

Topics-Course: Empirical Political Economy (Winter 2015)

Protests and Assassinations

November 26, 2015

Amalia Alvarez & Svenja Hippel



MAX-PLANCK-GESELLSCHAFT

Main Paper

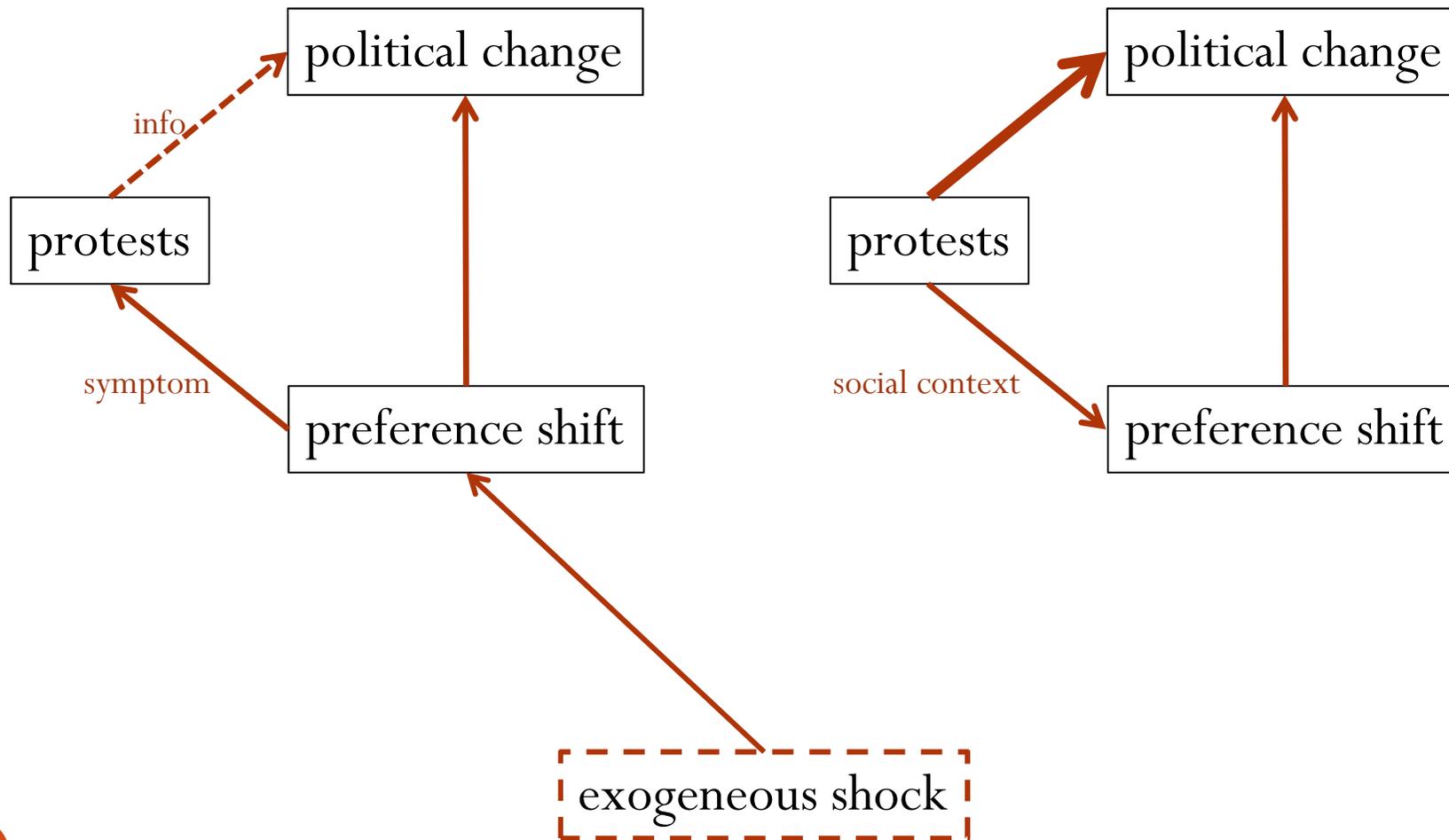
- **Madestam, Shoag, Veuger and Yanagizawa-Drott (2013):**
“Do Political Protests Matter? Evidence from the Tea Party Movement”
(Quarterly Journal of Economics)
- Acemoglu, Hassan and Tahoun (2014):
“The Power of the Street: Evidence from Egypt's Arab Spring”
(National Bureau of Economic Research)
- Jones and Olken (2009):
“Hit or Miss? The Effect of Assassinations on Institution and War”
(American Economic Journal: Macroeconomics)

