

Supranation Building

Guglielmo Barone Matteo Cervellati Federico Maggio
Tommaso Nannicini Massimiliano Onorato

Milano

August 5, 2025



Finanziato
dall'Unione europea
NextGenerationEU



Ministero
dell'Università
e della Ricerca



Italiadomani
PIANO NAZIONALE
DI RIPRESA E RESILIENZA

Partenariato Esteso Finanziato dal PNRR - Missione 4, Componente 2, Investimento 1.3

Background

- Supranational governments just as national ones require legitimacy (whether input or output based)
 - Our focus: the European Union
 - Our outcomes: electoral participation & self-reported beliefs
- Large literature on drivers of nation building (Rohner & Zhuravskaya, 2023):
 - external wars, leadership, shared experiences, etc.
- Two relevant examples
 - **Gehring (2022)**: surge in European identity and trust in the EU among Eastern Europeans after Russia's 2014 Crimea invasion
 - **Caprettini & Voth (2023)**: increased US patriotism during WWII among New Deal welfare recipients (bonds, volunteering, medals)

Research question

- Supranational political systems differ from nation-states:
 - greater heterogeneity and fragmentation (e.g., no common language)
 - Weaker social identity-building institutions (e.g., schooling system, shared historical experiences or foundational myths)
- It is an open question whether the same tools can foster supranation-building as nation-building
- Our research question: What are the effects of two get-out-the-vote narratives—**External Threats** vs **Common Challenges**—on voter turnout and beliefs during the 2024 EU elections in Italy?
- These narratives provide different motivations to support the EU
 - One appeals to external enemies and defense
 - The other to commonality and problem-solving (shared challenges)
 - Both seek to shape political behavior by framing the meaning of **supranational cooperation**

Experiment design

- **Large field experiment** two weeks before the vote for European elections in Italy (June 8-9, 2024)
- **Nonpartisan** get-out-the-vote campaign
- **Treatments:** Two 15-second videos
 - ④ External threats (T1)
 - ② Common challenges (T2)
- **Programmatic advertising** in 200 small (2,500-7,500 inhabitants) municipalities with almost **1.7 million impressions** (clicks on non-skippable pre-roll videos) from May 21 to June 7
 - reached about **80%** of eligible voters, who watched **2.35** impressions on average.
 - video completion rate: **60%**
- **Randomization** at municipality level: T1 to 100 municipalities, T2 to 100 municipalities, 200 in the control group
- **Survey experiment in the field, CAPI:** 2,100 individuals from 57 municipalities exposed to the same experimental condition; street interviews from May 22 to June 5

Information treatments

T1: External threats

“There are external threats. Italy alone cannot succeed. Only a united Europe can defend itself. Europe needs you. On June 8th and 9th, vote in the European Elections”

T2: Common challenges

“There are common challenges. Italy alone cannot succeed. Only a united Europe can face them. Europe needs you. On June 8th and 9th, vote in the European Elections.”

- Both ads last 15 seconds
 - They share background colors, the narrator's voice, narrative structure, and a fast-paced blend of text and music
 - Each ad concludes with identical information and a call to turnout
 - But: they use different images to reinforce their respective messages
- Most of interviewed individuals define T1 and T2 as politically neutrals

Estimation

To measure the causal impact of our two treatments (T1 and T2) on EU turnout, we estimate the following linear model by OLS:

$$Y_m = \alpha + \beta T1_m + \gamma T2_m + \mu_{j(m)} + X_m + \varepsilon_m$$

where

- the outcome is the turnout rate for municipality m ,
- $j()$ is a function that maps municipality m to its quadruplet j ,
- $\mu_{j(m)}$ is a quadruplet fixed effect,
- and X_m are municipality-specific controls in some specifications

