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Do People Pay More Attention to Earthquakes in Western Countries?

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Motivation

- August 2016 Central Italy earthquake
  - Magnitude: 6.2
  - Casualties: 297

- April 2016 Ecuador earthquake
  - Magnitude: 7.8
  - Casualties: 662

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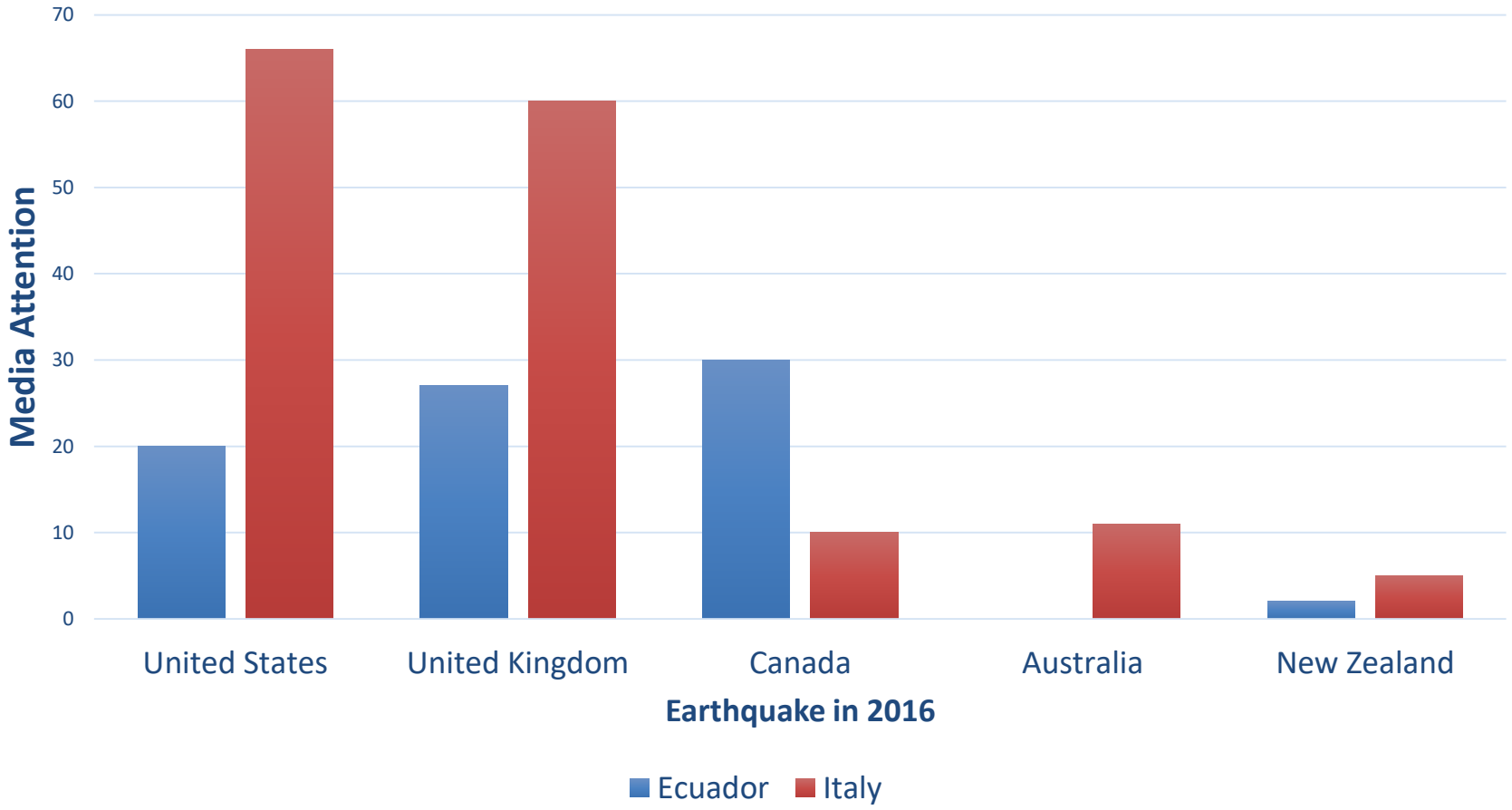
Motivation



Motivation

- Emergency (post- disaster risk) management requires action
- Public attention leads to action from non-profit organizations and governments
- Social similarities lead to biased attention

- …Yet, we know little about what generates public attention!

Research question

- Do people from Western countries pay more attention to earthquakes in Western countries?