Overview

Can protests cause political change? (Or are protests merely symptoms of underlying shifts in policy preferences?)

- **motivation:** almost no empirical work on this question so far
- **contribution:** quantifying the causal effects of protest on subsequent political outcomes
- **approach:**
 - studying the coordinated Tea Party movement rallies across the U.S. on April 15, 2009 (Tax Day)
 - exploiting variation in rainfall on the day of these rallies as an exogenous source of variation in protest attendance
- **main results:**
 - protests can build political movements that ultimately affect policy making
 - they do so by influencing political views
 - rather than solely through the revelation of existing political preferences

Evaluation I



Evaluation II

Why do protests matter as a tool for political change?

- political protests create a new context of face to face interaction where effects are very much local with individuals embedded in small groups:
 - personal interaction within small groups serves as a channel for the transmission of new political views
 - increases political activism
- a new network of interaction is generated:
 - long-term effects
 - stability of political preferences
 - spillover effects

Tea Party Movement I

1773 Boston Tea Party



- an entire shipment of tea sent by the East India Company got destroyed
- in defiance of the Tea Act of May 1773

2009 Tea Party Movement



- loose coalition of national umbrella organizations
- desire to shift policy „to the right“

Tea Party Movement II

- **Sept. 2008** collapse of **Lehman Brothers**
 - outbreak of financial crises
- **Oct. 2008** **Emergency Economic Stabilization Act**
 - authorization to spend up to \$700 billion to purchase distressed assets and supply cash directly to banks
- **Feb. 17, 2009** **American Recovery and Reinvestment Act**
 - economic stimulus package of \$831 billion (direct spending in infrastructure etc.)
- **Feb. 19, 2009** **Rick Santelli** (CNBC Business News editor)
 - attacks „Homeowners Affordability and Stability Plan” (\$75 billion program to help homeowners)
 - raised possibility for a „Chicago Tea Party“
- **Feb. 2009** ongoing small **local protests**
- **April 15, 2009** (Tax Day) first large **nationwide coordinated activism**
 - more than 500 rallies across the U.S.
 - 440,000-810,000 individuals protesting nationwide
 - most activists „got involved for the first time“

Tea Party Rallies on April 15, 2009



size of circles reflects **share of the population** turning out to protest

(**total number** of counties with rallies: 542, **mean attendance**: 815, **sd**: 1,056)

Data Sources I

- **rainfall data:** National Oceanic and Atmospheric Administration
 - approx. 12,000 weather stations over the period 1980–2010
 - rainfall measure: aggregation of the weather station data to county (or congressional district) and extract the mean daily rainfall
 - rainy day: > 0.10 inches of rain
- **Tax Day rally attendance:** 3 different sources
 1. Tea Party self reports
 2. New York Times
 3. Institute for Research and Education on Human Rights (think tank):
 - number of social network profiles posted on the websites of the five main Tea Party nonprofit organizations
 - finance reports on donations to Tea Party Express (Federal Election Commission)
 - average of the 3 sources
 - population-weighted per capita