Field results on turnout

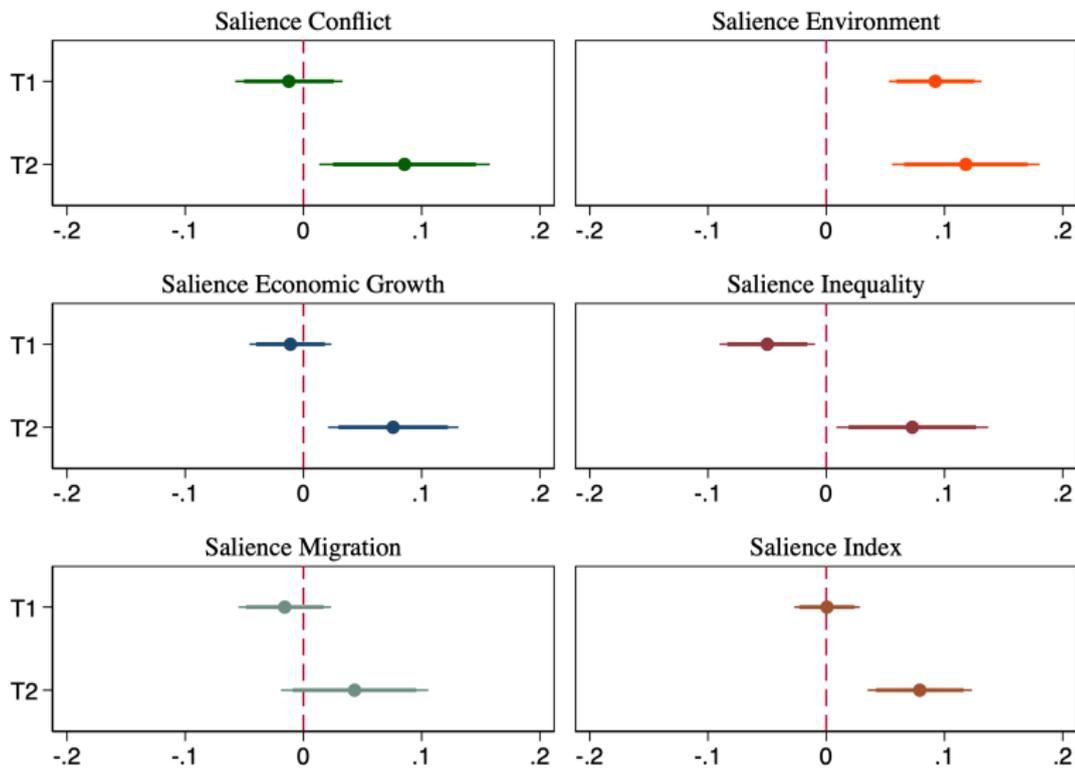
<i>Dep. Variable:</i>	(1)	(2)	(3)
	<i>Turnout EU 24</i>		
External Threats (T1)	0.660 (1.513)	0.566 (1.107)	0.062 (0.908)
Common Challenges (T2)	2.170** (0.945)	2.249*** (0.665)	1.712*** (0.517)
<i>Wald Test (p-value)</i>			
T1 = T2	0.334	0.096	0.081
T1 + T2 = 0	0.180	0.090	0.153
Quadruplet FEs	Yes	Yes	Yes
Turnout EU Elections 2019	No	Yes	Yes
Controls	No	No	Yes
Mean	50.632	50.632	50.632
Observations	400	400	400

