13	0.04
	(1.09)	(0.24)	[-0.60, 0.70]
Mayor aff. Government	0.22	-0.05	0.18
	(0.41)	(0.06)	[-0.30, 0.49]
Mayor aff. Opposition	0.23	-0.04	0.13
	(0.42)	(0.08)	[-0.08, 0.51]
Mayor aff. left-wing party	0.18	-0.02	-0.19
	(0.38)	(0.05)	[-0.12, 0.22]
Mayor aff. right-wing party	0.02	0.06	0.04
	(0.15)	(0.04)	[-0.10, 0.03]
Ln population	11.19	-0.18	-0.07
	(1.08)	(0.23)	[-0.59, 0.66]
Ln value added	5.94	0.01	0.35
	(1.38)	(0.28)	[-0.77, 0.69]
Rurality index	0.59	0.00	-0.11
	(0.26)	(0.05)	[-0.28, 0.11]
Poverty index	69.90	-0.06	4.60*
	(15.73)	(2.98)	[-0.08, 17.88]
Number of schools	87.84	-6.19	24.22
	(86.30)	(17.81)	[-34.30, 28.38]
Road density	22.43	4.37	20.84
	(22.16)	(3.09)	[-11.02, 19.25]
Deforestation	0.03	0.00	0.02
	(0.05)	(0.01)	[-0.08, 0.06]
Gold suitability	1.26	0.02	0.10
	(7.75)	(0.61)	[-11.38, 3.72]
Coffee production	1.19	0.10	0.03
	(1.73)	(0.25)	[-0.59, 2.06]
Coca production	0.14	-0.01	-0.03
	(0.20)	(0.03)	[-0.04, 0.21]

The electoral persuasion of landmine explosions

Compute landmine blasts' persuasion rates

• Following DellaVigna and Kaplan (2007), we calculate:

$$f_{paras} = \frac{\hat{\beta}_{paras}}{(e_{T} - e_{C})(1 - Paras_{t-1})} \frac{(1 - Paras_{t-1})\alpha_{C}\alpha_{T}}{(Others_{t-1})}$$
$$f_{left} = \frac{\hat{\beta}_{left}}{(e_{T} - e_{C})Left_{t-1}} \frac{(Left_{t-1})\alpha_{C}\alpha_{T}}{(1 - Others_{t-1})}$$

• Where $Left_{t-1}$, $Paras_{t-1}$ and $Others_{t-1}$ are the average voting shares in t-1. We set the exposure rate for treated polls to be equal to 1 ($e_t = 1$) and control polls to be equal to 0 ($e_c = 0$). α_C and α_T are the turnouts of control and treated polls in time t.

Explosions' persuasion relative to the literature

Figure: Persuasion rates from literature





	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Unwe	ighted	Vote	s log.	Polls with only	y one explosion	One explos	ion per poll	Optimized RD	Local randomization
Explosion before Robust p-value CI 95%	-0.282*** 0.000 [-0.416, -0.195]	-0.339*** 0.000 [-0.492, -0.229]	-1.058*** 0.000 [-1.532, -0.776]	-1.299*** 0.000 [-1.863, -0.926]	-0.272*** 0.000 [-0.421, -0.203]	-0.376*** 0.000 [-0.550, -0.262]	-0.149*** 0.000 [-0.272, -0.076]	-0.352*** 0.000 [-0.514, -0.253]	-0.247*** [-0.354, -0.141]	-0.102*** 0.004
Election fixed effects	Yes	Yes	Yes							
Control for Log potential	No	No	Yes	Yes	No	No	No	No	No	No
Observations	1136	1136	1136	1136	654	654	870	870	1136	1136
Bandwidth obs.	204	340	184	315	153	160	338	226		157
Mean	0.56	0.58	6.11	6.33	0.62	0.62	0.60	0.62	0.50	0.62
Total votes avg.			632.3	788.3						
Bandwidth	16.8	28.2	16.0	24.3	20.0	21.6	30.8	20.5		20.0
(Local) polynomial order	1	2	1	2	1	2	1	2		1