Data Sources II

- **media coverage:** Newslibrary.com and Audit Bureau of Circulations
 - all articles from newspapers with circulation over 15,000 containing the phrase “Tea Party” from January 1, 2009, through June 20, 2010
 - merging these data to geographic regions using the county-level circulation information, ending up with 255 newspapers across 46 states (40,000 articles in total)
- **political beliefs:** Evaluations of Government and Society Study from the American National Election Studies
 - interviews conducted in October 2010 (weeks before the midterm election)
 - set of questions about the Tea Party and political opinions associated with the movement’s leaders
 - sociodemographic variables, voting behavior in the 2008 election, reported likelihood of voting in the 2010 midterm election
 - from 42 states at the congressional-district level (match with rainfall, census, and survey data)

Data Sources III

- **voting outcomes and policy making**
 - election results 2010 midterm elections for House of Representatives (David Leip's Atlas)
 - incumbent congressman retiring before 2010 elections (Wikipedia)
 - congressional voting behavior (0-100 rating from American Conservative Union)
- **demographic data:** Census (200,2010) and American Community Survey (2009)
 - sociodemographic county and congressional district-level data
 - income, population, race, immigrants, unemployment

Estimation Framework

What is the effect of larger rally attendance?

- **main hypothesis:** protests strengthen the consequent Tea Party movement and have a positive effect on votes for the Republican Party
- **main challenge:** unobserved **political beliefs** (or a culture of activism) are likely to be correlated with both the number of protesters (and other political behavior)
- **approach:** exploit that people are less likely to attend a rally if it rains
- **identification strategy:** assume that rainfall on the rally day only affects the outcomes of interest through rally attendance (**exclusion restriction**)
- **concerns:**
 1. bad weather may make a rally less pleasant for actual attendees
 2. weather affects the likelihood that mass media cover the protests
 3. LATE (e.g. only attendance of moderate people is treated by weather)

Rain and Number of Protesters

Does rain decrease number of protesters?

$$Protesters_c = RainyRally_c \theta' + Prob.ofRain_c \delta' + \mu_r + x_c \gamma' + \varepsilon_c$$

with:

- *Protesters*: measure of rally attendance in county c
- *RanyRally*: rainfall dummy (=1 if rainy day, =0 otherwise)
- *Prob.ofRain*: set of dummies controlling for the likelihood of rain (protest day)
 - control for prob.of rain flexibly (variation with similar baseline probabilities)
- μ : captures four U.S. Census region fixed effects
- x : vector of predetermined county covariates
- ε : standard errors clustered at the state level

Predetermined County Variables

- inclusion reduces residual variation and improves precision of estimates
- **standard set of covariates:**
 - population size
 - log of population density
 - log median income
 - unemployment rate
 - increase in unemployment 2005 to 2009
 - share of whites, African Americans, Hispanics and other
 - share of immigrants in 2000
- **election covariates:**
 - county vote share for Barack Obama (2008 presidential elections)
 - House of Representatives elections (2006, 2008)
 - Republican Party vote share
 - number of votes for the Republican and Democratic Party (in total or per capita)
 - turnout (in total or per capita)

Movement Outcomes

Do protests affect the strength of the Tea Party movement and voting behavior?

reduced-form:

$$y_c = \text{RainyRally}_c \kappa' + \text{Prob.ofRain}_c \delta' + \mu_r + x_c \gamma' + \varepsilon_c$$

with:

- y : variety of postrally outcomes
- **but:** size of κ hard to interpret

2SLS:

$$\text{Protesters}_c = \text{RainyRally}_c \theta' + \text{Prob.ofRain}_c \delta' + \mu_r + x_c \gamma' + \varepsilon_c$$

$$y_c = \text{Protesters}_c \lambda' + \text{Prob.ofRain}_c \delta' + \mu_r + x_c \gamma' + \varepsilon_c$$

with:

- y : variety of postrally outcomes
- **here:** strict causal interpretation of λ (effect for one additional protestor)