Effect on political parties

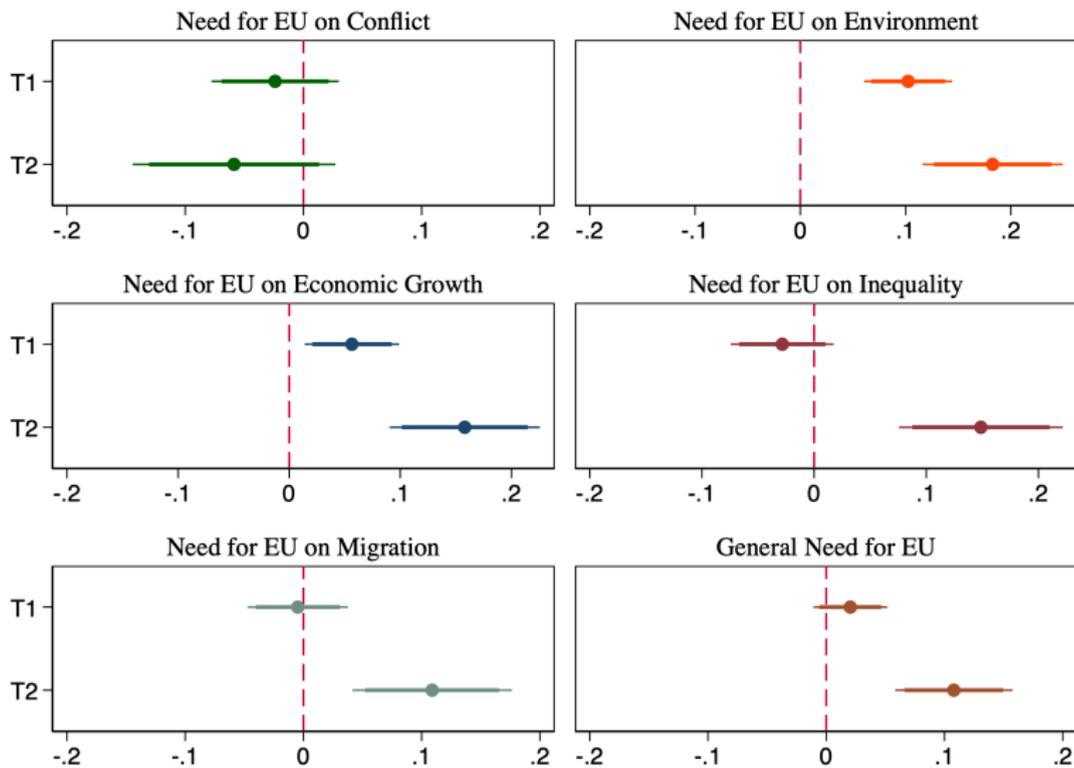
Heterogeneous effects

Persuasion rates

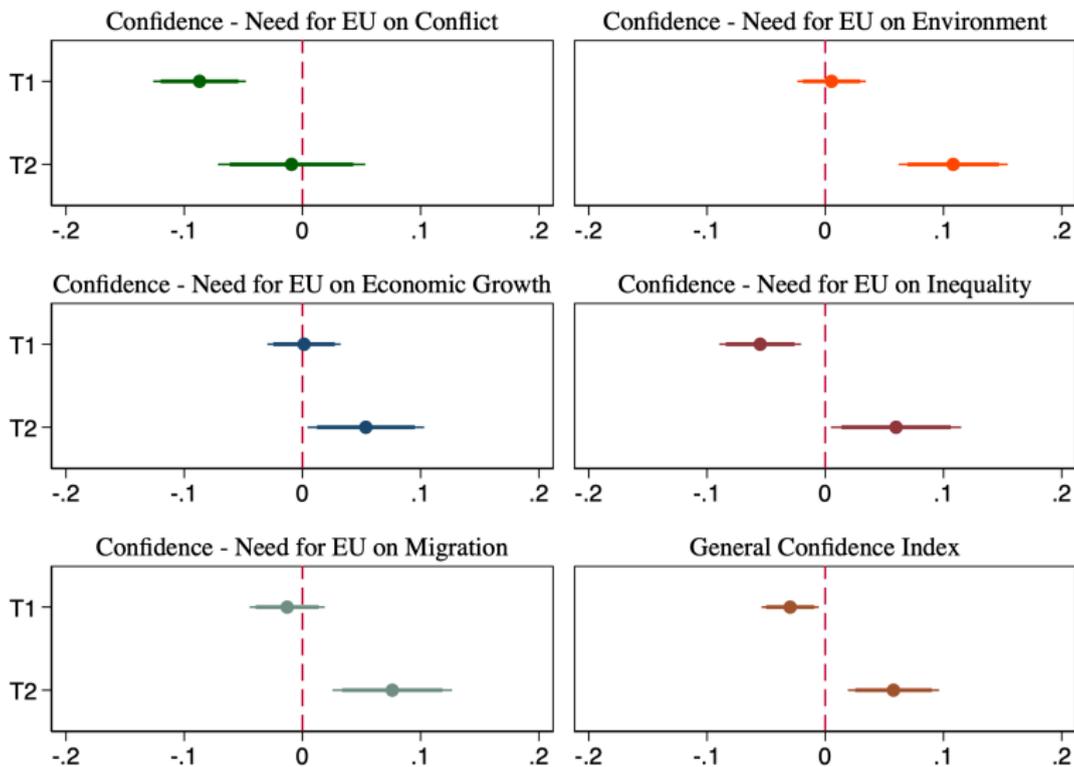
Survey results on issue salience



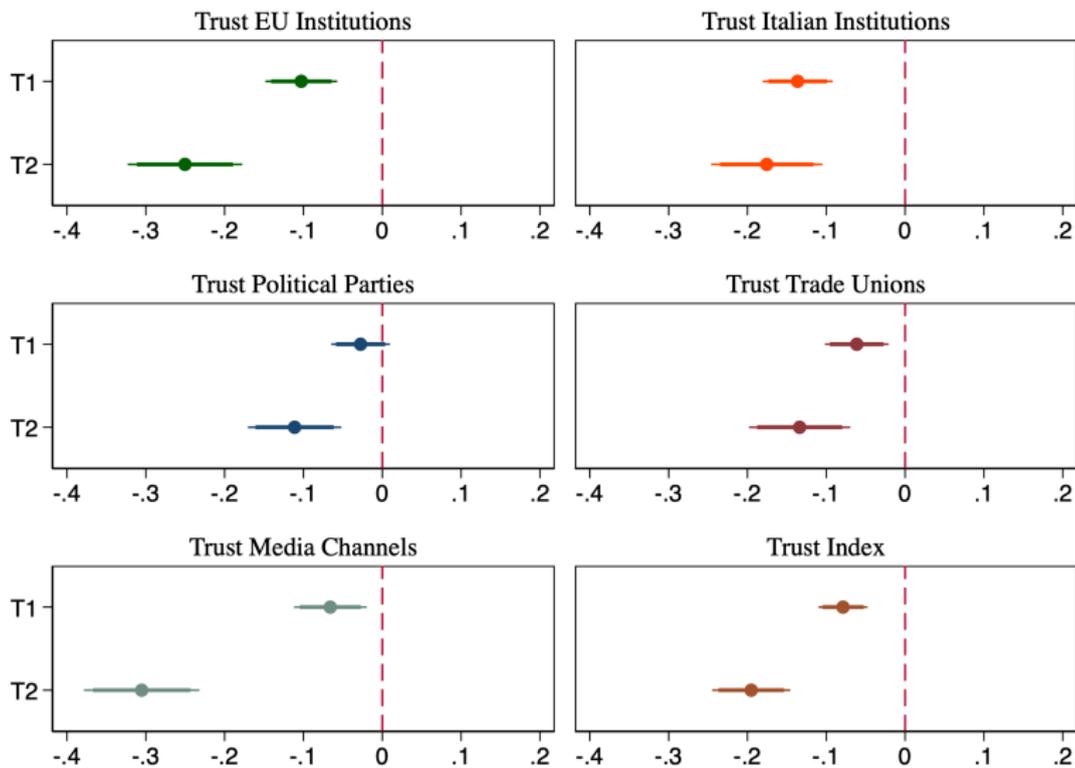
Survey results on EU role support



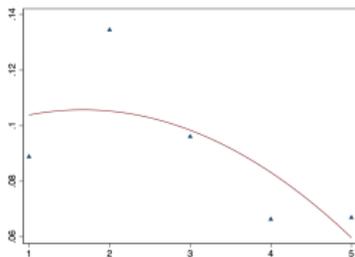
Uncertainty about EU role support (second moments)



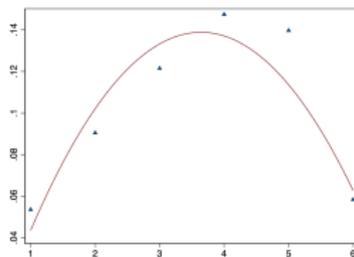
Survey results on institutional trust



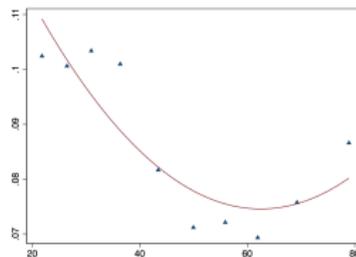
Heterogeneity - need for EU (common challenges)



