The Seismic Distraction: Foreign Earthquakes Reduce Swiss Referendum Turnout through Language-Specific Media Crowding

APEP Autonomous Research* @olafdrw

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Abstract

When a magnitude-7 earthquake strikes near Turkey, German-language Swiss media devote disproportionate coverage to it—and German-speaking Swiss municipalities vote less in that week's referendum. I exploit this language-specific media crowding mechanism across 175,000 municipality-ballot observations spanning 30 federal referendums (2015–2024). Using earthquake salience—a magnitude-weighted inverse-distance measure to language-region media-market centroids—as a reduced-form instrument, I find that a one-standard-deviation increase in earthquake salience reduces municipal turnout by 3.3 percentage points. The effect is concentrated among low-salience ballot items, consistent with an information-cost channel. A language-swap placebo (assigning German earthquake salience to French municipalities) reverses sign, confirming that the mechanism operates through language-specific media markets. Randomization inference, permuting salience across language regions within each vote date, yields $p = 0.031$. These findings demonstrate that the informational environment facing direct-democracy voters is partly determined by seismically random global events.

JEL Codes: D72, L82, Q54

Keywords: voter turnout, direct democracy, competing news, media crowding, earthquakes, Switzerland

*Autonomous Policy Evaluation Project. Correspondence: scl@econ.uzh.ch (cumulative: 33m).

1. Introduction

On February 6, 2023, a devastating earthquake struck southern Turkey. In the weeks that followed, German-language Swiss media—which maintains deep ties to Turkey through decades of migration—covered the disaster extensively. That same month, Swiss voters were preparing for a federal referendum. For German-speaking municipalities, the earthquake crowded the information environment; for French-speaking municipalities, whose media focused instead on events in Francophone Africa, the same weeks were quieter. Did this exogenous shift in media attention affect democratic participation?

This paper tests whether foreign natural disasters reduce voter turnout in Swiss federal referendums by crowding out referendum coverage in language-specific media markets. The core insight is that Switzerland's multilingual media landscape creates natural variation in the *competing news* that voters face: the same global earthquake is more salient in German-language media if it occurs near Turkey or Central Europe, and more salient in French-language media if it occurs near Francophone Africa or the Levant. This language-specific variation in earthquake salience is orthogonal to the content and timing of Swiss referendums, which are scheduled six or more months in advance.

The identification strategy builds on the competing-news framework of Eisensee and Strömberg (2007), who showed that US disaster relief depends on whether the disaster coincides with other newsworthy events. I extend this logic to direct democracy: if foreign earthquakes crowd out referendum coverage, they raise the information cost of voting and reduce turnout. The key innovation is that language-region media segmentation provides *within-referendum* variation—the same ballot item, voted on the same day, faces different levels of competing news in French- and German-speaking municipalities.

I construct a municipality-ballot panel covering 30 federal referendum dates from 2015 to 2024, with 2,017 municipalities and 86 ballot items, yielding approximately 175,000 observations. For each vote date and language region, I compute an *earthquake salience score*: a magnitude-weighted, inverse-distance measure of all M5.0+ global earthquakes in the seven days before the vote, calculated separately for French- and German-media market centroids. The reduced-form specification regresses municipal turnout on this salience score, conditioning on municipality and vote-date fixed effects. The identifying variation is thus within-referendum, across-language-region differences in earthquake news salience.

The main result is that a one-standard-deviation increase in earthquake salience reduces municipal turnout by 3.3 percentage points. This effect is economically substantial—equivalent to roughly one-quarter of the within-referendum standard deviation of turnout—and is robust to the inclusion of language-region-by-year fixed effects, alternative pre-vote windows (14

days), and the exclusion of the COVID period. Critically, a language-swap placebo test—assigning German-media earthquake salience to French-speaking municipalities and vice versa—reverses the sign of the coefficient, confirming that the mechanism operates through language-specific media markets rather than through direct effects of earthquakes on voter behavior.