Paper in one slide

- We examine the role of Western country status on public attention to earthquakes across the world
- We measure attention using Google Trends
- People from Western countries pay on average 50 percent more attention to earthquakes in Western countries

Contribution

- This paper examines explicitly whether people as opposed to the media in Western countries pay more attention to earthquakes struck in Western countries using Google Trends data.
    - Koopmans and Vliegenthart (2010)
    - Van Belle (2000)

Public attention vs. media attention

- Public attention to earthquakes reflects direct interest of internet users
- Media coverage of earthquakes might have other drivers than interest such as:
  - limited number of reporters in the country of earthquake
  - The influence of simultaneous media events like Olympics

Data

- Dependent variable:
  - **Public attention**: Google Trends data

- Independent variable of interest:
  - **Western country status**: Earthquakes in Western Europe, the United States, Canada, Australia, and New Zealand

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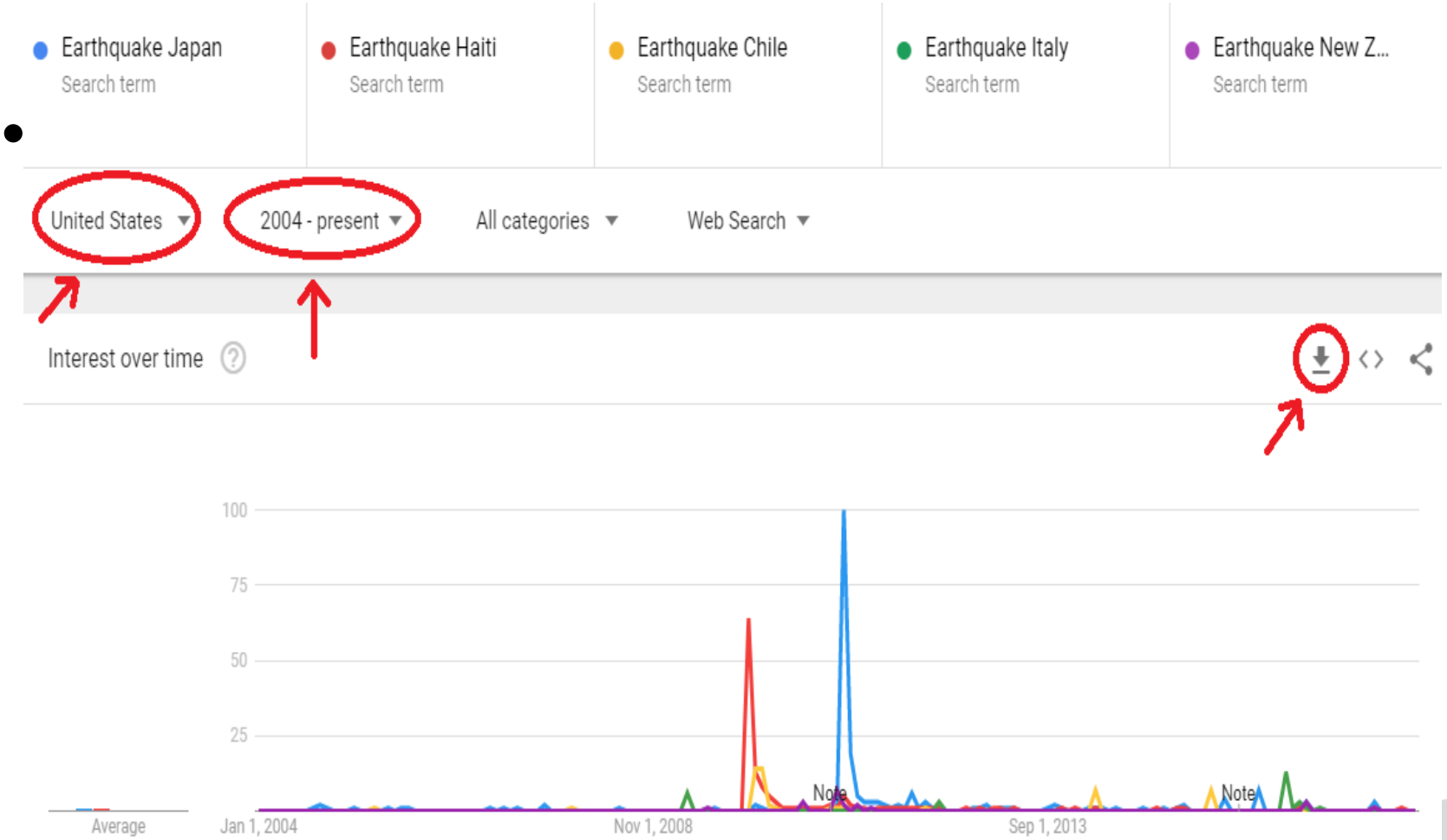
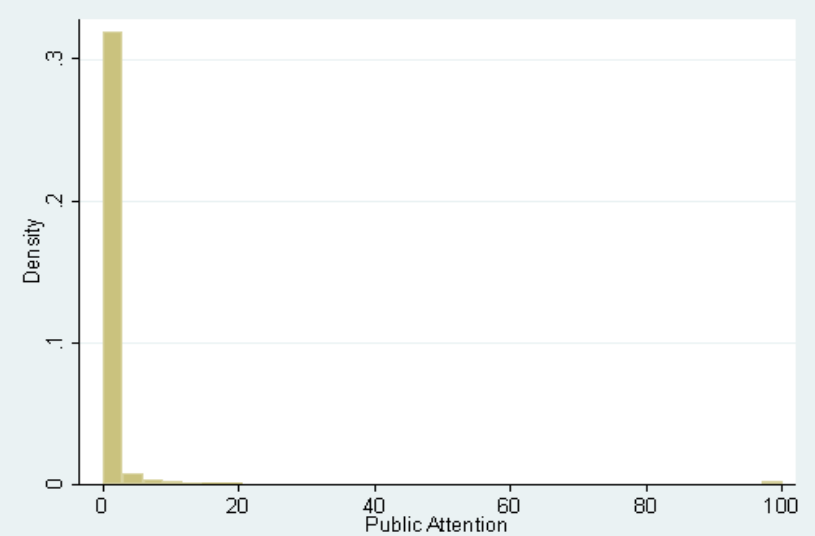
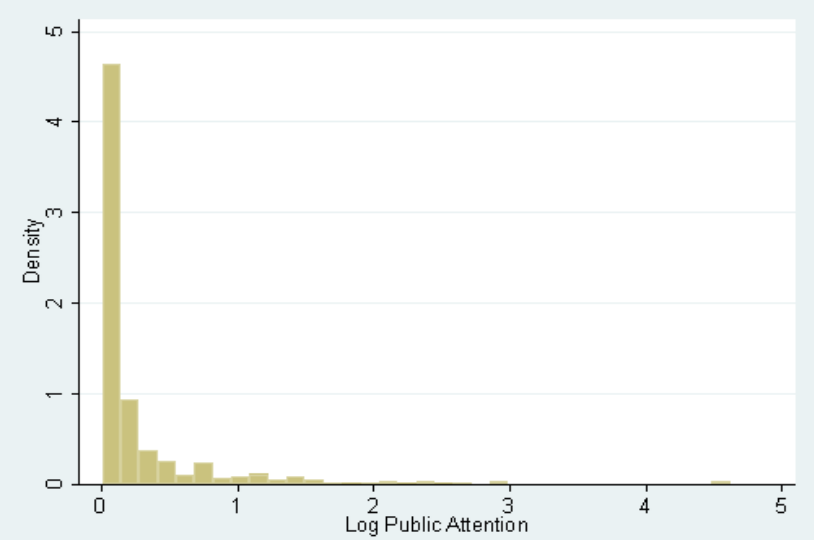
Google Trends