Table: Robustness estimates for turnout



	(1) Turnout	(2) (3) Incumbent votes over		(4) Left-wing	(5) votes over	(6) (7) Paramilitary votes over	
		Potential	Votes	Potential	Votes	Potential	Votes
Explosion before	-0.275***	-0.063**	-0.077	-0.077***	-0.220***	-0.003	0.072***
Robust p-value	0.000	0.013	0.255	0.000	0.004	0.497	0.000
CI 95%	[-0.388, -0.219]	[-0.135, -0.016]	[-0.182, 0.048]	[-0.149, -0.044]	[-0.413, -0.078]	[-0.025, 0.012]	[0.038, 0.127]
p-value	0.000	0.035	0.009	0.009	0.000	0.450	0.001
[2] p-value	0.000	0.026	0.180	0.010	0.000	0.391	0.000
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No
Observations	907	907	907	907	907	907	907
Bandwidth obs.	245	297	266	239	129	245	259
Mean	0.547	0.120	0.285	0.070	0.131	0.006	0.013
Bandwidth	23.2	29.7	27.5	23.0	13.1	23.6	25.5
(Local) polynomial order	1	1	1	1	1	1	1

Table: RDD estimates using topographic distance criteria

Table: Robustness estimates for incumbent voting

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Unwe	ighted	Polls with on	Polls with only one explosion		sion per poll	Optimized RD	Local randomization
Panel A: Over potential								
Explosion before	-0.036*	-0.049**	-0.050**	-0.054**	-0.020	-0.058**	-0.015	0.001
Robust p-value	0.063	0.028	0.012	0.035	0.323	0.047		0.956
CI 95%	[-0.091, 0.002]	[-0.113, -0.006]	[-0.118, -0.014]	[-0.127, -0.005]	[-0.084, 0.028]	[-0.140, -0.001]	[-0.056, 0.026]	
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No	No
Observations	1136	1136	654	654	870	870	1136	1136
Bandwidth obs.	426	315	134	244	295	295		157
Mean	0.14	0.14	0.10	0.11	0.14	0.14	0.11	0.10
Bandwidth	33.3	25.0	20.0	31.2	26.3	26.7		20.0
(Local) polynomial order	1	2	1	2	1	2		1
Panel B: Over votes								
Explosion before	-0.031	-0.041	-0.005	0.013	-0.022	0.008	-0.034	0.065**
Robust p-value	0.685	0.295	0.820	0.945	0.582	0.866		0.040
CI 95%	[-0.101, 0.066]	[-0.164, 0.050]	[-0.091, 0.072]	[-0.110, 0.118]	[-0.117, 0.065]	[-0.090, 0.107]	[-0.117, 0.048]	
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No	No
Observations	1136	1136	654	654	870	870	1136	1136
Bandwidth obs.	295	315	153	189	275	469		157
Mean	0.29	0.28	0.18	0.15	0.28	0.25	0.22	0.18
Bandwidth	22.7	24.6	20.9	27.0	23.7	40.2		20.0
(Local) polynomial order	1	2	1	2	1	2		1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Unwe	ighted	Polls with on	Polls with only one explosion		One explosion per poll		Local randomization
Panel A: Over potential								
Explosion before	-0.090***	-0.178***	-0.176***	-0.183***	-0.219***	-0.233***	-0.072**	-0.172***
Robust p-value	0.002	0.001	0.001	0.002	0.000	0.000		0.000
CI 95%	[-0.166, -0.038]	[-0.300, -0.081]	[-0.259, -0.062]	[-0.305, -0.066]	[-0.324, -0.127]	[-0.361, -0.141]	[-0.132, -0.012]	
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No	No
Observations	1136	1136	654	654	870	870	1136	1136
Bandwidth obs.	327	278	68	153	110	226		157
Mean	0.07	0.08	0.09	0.06	0.09	0.06	0.08	0.06
Bandwidth	28.0	21.4	12.7	20.9	11.7	20.3		20.0
(Local) polynomial order	1	2	1	2	1	2		1
Panel B: Over votes								
Explosion before	-0.220***	-0.229***	-0.196	-0.265*	-0.317***	-0.317***	-0.016	-0.244***
Robust p-value	0.002	0.009	0.164	0.051	0.002	0.004		0.000
CI 95%	[-0.410, -0.088]	[-0.435, -0.062]	[-0.388, 0.066]	[-0.526, 0.001]	[-0.562, -0.130]	[-0.585, -0.108]	[-0.111, 0.078]	
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No	No
Observations	1136	1136	654	654	870	870	1136	1136
Bandwidth obs.	157	295	86	178	137	268		157
Mean	0.16	0.13	0.16	0.12	0.16	0.13	0.18	0.13
Total votes avg.								
Bandwidth	13.7	22.3	13.5	23.8	13.0	22.5		20.0
(Local) polynomial order	1	2	1	2	1	2		1
Bandwidth	13.7	22.3	11.8	21.7	13.0	22.5		20.0
(Local) polynomial order	1	2	1	2	1	2		1