Local Media Coverage

Does rain affect local newspaper's coverage of the Tea Party movement? (immediately as well as later on)

$$y_c = \text{RainyRally}_c \kappa' + \text{Prob. of Rain}_c \delta' + \mu_r + x_c \gamma' + \varepsilon_c$$

with:

- y : count of number of articles containing phrase “Tea Party”
- cross-sectional regression week-by-week at the paper level
- no election and demographic data on newspaper level

Political Beliefs

Do protests increase support for the movement and its political views?

$$y_i = \text{RainyRally}_i \beta' + \text{Prob. of Rain}_i \delta' + x_i \gamma' + x_d \theta' + \varepsilon_i$$

with:

- covariates at the individual level (sociodemographics)
- election covariates from 2008 House of Representatives election
- congressional district-level rainfall date (instead of county-level)

Policy Making

Were Tea Party Protests successful in getting their policies implemented?

$$y_d = \text{RainyRally}_d \beta' + \text{Prob.ofRain}_d \delta' + \mu_r + x_d \gamma' + \varepsilon_d$$

with:

- y : incumbent congressman decision to retire before 2010 elections
- y : congressman voting behavior (0-100 rating from ACU)

Exogeneity Test

TABLE II
EXOGENEITY CHECK AT THE COUNTY LEVEL

Dependent variable	Republican votes, U.S. House, 2008				Democratic votes, U.S. House, 2008		Turnout, U.S. House, 2008		Obama vote share, 2008	
	(1) Votes, % of population	(2) Votes, % of population	(3) Votes, % of votes	(4) Votes, % of votes	(5) Votes, % of population	(6) Votes, % of population	(7) Votes, % of population	(8) Votes, % of population	(9) Obama vote share, 2008	(10) Obama vote share, 2008
Rainy protest	0.53 (0.50)	0.46 (0.52)	0.61 (1.25)	0.99 (1.32)	0.66 (0.63)	0.23 (0.62)	0.93 (0.63)	0.47 (0.62)	1.25 (1.39)	0.58 (1.00)
Observations	2,758	2,758	2,758	2,758	2,758	2,758	2,758	2,758	2,758	2,758
R-squared	0.77	0.79	0.74	0.76	0.76	0.79	0.73	0.78	0.66	0.81
Election Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	N	Y	N	Y	N	Y	N	Y	N	Y
Dep. Var. mean	17.56	17.56	43.69	43.69	21.37	21.37	40.05	40.05	52.27	52.27

- dependent variables used include results from the 2008 House of Representatives and presidential elections
- regressors are identical to those first-stage equation

Empirical Results I

- rain and number of protesters
 - rainfall decreases attendance at the Tea Party rallies ($\sim 50\%$)
- movement outcomes
 - organizers: lack of rain causes more local organizers ($\sim 13\%$)
 - 2010 protesters: lack of rain leads to higher attendance during next years rallies
 - monetary contributions: lack of rain leads to increased contributions in 2009 ($\sim 16\%$) as well as 2010 ($\sim 14\%$)
 - voting behavior:
 - lack of rain increases share of population voting for the Republican Party ($\sim 7\%$)
 - no significant effect on Democratic Party votes (hence: movement raises turnout in favor of the Republican Party)
 - Republican vote share at the congressional-district levels raised ($\sim 2\%$)

Empirical Results II

- local media coverage
 - no significant increase through lack of rain, only on four key protest days
- political beliefs
 - lack of rain increases popular support for the movement (~45%)
 - in districts without rain, the local population adopts political beliefs of the movement
- policy making
 - significant effect on voting records in 2009 and 2010 in direction of more conservative votes
 - lack of rain at Tax Day makes it significantly more likely for Democrat incumbents to retire (no effects for Republicans)