- 

Distribution of public attention





- Only a few earthquakes receive a lot of attention. Most go relatively unnoticed.

Empirical strategy

$$Ln(Attention)_{ic} = \beta_1 Western_i + \delta X'_{ic} + u_{ic}$$

- $Ln(Attention)_{ic}$ is the natural logarithm of Google Trends score for earthquake i in country c (country of attention)
- $Western_i$ is a dummy variable that is equal to one if the earthquake struck in a Western country
- The vector X'_{ic} contains three sets of control variables, geographical, social, and economic characteristics

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Results

Determinants of Public Attention to Earthquakes

Dependent Variable:	(1) Log Public Attention	(2) Log Public Attention	(3) Log Public Attention	(4) Log Public Attention
Western	0.365***	0.376***	0.454***	0.024
	(0.083)	(0.085)	(0.083)	(0.146)
Distance (in 10,000 kms)		-0.140**	-0.127**	-0.125**
		(0.021)	(0.022)	(0.021)
Common Border		-0.055	-0.166	-0.350**
		(0.096)	(0.112)	(0.119)
Colony			-0.075	-0.092
			(0.032)	(0.034)
Common Official First Language			-0.136***	-0.089**
			(0.041)	(0.039)
Share of Migrants from Country of Earthquake			0.167***	0.160***
			(0.043)	(0.049)
Share of Christians			-0.189***	-0.187***
			(0.070)	(0.058)
GDP per capita (in $10,000s)				0.146***
				(0.041)
Earthquake Characteristics	YES	YES	YES	YES
R-squared	0.277	0.284	0.320	0.381
Observations	2,950	2,950	2,950	2,950

NOTE. — The dependent variables in all Columns are the log of public attention, which is a proportionate measure scaled from 0-100 calculated by Google Trends. All columns are estimated with OLS regressions that include country-of-attention fixed effect, magnitude of the earthquakes, number of deaths and a dummy variable, which is equal to 1 if the earthquake generated tsunami. We include cubic polynomials of magnitude and number of deaths to control for their non-linear effects. The regressions also include a dummy variable, which is equal to 1 if the earthquake is stricken in the same country that attention is captured from. Robust standard errors in parentheses are clustered at earthquake level. * p<0.1, ** p<0.05, *** p<0.01.