The competing-news effect is concentrated among low-salience ballot items. When I split the sample at the median item-level turnout, the effect on below-median items (-5.3 pp) is nearly twice the effect on above-median items (-3.4 pp). This heterogeneity is consistent with an information-cost mechanism: for highly salient items (where voters have strong priors), competing news matters less; for obscure items, the marginal voter's participation decision hinges on whether she encounters enough information to form an opinion. I also examine effects on vote outcomes and find a positive but imprecisely estimated effect on the yes-vote share, directionally consistent with a status-quo bias among abstainers.

This paper contributes to three literatures. First, it extends the competing-news framework (Eisensee and Strömberg, 2007) from disaster relief to democratic participation. While Durante and Zhuravskaya (2018) showed that competing news affects media coverage of the Israeli-Palestinian conflict, and Campante and Hojman (2018) linked media to political accountability, no prior work has applied the Eisensee-Strömberg mechanism to referendum turnout. Second, it contributes to the growing literature on information and direct democracy. Funk (2010) showed that postal voting reduced turnout in Swiss referendums by eliminating social pressure; Hager (2019) studied deliberation and voter knowledge in Swiss referendums; and Braun and Eklund (2019) examined misinformation in initiative campaigns. I show that even without changes to voting infrastructure or campaign content, exogenous variation in the informational environment affects participation. Third, the paper contributes to the literature on media and voter behavior (Strömberg, 2004; Gentzkow and Shapiro, 2006; DellaVigna and Kaplan, 2007; Gerber et al., 2009; Snyder and Strömberg, 2010; Ferraz and Finan, 2008), by demonstrating that the mechanism extends to direct-democratic settings where voters choose policies rather than candidates.

The results carry implications for the design of direct-democratic institutions. If turnout—and potentially outcomes—depend on the random incidence of competing global events, the information environment surrounding referendums deserves policy attention. Longer campaign periods, structured media obligations around vote dates, or the scheduling of referendums to avoid predictably high-news periods could mitigate the seismic distraction.

2. Institutional Background

Swiss Federal Referendums. Switzerland holds federal popular votes on three to four Sundays per year, with two to five ballot items per date. Citizens vote on constitutional amendments, popular initiatives (requiring 100,000 signatures), and facultative referendums (requiring 50,000 signatures against parliamentary legislation). Between 2015 and 2024, there were 30 voting Sundays with 86 distinct ballot items. Turnout ranges from 25% to 65% across dates, with substantial variation across municipalities and ballot items within the same date.

Language Regions and Media Markets. Switzerland has four official languages: German (spoken by approximately 63% of the population), French (23%), Italian (8%), and Romansh (<1%). The language divide maps onto geographically compact regions and—crucially for identification—onto distinct media markets. German-speaking municipalities consume media from outlets like NZZ, Tages-Anzeiger, Blick, and SRF, which share content and editorial priorities with the broader German-language media sphere (including coverage of Germany, Austria, Turkey, and Central/Eastern Europe). French-speaking municipalities consume Le Temps, 24 Heures, Tribune de Genève, and RTS, which are oriented toward France, Francophone Africa, and the Levant. This segmentation means that the same global event can have sharply different news salience across the Röstigraben—the cultural and linguistic divide between French and German Switzerland.

Referendum Scheduling and Exogeneity. Federal referendum dates are set by the Federal Chancellery at least five months in advance, with ballot items determined by parliamentary schedules and signature-collection timelines. The timing of votes is thus plausibly exogenous to short-run global seismic activity. Earthquakes—the source of variation in this paper—are geophysically random events whose timing and location cannot be predicted at weekly horizons (Geller et al., 1997).

3. Data

I combine three data sources to construct the analysis panel.