Rain and Number of Protesters

TABLE III
THE EFFECT OF RAIN ON THE NUMBER OF TEA PARTY PROTESTERS IN 2009

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent variable	Protesters, % of population				Protesters, '000				log(Protesters)
Rainy protest	-0.082*** (0.021)	-0.170*** (0.046)	-0.128*** (0.036)	-0.108*** (0.034)	-0.096*** (0.023)	-0.190*** (0.051)	-0.165*** (0.055)	-0.228** (0.096)	-0.473** (0.211)
Observations	2,758	2,758	2,758	542	2,758	2,758	2,758	542	478
R-squared	0.16	0.14	0.15	0.22	0.41	0.41	0.41	0.40	0.43
Protesters variable	Mean	Max	Mean	Mean	Mean	Max	Mean	Mean	Mean
Rain variable	Dummy	Dummy	Continuous	Dummy	Dummy	Dummy	Continuous	Dummy	Dummy
Sample counties	All	All	All	Protesters > 0	All	All	All	Protesters > 0	Protesters > 0
Election controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Demographic controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dep. var. mean	0.161	0.295	0.161	0.240	0.160	0.293	0.160	0.815	6.598

Movement Outcomes: Organizers, Protesters, Contributions

TABLE IV
THE EFFECT OF TEA PARTY PROTESTS ON LOCAL TEA PARTY ACTIVITY AND PAC CONTRIBUTIONS

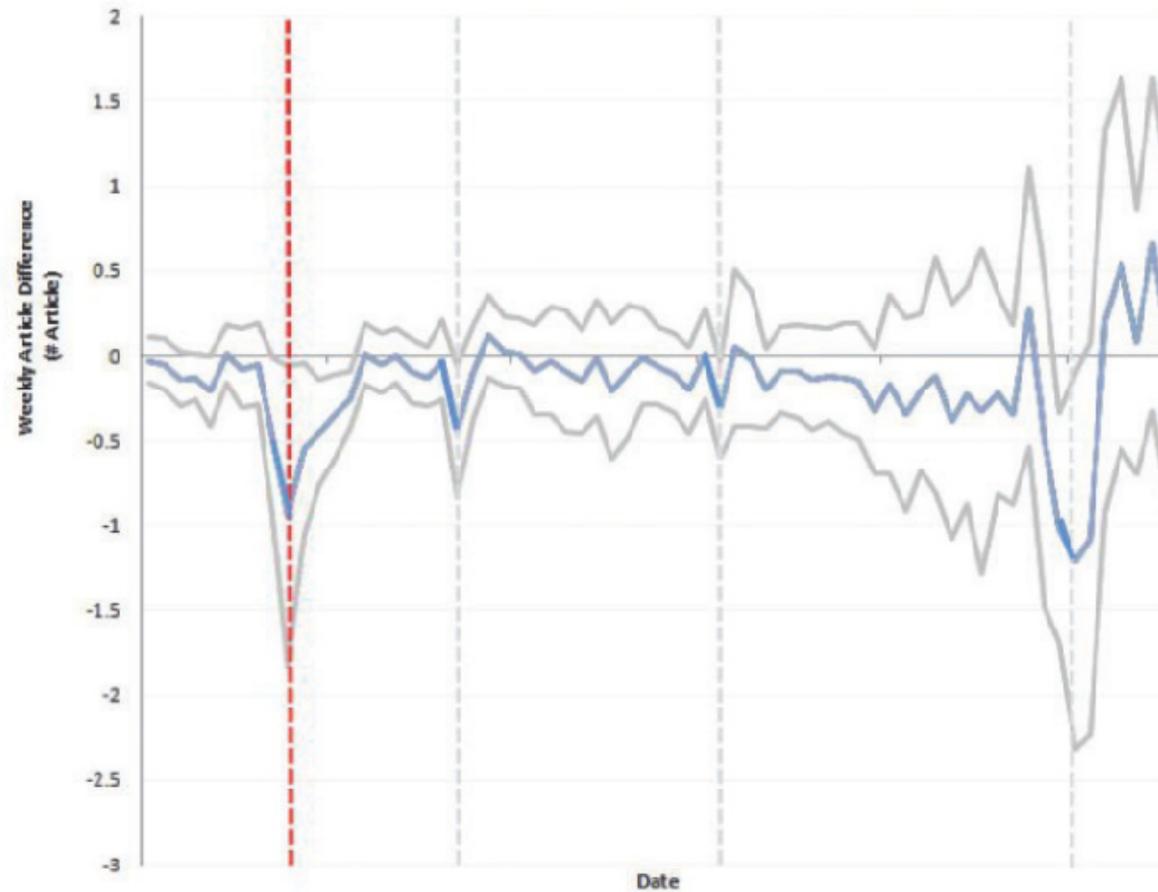
Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Tea Party organizers, 2010		Tea Party protesters, 2010		PAC contributions			
					2009	2010	2009–10	
		Second-stage 2SLS estimates		Second-stage 2SLS estimates			Second-stage 2SLS estimates	
	Persons, % of population				PAC contributions, \$ per capita			
Rainy protest	-0.0077** (0.0030)		-0.065** (0.027)		-0.00032** (0.00013)	-0.0011*** (0.0004)	-0.0014*** (0.0005)	
% of pop. protesting scaling		0.0931** (0.0382)		0.794*** (0.277)			1.700** (0.698)	
Observations	2,758	2,758	2,758	2,758	2,758	2,758	2,758	
R-squared	0.04	—	0.05	—	0.16	0.20	0.23	
Protesters variable	—	Mean	—	Mean	—	—	Mean	
Election controls	Y	Y	Y	Y	Y	Y	Y	
Demographic controls	Y	Y	Y	Y	Y	Y	Y	
Dep. var. mean	0.058	0.058	0.070	0.070	0.002	0.008	0.010	