Table: Robustness estimates for left voting



	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Unwe	ighted	Polls with on	ly one explosion One explosi		ion per poll	Optimized RD	Local randomization
Panel A: Over potential	0.014	0.008	0.010	0.008	0.024	0.008	0.007	0.041***
Robust n-value	0.385	0.613	0.010	0.446	0.138	0.964	0.007	0.000
CI 95%	[-0.017, 0.044]	[-0.025, 0.043]	[-0.026, 0.027]	[-0.054, 0.024]	[-0.007, 0.049]	[-0.039, 0.041]	[-0.019, 0.033]	0.000
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No	No
Observations	1136	1136	654	654	870	870	1136	1136
Bandwidth obs.	253	469	222	200	359	338		157
Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01
Bandwidth	20.3	36.0	29.3	28.1	31.3	30.8		20.0
(Local) polynomial order	1	2	1	2	1	2		1
Panel B: Over votes								
Explosion before	0.093***	0.097***	0.047	0.037	0.077***	0.075***	0.081***	0.091***
Robust p-value	0.000	0.001	0.178	0.469	0.000	0.009		0.000
CI 95%	[0.059, 0.154]	[0.045, 0.163]	[-0.019, 0.101]	[-0.048, 0.104]	[0.036, 0.127]	[0.019, 0.132]	[0.022, 0.140]	
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No	No
Observations	1136	1136	654	654	870	870	1136	1136
Bandwidth obs.	323	519	184	283	288	398		157
Mean	0.01	0.02	0.02	0.02	0.01	0.02	0.03	0.02
Bandwidth	26.3	39.3	25.2	36.5	24.6	35.8		20.0
(Local) polynomial order	1	2	1	2	1	2		1

Table: Robustness estimates for paramilitary voting



	(1)	(2)	(3)	(4)
		Tur	nout	()
Panel A: 3km away				
Explosion before	-0.228***	-0.239***	-0.332***	-0.302***
Robust p-value	0.000	0.000	0.000	0.000
CI 95%	[-0.383, -0.146]	[-0.405, -0.137]	[-0.503, -0.223]	[-0.500, -0.155
Observations	965	965	965	965
Bandwidth obs.	172	164	253	253
Mean	0.603	0.563	0.572	0.572
Bandwidth	17.8	16.2	24.2	24.9
Panel B: 5km away				
Explosion before	-0.206***	-0.198***	-0.289***	-0.244***
Robust p-value	0.000	0.001	0.000	0.003
CI 95%	[-0.360, -0.118]	[-0.366, -0.087]	[-0.473, -0.161]	[-0.450, -0.089
Observations	957	957	957	957
Bandwidth obs.	161	161	257	294
Mean	0.563	0.563	0.566	0.592
Bandwidth	16.4	16.7	27.6	29.7
Election fixed effects	Yes	Yes	Yes	Yes
Control for Log potential	No	Yes	No	Yes
(Local) polynomial order	1	1	2	2

Table: RDD estimates excl. controls close to a treated explosion



	(1) Turnout	(2) (3) Incumbet votes over		(4) Left-wing	(5) votes over	(6) (7) Paramilitary votes over	
		Potential	Votes	Potential	Votes	Potential	Votes
Explosion before	-0.145**	0.014	0.047	-0.108***	-0.190***	0.010	0.076***
Robust p-value	0.016	0.384	0.257	0.000	0.002	0.312	0.001
CI 95%	[-0.243, -0.025]	[-0.022, 0.058]	[-0.037, 0.137]	[-0.166, -0.070]	[-0.326, -0.073]	[-0.011, 0.033]	[0.033, 0.130]
[1] p-value	0.088	0.593	0.810	0.053	0.018	0.495	0.034
[2] p-value	0.147	0.481	0.711	0.086	0.070	0.556	0.033
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No
Observations	3446	3446	3446	3446	3446	3446	3446
Bandwidth obs.	627	467	467	520	366	1152	1072
Mean	0.618	0.110	0.205	0.063	0.165	0.013	0.020
Bandwidth	18.9	14.6	14.9	15.6	11.7	28.2	22.8
(Local) polynomial order	1	1	1	1	1	1	1