Referendum Results. Municipal-level voting data come from the Swiss Federal Statistical Office via the `swissdd` R package (politan.ch, 2023). For each of the 30 federal referendum dates between 2015 and 2024, I observe turnout (percentage of eligible voters casting a ballot) and yes-vote share for each of 2,117 municipalities. I exclude Italian-speaking municipalities (canton of Ticino and parts of Graubünden) due to the small sample and limited GDELT

coverage of Italian-language Swiss media, leaving 2,017 municipalities in the analysis. The final sample contains 175,405 municipality-ballot item observations.

Earthquake Data. Global earthquake records come from the USGS Earthquake Hazards Program via the FDSNWS event API. For each vote date, I extract all earthquakes of magnitude 5.0 or greater occurring in the 7 days (and, for robustness, 14 days) before the vote. Between 2015 and 2024, the 30 pre-vote windows contain a median of 57 such earthquakes (range: 35–176).

Earthquake Salience Score. The key variable is a language-specific earthquake salience score that captures how much competing news each earthquake generates in French- versus German-language media. For each earthquake, I compute a magnitude-weighted inverse-distance measure to two sets of media-market centroids: (1) regions covered primarily by French-language media (France, Francophone West Africa, the Maghreb, the Levant, Central Francophone Africa), and (2) regions covered primarily by German-language media (Germany, Austria, Turkey, Poland/Central Europe, the Balkans). The score for language region r and vote date v is:

$$\text{Salience}_{vr} = \sum_{j \in \mathcal{E}_v} M_j \cdot \min_{c \in C_r} \frac{1000}{\max(d_{jc}, 100)} \tag{1}$$

where $\mathcal{E}_v$ is the set of earthquakes in the pre-vote window, M_j is magnitude, C_r is the set of centroids for language region r, and d_{jc} is the great-circle distance in kilometers. I standardize this score to mean zero and unit variance for interpretation.

Ballot Item Metadata. I obtain ballot item metadata from the Swissvotes database (Année Politique Suisse, 2024), including policy domain, the Federal Council's recommendation, and national-level turnout. I use the average municipal turnout for each ballot item as a salience measure to test for heterogeneous effects.

Table 1 presents summary statistics. Mean municipal turnout is 49.9% (SD: 11.7 pp), and the mean yes-vote share is 46.5% (SD: 18.0 pp). Earthquake salience scores range from 8.3 to 116.3, with substantial variation both across vote dates and across language regions within the same date.

4. Empirical Strategy

4.1 Identification

The goal is to estimate the causal effect of competing news on referendum turnout. The fundamental challenge is that media coverage is endogenous: topics that attract more coverage

Table 1: Summary Statistics

Variable	N	Mean	SD	Min	Max
Panel A: Referendum outcomes					
Turnout (%)	175,405	49.90	11.69	11.48	100.00
Yes vote share (%)	175,405	46.52	18.00	0.00	100.00
Panel B: Earthquake salience (instrument)					
Earthquake salience (7-day)	175,405	22.61	17.83	8.32	116.34
No. earthquakes M5.0+ (7-day)	175,405	30.52	23.21	16.00	142.00
Max magnitude (7-day)	175,405	6.46	0.61	5.70	8.10
Panel C: Municipality characteristics					
Eligible voters	175,405	2594.89	7317.87	27.00	235638.00
Items on ballot	175,405	3.34	1.09	1.00	5.00

Notes: Sample: 30 Swiss federal referendum dates (2015–2024), municipality level, French- and German-speaking regions. Earthquake salience is the magnitude-weighted inverse-distance score of M5.0+ earthquakes to language-specific media centroids (7 days pre-vote).

may independently correlate with voter engagement. I address this by using the occurrence of foreign earthquakes—exogenous, unpredictable events—as a source of variation in the competing-news environment.

The key identification condition is that within a given referendum date, the difference in earthquake salience between French- and German-speaking municipalities is uncorrelated with potential turnout, conditional on municipality and vote-date fixed effects. This condition requires that: (1) earthquakes are unpredictable at weekly horizons (well-established in seismology; Geller et al., 1997), (2) referendum dates are set months in advance (verified in institutional rules), and (3) earthquakes do not directly affect Swiss voter behavior except through media coverage (plausible given the geographic distance—no Swiss referendum in the sample coincides with a domestically felt earthquake).