Movement Outcomes: Voting Behavior

TABLE VI
THE EFFECT OF TEA PARTY PROTESTS ON VOTING BEHAVIOR, 2010 U.S. HOUSE

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Republican Party votes		Democratic Party votes		Republican Vote share		
	Second-stage 2SLS estimates		Second-stage 2SLS estimates		Second-stage 2SLS estimates		
	Votes, % of county population				Votes, % of county votes		Votes, % of district votes
Rainy protest	-1.04*** (0.30)		-0.14 (0.35)		-1.55** (0.69)		-1.92*** (0.68)
% of pop. protesting scaling		12.59*** (4.21)		1.73 (4.14)		18.81** (7.85)	
Observations	2,758	2,758	2,758	2,758	2,758	2,758	435
R-squared	0.88	—	0.87	—	0.89	—	0.91
Protesters variable	—	Mean	—	Mean	—	Mean	—
Election controls	Y	Y	Y	Y	Y	Y	Y
Demographic controls	Y	Y	Y	Y	Y	Y	Y
Dep. var. mean	14.97	14.97	12.76	12.76	52.47	52.47	50.86

Local Media Coverage



Week of:	2/19/09	4/15/09	7/4/09	11/3	4/15/10
Event	Tea Party 'Inception'	Tax Day Protests	July 4 Tea Party Events	2009 Elections	2010 Tax Day Protests
Avg. # Articles Per Week	1.3	4.66	2.28	1.94	3.63

Political Beliefs

TABLE V
POLITICAL BELIEFS, ANES SURVEY 2010

Dependent variable	(1) Strongly supports the Tea Party movement, dummy	(2) Favorable view on Sarah Palin, dummy	(3) Feels outraged about the way things are going in country, dummy	(4) Opposes raising taxes on income >\$250K, dummy	(5) Believes Americans today have less freedom compared to 2008, dummy	(6) Unfavorable feelings toward President Obama, dummy	(7) Average belief effect	(8) Reported likelihood of voting in the 2010 midterm election
Rainy protest	-0.057** (0.025)	-0.057** (0.026)	-0.046** (0.021)	-0.058* (0.030)	-0.065** (0.026)	-0.046* (0.024)	-0.13*** (0.037)	-0.067*** (0.024)
Observations	1,146	1,140	1,142	1,140	1,138	1,145	—	1,092
R-squared	0.172	0.300	0.101	0.226	0.120	0.292	—	0.303
Election controls	Y	Y	Y	Y	Y	Y	Y	Y
Demographic controls	Y	Y	Y	Y	Y	Y	Y	Y
Dep. var. mean	0.120	0.311	0.174	0.228	0.438	0.245	—	0.701