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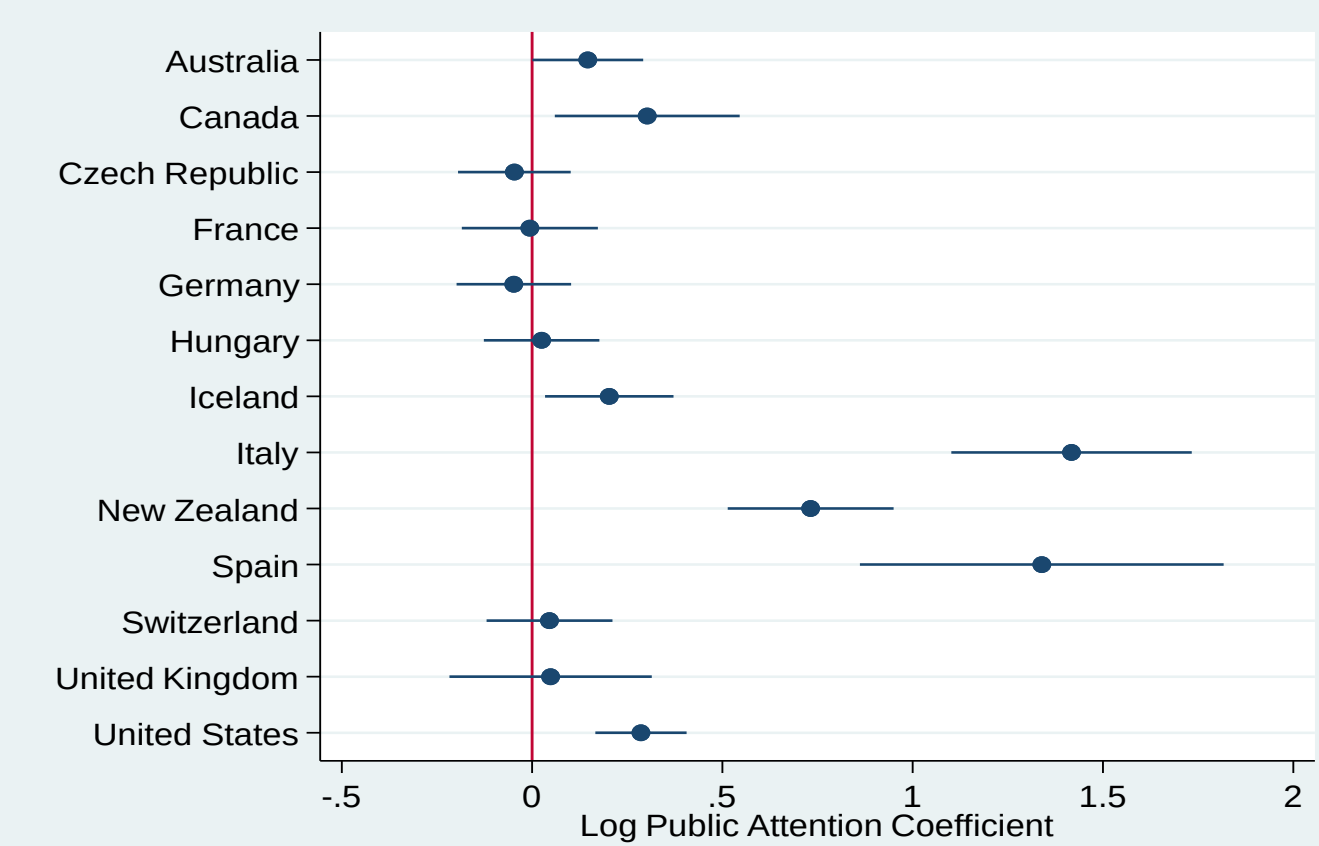
Results - Coefficient Plot of Western Country Dummies



Conclusion

- People from these countries pay on average 50 percent more attention to earthquakes in Western countries
- We find enough evidence to generalize our findings to all Western countries
- This result disappears after controlling for GDP per capita of the country in which earthquake is hit
- Such bias might make it difficult to motivate governments to provide relief for less economically developed countries who need this help more urgently

Thank you!