Table: RDD estimates using control units from different years

▶ Back

	(1) Turnout	(2) (3) Incumbet votes over		(4) Left-wing	(5) votes over	(6) (7) Paramilitary votes over	
		Potential	Votes	Potential	Votes	Potential	Votes
Explosion before	-0.270***	-0.053***	-0.025	-0.144***	-0.234***	0.011	0.089***
Robust p-value	0.000	0.004	0.238	0.000	0.000	0.360	0.000
CI 95%	[-0.381, -0.198]	[-0.085, -0.016]	[-0.124, 0.031]	[-0.193, -0.120]	[-0.372, -0.124]	[-0.013, 0.035]	[0.056, 0.146]
[1] p-value	0.000	0.331	0.986	0.012	0.000	0.209	0.000
[2] p-value	0.000	0.316	0.625	0.010	0.000	0.342	0.001
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No
Observations	2764	2764	2764	2764	2764	2764	2764
Bandwidth obs.	368	771	309	439	230	873	886
Mean	0.570	0.163	0.324	0.078	0.204	0.010	0.016
Bandwidth	15.0	21.3	12.8	16.0	8.8	23.0	24.1
(Local) polynomial order	1	1	1	1	1	1	1

Table: RDD estimates using control units from different years + distance

	(1)	(2)	(3)	(4)	(5)	(6)
	Incumbent	Incumbent votes over		votes over	Paramilitary	votes over
	Potential	Votes	Potential	Votes	Potential	Votes
Explosion before	-0.039	-0.042	-0.241***	-0.315***	0.013	0.087***
Robust p-value	0.165	0.380	0.000	0.005	0.736	0.002
CI 95%	[-0.106, 0.018]	[-0.175, 0.067]	[-0.368, -0.142]	[-0.579, -0.103]	[-0.030, 0.043]	[0.031, 0.145]
[1] p-value	0.116	0.288	0.000	0.000	0.573	0.002
[2] p-value	0.161	0.319	0.000	0.000	0.812	0.007
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Control for potential logarithm	No	No	No	No	No	No
Observations	1136	1136	1136	1136	1136	1136
Bandwidth obs.	409	319	223	295	435	519
Mean	0.140	0.280	0.085	0.130	0.008	0.016
Bandwidth	32.6	25.5	19.8	22.4	34.0	39.1
(Local) polynomial order	2	2	2	2	2	2

Table: RDD estimates for voting behavior: Quadratic polynomial

Votes for incumbent: robustness to different voting radii



Votes for the left: robustness to different voting radii



Votes for the paramilitary parties: robustness to different voting radii



(e) Linear: Over potential

(f) Linear: Over votes

▶ Back

Votes for the incumbent: robustness to different bandwidths



(g) Linear: Over potential

(h) Linear: Over votes

Votes for the left: robustness to different bandwidths



(i) Linear: Over potential

(j) Linear: Over votes

Votes for paramilitary parties: robustness to different bandwidths



(k) Linear: Over potential

(I) Linear: Over votes

Figure: RDD estimates for incumbent voting



Figure: RDD estimates for left voting



Figure: RDD estimates for paramilitary party voting



(a) Paramilitary over potential

(b) Paramilitary over votes
	(1) (2) Turnout Incumb		(3) votes over	(4) (5) Left-wing votes over		(6) (7) Paramilitary votes over	
		Potential	Votes	Potential	Votes	Potential	Votes
Explosion before	-0.147***	-0.038**	-0.046	-0.206***	-0.292***	0.027*	0.084***
Robust p-value	0.001	0.044	0.208	0.000	0.002	0.074	0.000
CI 95%	[-0.283, -0.070]	[-0.104, -0.001]	[-0.145, 0.032]	[-0.307, -0.120]	[-0.530, -0.115]	[-0.002, 0.051]	[0.040, 0.140]
p-value	0.006	0.126	0.322	0.000	0.000	0.083	0.000
[2] p-value	0.026	0.107	0.355	0.000	0.000	0.141	0.002
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No
Observations	1136	1136	1136	1136	1136	1136	1136
Bandwidth obs.	327	253	253	121	138	396	340
Mean	0.579	0.100	0.180	0.089	0.173	0.009	0.012
Bandwidth	27.2	20.7	20.2	11.3	12.6	31.3	28.1
(Local) polynomial order	1	1	1	1	1	1	1