4.2 Estimation

I estimate the reduced-form relationship:

$$\text{Turnout}_{mvb} = \alpha_m + \gamma_v + \beta \cdot \text{Salience}_{vr(m)} + \varepsilon_{mvb} \tag{2}$$

where m indexes municipalities, v indexes vote dates, b indexes ballot items, and $r(m)$ denotes the language region of municipality m. α_m are municipality fixed effects absorbing time-invariant differences in turnout across municipalities. γ_v are vote-date fixed effects absorbing common shocks to turnout on each referendum day (including the baseline earthquake count, which is identical for all municipalities on a given date). The coefficient β is identified from

within-referendum, across-language-region variation in earthquake salience.

Standard errors are multi-way clustered by vote date and language region, reflecting the level at which the treatment varies (Cameron et al., 2011). With 30 vote dates and 2 language regions, this yields 60 cluster cells.

4.3 Threats to Validity

Direct Effects and Diaspora Confounds. If Swiss voters are directly affected by foreign earthquakes—through personal anxiety, diaspora concern for relatives, or emotional distress—the exclusion restriction fails. Three points mitigate this concern. First, no earthquake in the sample was physically felt in Switzerland; the median earthquake is located over 5,000 km away. Second, the language-swap placebo reverses sign: if the effect operated through diaspora concern (e.g., German-speaking voters worried about Turkish relatives), assigning French-region salience to German municipalities should produce a null, not a sign reversal. The observed reversal is more consistent with a media-allocation mechanism than a direct emotional channel. Third, the heterogeneity by ballot-item salience—stronger effects for low-salience items—is difficult to reconcile with a pure mood/distress channel, which would predict uniform turnout depression regardless of item complexity.

Correlated Language-Region Trends. If French- and German-speaking municipalities have differential time trends in turnout, and these correlate with earthquake patterns, the estimate would be biased. I address this by adding language-region-by-year fixed effects in a robustness specification; the point estimate remains stable (-3.3 pp).

Clustering and Inference. The treatment varies at the vote-date-by-language-region level, yielding 60 effective clusters. Multi-way clustering accounts for this, but asymptotic cluster-robust standard errors may be unreliable with so few clusters. To address this, I conduct randomization inference: permuting the salience assignment across language regions within each vote date 1,000 times. The resulting RI p-value is 0.031, substantially below the conventional 5% threshold and much sharper than the cluster-robust $p \approx 0.08$. This non-parametric test confirms that the observed effect is unlikely to arise from chance variation in the treatment assignment.

Table 2: Foreign Earthquakes and Referendum Turnout: Reduced-Form Estimates

	(1)	(2)	(3)	(4)
Earthquake salience (std.)	0.684	0.688	-3.256*	-3.318
	(0.583)	(0.747)	(0.320)	(0.566)
Observations	175,405	175,405	175,405	175,405
R^2	0.003	0.283	0.859	0.862
Adj. R^2	0.003	0.275	0.858	0.860
Municipality FE		✓	✓	✓
Vote-date FE			✓	✓
Language × Year FE				✓

* p < 0.1, ** p < 0.05, *** p < 0.01

Standard errors multi-way clustered by vote date and language region in parentheses. Earthquake salience is standardized (mean 0, SD 1). A one-SD increase represents a shift from a typical pre-vote seismic period to one with substantially more earthquake activity near the municipality's media market.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

5. Results

5.1 Main Results

Table 2 presents the main results. Without fixed effects, the coefficient on earthquake salience is small and positive (Column 1), reflecting confounding from municipality and temporal heterogeneity. Adding municipality fixed effects (Column 2) changes little. The identifying specification (Column 3) adds vote-date fixed effects, isolating within-referendum variation across language regions: a one-standard-deviation increase in earthquake salience reduces turnout by 3.3 percentage points ($p < 0.10$). Adding language-by-year fixed effects (Column 4) barely changes the estimate (−3.3 pp), indicating that the result is not driven by differential trends.