Policy Making

TABLE VII
POLICY MAKING EFFECT

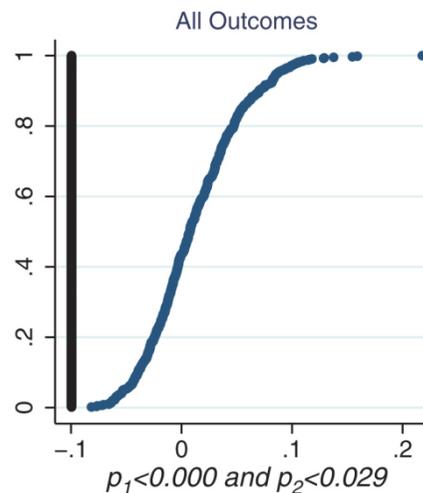
Dependent variable	(1)	(2)	(3) (4) (5) (6) ACU score				(7) (8) Retirement	
	2009		2010		Δ Score 2010 – 2008		Republicans	Democrats
	Full	All votes	Full	All votes	Full	All votes		
Rainy protest	-1.922** (0.937)	-2.827*** (1.021)	-4.296*** (1.258)	-3.181** (1.411)	-3.371** (1.310)	-2.405 (1.849)	0.049 (0.064)	-0.094*** (0.034)
Observations	435	327	435	279	435	191	179	256
R-squared	0.979	0.982	0.961	0.973	0.804	0.894	0.242	0.235
Election controls	Y	Y	Y	Y	Y	Y	Y	Y
Demographic controls	Y	Y	Y	Y	Y	Y	Y	Y
Dep. var. mean	41.14	41.44	41.45	39.17	-0.164	-0.157	0.0447	0.0469

Robustness Checks I

- specification of covariates
 - excluding demographic covariates
 - excluding region fixed effects
 - flexible covariates (nine dummies per variable according to deciles)
- different measures of rain on the protest day
 - higher precipitation threshold for dummy
 - ln of precipitation amount
 - maximum of 3 sources
- nearest-neighbor matching (**non-parametric** estimation)
- restriction of the sample
 - only counties with population size in [10,000; 1,000,000]
 - only counties where at least one source reports a Tax Day rally

Robustness Checks II

- spatial correlation
 - Conley (1999) procedure allows for spatial dependent standard errors
 - drop each state (**influential county**)
 - **placebo tests**
 - using rainfall on 627 other historical dates in April
 - average-effect measure: evaluation of likelihood of finding so many consistent results



(Classical) Theoretical Framework

Lohmann (1993, 1994)

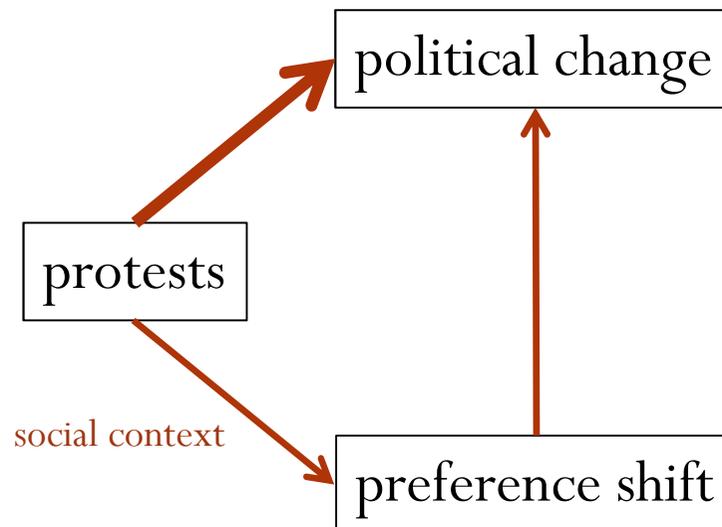
- protest size affects policy only through a Bayesian learning process
- simplified version of an information revelation model
 - incumbent maximizes likelihood of reelection and sets policy according to (expected) median voter
 - uncertainty about preferences of median voter
 - updates beliefs and sets policy conditional on number of protesters
 - a protest leader exogenously sets protesters' policy
 - homogeneous costs for protesting (affected by weather)
 - with more districts, only in sunny districts number of protesters is observed
 - learning effect should decrease over time