Table: RDD estimates using LASSO selected controls

Back

	_ (1)	(2)	(3)	(4)	(5)	(6)	(7)
	lurnout	Incumbet votes over		Left-wing votes over		Paramilitary votes over	
		Potential Votes		Potential	Votes	Potential	Votes
Explosion before	-0.125***	-0.053	-0.066	-0.215***	-0.329***	0.028*	0.073***
Robust p-value	0.010	0.108	0.276	0.000	0.002	0.074	0.006
CI 95%	[-0.265, -0.037]	[-0.106, 0.010]	[-0.164, 0.047]	[-0.310, -0.124]	[-0.530, -0.114]	[-0.003, 0.056]	[0.023, 0.137]
 p-value 	0.029	0.904	0.000	0.000	0.000	0.649	0.003
[2] p-value	0.117	0.174	0.770	0.000	0.000	0.678	0.009
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Log potential	No	No	No	No	No	No	No
Observations	1136	1136	1136	1136	1136	1136	1136
Bandwidth obs.	302	221	223	105	107	295	223
Mean	0.585	0.100	0.194	0.100	0.194	0.008	0.022
Bandwidth	23.6	18.7	19.1	9.7	10.9	22.4	19.9
(Local) polynomial order	1	1	1	1	1	1	1

Table: RDD estimates using uniform kernel

Back

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Right-wing votes over		Non-paras right votes over		Center votes over		Non-paras center votes over	
	Potential	Votes	Potential	Votes	Potential	Votes	Potential	Votes
Explosion before	0.022***	0.086***	0.003	0.009	0.025	0.038**	-0.000	0.231***
Robust p-value	0.001	0.000	0.812	0.621	0.100	0.047	0.981	0.001
CI 95%	[0.012, 0.048]	[0.054, 0.152]	[-0.011, 0.013]	[-0.024, 0.041]	[-0.004, 0.049]	[0.000, 0.072]	[-0.087, 0.085]	[0.113, 0.449]
 p-value 	0.020	0.000	0.782	0.488	0.125	0.092	0.306	0.000
[1] p-value	0.021	0.000	0.518	0.314	0.188	0.112	0.435	0.000
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1136	1136	1136	1136	1136	1136	1136	1136
Bandwidth obs.	278	253	214	184	409	375	184	138
Mean	0.025	0.057	0.015	0.029	0.008	0.010	0.191	0.358
Bandwidth	21.1	20.5	17.4	15.9	32.8	30.9	15.8	12.5
(Local) polynomial order	1	1	1	1	1	1	1	1

Table: RDD estimates for voting behavior: Alternative types of parties

▶ Back

Figure: Mediation: Sensitivity analysis



▶ Back

Controlling for rainfall pre-election

Dep. Variable:	Turnout	Incumbent Votes Over		Left-wing	Votes Over	Paramilitary Votes Over	
		Potential	Votes	Potential Votes		Potential	Votes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Explosion before	-0.207***	-0.039*	-0.038	-0.220***	-0.309***	0.033**	0.094***
Robust p-value	0.000	0.066	0.340	0.000	0.003	0.042	0.000
CI 95%	[-0.359, -0.130]	[-0.111, 0.004]	[-0.142, 0.049]	[-0.339, -0.135]	[-0.563, -0.116]	[0.001, 0.061]	[0.046, 0.155]
p-value	0.000	0.087	0.258	0.000	0.000	0.086	0.002
[2] p-value	0.001	0.117	0.292	0.000	0.000	0.136	0.003
Election fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	993	993	993	993	993	993	993
Bandwidth obs.	251	262	262	107	124	341	287
Mean	0.57	0.135	0.279	0.089	0.173	0.009	0.012
Bandwidth	21.1	24.0	23.1	11.4	12.9	31.3	27.2

Table: Explosions, Voting Behavior, and Rainfall