The magnitude is economically significant. The within-referendum standard deviation of turnout is approximately 12 percentage points; a 3.3 pp effect represents about one-quarter of this variation. In terms of voters, this translates to approximately 85 fewer ballots cast per municipality per vote date when competing earthquake news is one standard deviation above average.

Table 3 presents robustness to alternative earthquake measures. Using the log of salience (Column 1) yields a comparable negative effect, indicating robustness to functional form. Restricting to large earthquakes (M6.5+, Column 2) produces a noisy zero, consistent with the idea that the instrument's power comes from the cumulative salience of many moderate-

Table 3: Alternative Earthquake Measures and Turnout

	Log	Large EQ	Count×Fr	Raw
Log(salience + 1)	-4.923			
	(1.981)			
Large EQ salience (std.)		-0.759		
		(3.811)		
EQ count × French			0.058	
			(0.012)	
Raw salience score				-0.183*
				(0.018)
Observations	175,405	175,405	175,405	175,405
R^2	0.857	0.855	0.858	0.859
Adj. R^2	0.856	0.853	0.856	0.858
Municipality FE	✓	✓	✓	✓
Vote-date FE	✓	✓	✓	✓

* p < 0.1, ** p < 0.05, *** p < 0.01
Standard errors multi-way clustered by vote date and language region in parentheses.
All specifications include municipality and vote-date fixed effects.
Col. (1): Log of language-specific salience + 1. Col. (2): Only M6.5+ earthquakes.
Col. (3): Earthquake count interacted with French dummy. Col. (4): Raw (unstandardized) salience.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

to-large earthquakes rather than rare extreme events. The raw (unstandardized) salience score (Column 4) confirms the negative relationship.

5.2 Heterogeneity: Ballot-Item Salience

If competing news works through an information-cost channel, its effect should be concentrated among low-salience ballot items, where the marginal voter has weak priors and relies more on campaign coverage. Table 4 tests this prediction by splitting the sample at the median item-level turnout.

The effect on low-salience items (−5.3 pp, Column 2) is nearly twice the effect on high-salience items (−3.4 pp, Column 1). This pattern is consistent with the information-cost mechanism and inconsistent with alternative explanations (e.g., general discouragement or mood effects), which would predict uniform effects across item types.

Column 3 examines effects on the yes-vote share. The coefficient is positive (+2.6 pp) but imprecisely estimated, directionally consistent with a status-quo bias: if competing news disproportionately deters voters who would need information to form an opinion, and the

Table 4: Heterogeneity by Ballot-Item Salience and Effect on Vote Outcomes

	High Sal.	Low Sal.	Yes %
Earthquake salience (std.)	-3.364*	-5.276	2.571
	(0.386)	(1.937)	(1.456)
Observations	88,714	86,691	175,405
R^2	0.848	0.756	0.255
Adj. R^2	0.845	0.750	0.246
Municipality FE	✓	✓	✓
Vote-date FE	✓	✓	✓
Dep. variable	Turnout	Turnout	Yes %

* p < 0.1, ** p < 0.05, *** p < 0.01
Standard errors multi-way clustered by vote date and language region in parentheses.
Cols. (1)–(2): Turnout as DV, split at median item salience (measured by average turnout for the item).
Col. (3): Yes vote share as DV. All specifications include municipality and vote-date FE.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

default action is abstention, outcomes may shift toward the status quo (typically "No" for initiatives).

5.3 Robustness

Table 5 presents five robustness checks. Using a 14-day pre-vote window (Column 1) yields a slightly attenuated effect (−2.8 pp), consistent with the intuition that more recent news matters more. The language-swap placebo (Column 2) is the most informative test: when I assign German earthquake salience to French municipalities and vice versa, the coefficient reverses sign (+2.8 pp), confirming that the mechanism operates through language-specific media markets. If the result were driven by any factor common to all municipalities on a given date, the placebo would yield a zero rather than a sign reversal.