(Possible) Alternative Frameworks

- social interaction literature
 - personal **interactions** of protestors with other protestors and protestors with non-protestors (and also via social networks)
- lobbying literature
 - policy is more likely to be set according to a **politically organized group** of voters
- habit formation models
 - protesting increases commitment to the proposed policy agenda (**consistent behavior**)

Conclusion Main Paper

- positive BloombergView and Freakonomics blog posts of Betsey Stevenson and Justin Wolfers (University of Michigan)
- rainfall method used in former and again in later papers (e.g. “Shaping the Nation”, 2011)
- evidence supporting that the causal effect of protests on political change is produced through local interaction (**social context**)



Other Papers

- Madestam, Shoag, Veuger and Yanagizawa-Drott (2013):
“Do Political Protests Matter? Evidence from the Tea Party Movement”
(Quarterly Journal of Economics)
- **Acemoglu, Hassan and Tahoun (2014):**
“The Power of the Street: Evidence from Egypt's Arab Spring”
(National Bureau of Economic Research)
- Jones and Olken (2009):
“Hit or Miss? The Effect of Assassinations on Institution and War”
(American Economic Journal: Macroeconomics)

The Power of the Street: Revolutions I

Are street protests effective in limiting corruption and favoritism?

- **motivation:** several social science theories emphasize the role of *de facto* political power resulting from protests for changing the economic outcome, but until now limited evidence
- **contribution:** protests have played an important role in curtailing rents captured by political connected firms in Egypt
- **main challenges:**
 - direct measures of corruption and the shifting rent-seeking abilities of different groups of firms are unavailable
 - but possibility of decoupling of perception of future rents of stock market participants from reality

The Power of the Street: Revolutions II

- **approach:**

- event study to describe impact of key political events on the perception of rents
- using daily variation in number of protesters in Cairo Tahir Square during Egypt's Arab Spring (Twitter, newspaper reports)
- estimate value of political connections from relative stock market changes of firms connected to Mubarak's NDP, military or Muslim Brotherhood (177 firms on Egyptian stock market, 22 NDP, 33 military, 13 Islamic)

- **main results:**

- more intense protests are associated with lower stock market returns for firms connected to the group currently in power (also in non-revolutionary protest periods)
- Egyptian firms made effort to cultivate connections to current incumbent group on short notice

Hit or Miss: Assassinations

What is the impact of assassinations on institutional change and war?

- **motivation:** so far only case studies on the question, no data driven approach
- **contribution:** leader selection and leader change leads to institutional change
- **main challenge:** causal effect hard to establish (assassinations occur often in times of crises)
- **approach:**
 - using data on all publicly reported assassination attempts on national leaders from 1875-2004 (298 attempts, 59 successful)
 - exploiting inherent randomness of success or failure (failures as controls for successes)
- **main results:**
 - successful assassinations produce sustained moves toward democracy
 - heterogeneous effects depending on the context before

Conclusion

- papers focus on **external forces on the state**
 - protest
 - revolution
 - assassinations
- tipping points (catalysts)
- exponential change potential
- differences in **measuring political outcomes**
 - voting outcomes
 - corruption (through stock market returns)
 - democracy

**random variation (weather, luck in killing someone, etc.)
in history changes political outcomes**