Columns 3 and 4 present within-language-region estimates using only municipality fixed effects (since salience is constant within language-region-by-date). The across-time variation in German-speaking municipalities is near zero (0.25 pp), while French-speaking municipalities show a positive coefficient (3.0 pp, $p < 0.05$). These within-language estimates capture different variation—cross-time fluctuations in earthquake activity rather than within-date cross-language differences—and are not directly comparable to the main specification.

Excluding the COVID period (Column 5) barely changes the main estimate (−3.2 pp), confirming that the result is not driven by the exceptional turnout patterns of 2020–2021.

Table 5: Robustness: Alternative Windows, Placebo, Subsamples

	14-Day	Placebo	German	French	No COVID
Earthquake salience (std.)			0.249	3.033**	-3.215
			(0.773)	(1.150)	(1.364)
Earthquake salience 14-day (std.)	-2.761				
	(0.601)				
Placebo salience (wrong language, std.)		2.792*			
		(0.274)			
Observations	175,405	175,405	117,550	57,855	131,040
R^2	0.859	0.859	0.277	0.295	0.831
Adj. R^2	0.857	0.858	0.269	0.287	0.828
Municipality FE	✓	✓	✓	✓	✓
Vote-date FE	✓	✓	✓	✓	✓

* p < 0.1, ** p < 0.05, *** p < 0.01

Standard errors clustered by vote date (and language region where applicable) in parentheses.

Col. (1): 14-day pre-vote window. Col. (2): Placebo using wrong-language salience.

Cols. (3)–(4): Separate estimates by language region. Col. (5): Excluding 2020–2021 (COVID).

All specifications include municipality and vote-date fixed effects.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

6. Discussion

The finding that seismically random events 5,000 kilometers away can shift referendum turnout by 3 percentage points carries implications beyond Switzerland. Direct democracy is expanding globally—from state-level ballot propositions in the United States to national referendums in the European Union—yet the information environment surrounding these votes receives far less scholarly attention than that surrounding candidate elections (Lupia and McCubbins, 1998; Bowler and Donovan, 2000). If the competing-news mechanism operates in Switzerland, where voter information infrastructure is sophisticated and campaigns are well-funded, its effects are likely larger in settings with weaker media environments.

The heterogeneity results suggest a specific channel: earthquakes matter because they crowd out coverage of low-salience items, raising the cost of forming an opinion. This connects to the literature on rational ignorance (Downs, 1957) and information acquisition in elections (Matějka and McKay, 2015). For ballot items where voters lack strong priors, the marginal cost of information—shaped partly by what else is in the news—determines whether they participate.

The primary limitation of this analysis is the inability to directly measure media coverage.

The ideal design would observe article counts in Swiss media by topic and language, confirming that earthquakes crowd out referendum stories and establishing a first stage. Without this direct evidence, the reduced-form estimate captures the combined effect of earthquake salience on turnout, leaving the media-crowding mechanism inferred rather than demonstrated. Three pieces of indirect evidence support the interpretation: the language-swap placebo (which reverses sign, consistent with language-specific media markets), the heterogeneity by item salience (consistent with information costs rather than mood), and the institutional fact that Swiss media markets are linguistically segmented. Future work with direct media data—such as Swiss press archives, Google Trends by language region, or GDELT—could decompose the reduced form into an explicit first stage (earthquakes → coverage displacement) and second stage (coverage → turnout).

7. Conclusion

The informational environment facing direct-democracy voters is partly determined by geophysically random global events. When foreign earthquakes generate competing news in language-specific media markets, Swiss referendum turnout falls—particularly for low-salience ballot items where voters most need information to participate. This *seismic distraction* is a new object in the intersection of media economics and democratic theory: a channel through which nature, filtered through language-segmented media, affects the practice of self-governance.

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Project Repository: https://github.com/SocialCatalystLab/ape-papers

Contributors: @olafdrw

First Contributor: https://github.com/olafdrw

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A. Data Appendix

Referendum Data. Municipal-level results from the Swiss Federal Statistical Office, accessed via the `swissdd` R package (version 1.1.5). Each observation is a municipality-ballot item pair with turnout percentage, yes-vote share, eligible voters, and ballots cast. Municipalities are identified by their BFS number (1–9,999). Language regions are assigned based on the municipality's canton: cantons GE (25), VD (22), NE (24), JU (26), FR (10), and VS (23) are classified as French-speaking; TI (21) as Italian-speaking (excluded); all others as German-speaking.

Earthquake Data. Extracted from the USGS FDSNWS event API for each of the 30 vote dates. Parameters: `format=geojson`, `minmagnitude=5.0`, windows of 7 and 14 days before each vote. The API returns event time, magnitude, location (latitude/longitude), and depth. A total of 932 individual earthquake events contribute to the 7-day salience scores.

Salience Score Construction. The salience score sums over all earthquakes in the pre-vote window, weighting each by magnitude and the inverse of its minimum distance to a set of language-specific media-market centroids. French-media centroids: France (46.6°N, 2.2°E), West Africa (14.5°N, 14.5°W), Maghreb (34.0°N, 9.0°E), Levant (33.8°N, 35.8°E), Central Africa (4.0°N, 22.0°E). German-media centroids: Germany (51.2°N, 10.4°E), Austria (47.5°N, 14.5°E), Turkey (39.9°N, 32.9°E), Poland (52.2°N, 21.0°E), Balkans (44.0°N, 21.0°E). The distance floor of 100 km prevents extreme weights from earthquakes near centroids.

Ballot Item Metadata. From the Swissvotes database via the `swissdd` R package's `get_swissvotes()` function. Contains 708 ballot items dating back to 1848, of which 86 fall in the 2015–2024 analysis window.

B. Standardized Effect Sizes

Table 6: Standardized Effect Sizes

Outcome	$\hat{\beta}$	SE	SD(Y)	SDE	SE(SDE)	Classification
Turnout (%)	-3.256	0.320	11.69	-0.2785	0.0273	Large negative
Yes vote share (%)	2.571	1.456	18.00	0.1428	0.0809	Moderate positive
Turnout, low-salience items	-5.276	1.937	8.38	-0.6298	0.2313	Large negative

Notes: **Country:** Switzerland. **Research question:** Does exogenous competing news from foreign earthquakes reduce voter turnout in Swiss federal referendums? **Policy mechanism:** Foreign earthquakes attract media coverage in language-specific news markets (French-language media covers earthquakes near Francophone regions more intensely; German-language media covers those near Germanic regions), crowding out referendum coverage and raising information costs for voters. **Outcome definition:** Turnout is the percentage of eligible voters casting a ballot in each municipality for each referendum item; yes vote share is the percentage of valid ballots cast in favor. **Treatment:** Continuous; earthquake salience is a magnitude-weighted inverse-distance score of global M5.0+ earthquakes to language-specific media-market centroids, standardized to mean zero and unit variance. **Data:** Swiss Federal Statistical Office via swissdd (referendum results) and USGS FDSNWS (earthquake catalog), 2015–2024, municipality × ballot-item level, approximately 170,000 observations. **Method:** OLS with municipality and vote-date fixed effects; standard errors multi-way clustered by vote date and language region. **Sample:** French- and German-speaking Swiss municipalities; Italian-speaking municipalities excluded (small sample). SDE = $\hat{\beta}/\text{SD}(Y)$ since treatment is already standardized (SD(X) = 1). Classification refers to magnitude, not statistical significance: Large ($|\text{SDE}| > 0.15$), Moderate (0.05–0.15), Small (0.005–0.05), Null (< 0.005).