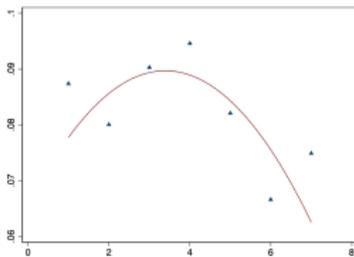
(a) CATE and europeism feeling



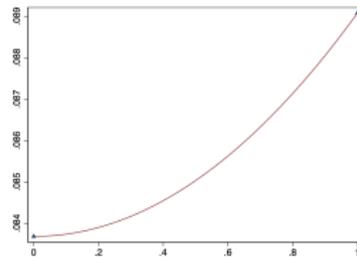
(b) CATE and political orientation



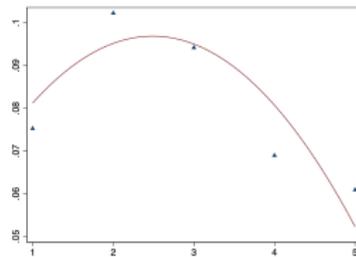
(c) CATE and age



(d) CATE and education

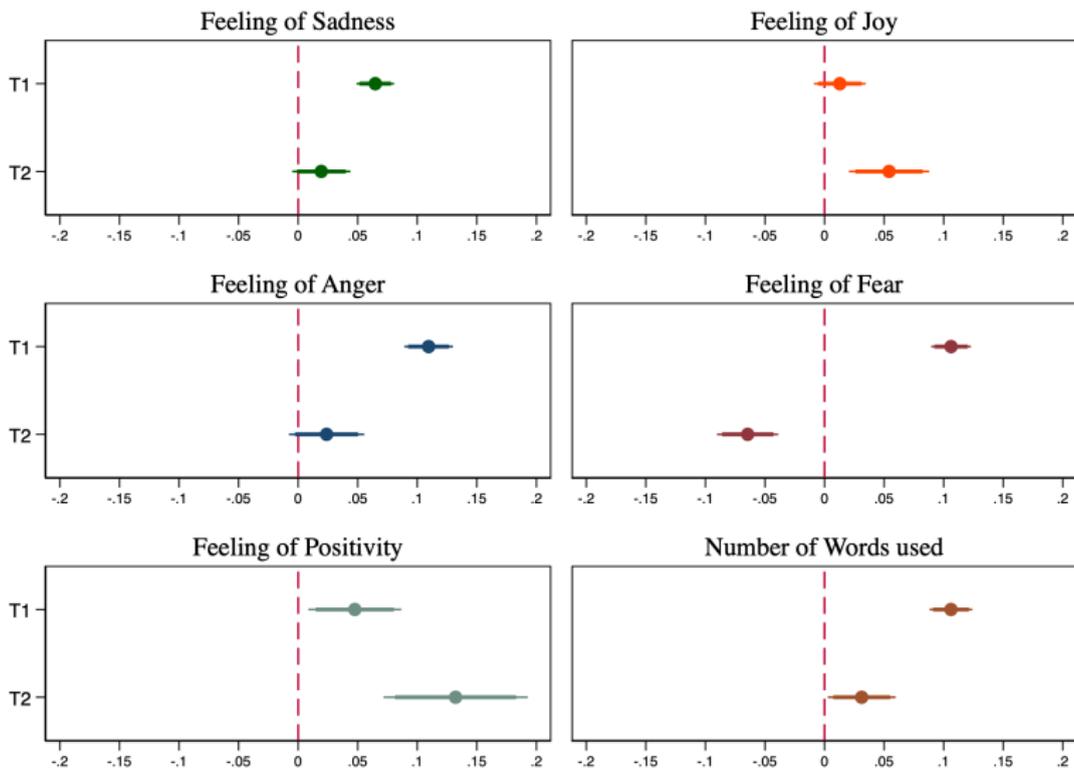


(e) CATE and gender



(f) CATE and politics information

Text Analysis - Emotional response to video ads



Different policy priorities?



Different countries?



Conclusions

- Positive narrative on **common challenges**
 - Increases turnout by about 4%
 - Increases salience of global issues by 10%
 - Increases belief in the need for more EU by 15%
 - Reduces uncertainty about this belief by 7%
 - Reduces trust in EU institutions by 65%

- Alternative narrative on **external threats**
 - Does not affect turnout
 - Increases salience of some issues
 - Has positive impact on some beliefs about the need for more EU
 - Increases uncertainty about this belief by 4%
 - Is associated with more negative emotions, such as anger and fear (ChatGPT-enhanced protocol)

What's next: Survey experiments with 14,000 respondents across five EU countries: Italy, Poland, Germany, France, and Spain

Thank You!

Federico Maggio: <federico.maggio3@unibo.it>

Massimiliano Onorato: <massimiliano.onorato@unibo.it>

Second experiment: Italian politics vs European politics

<i>Dep. Variable:</i>	(1)	(2)	(3)
	<i>Turnout EU 24</i>		
Italian Politics	-0.339 (1.844)	0.655 (1.453)	0.535 (1.228)
European Politics	-0.107 (1.173)	0.707 (0.669)	-0.094 (0.382)
<i>Wald Test (p-value)</i>			
T3 = T4	0.890	0.966	0.577
T3 + T4 = 0	0.875	0.524	0.783
Quadruplet FEs	Yes	Yes	Yes
Turnout EU Elections 2019	No	Yes	Yes
Controls	No	No	Yes
Mean	49.813	49.813	49.813
Observations	400	400	400

Descriptive Statistics Field Experiment

	T1					T2					Control Group				
	N	Mean	SD	Min	Max	N	Mean	SD	Min	Max	N	Mean	SD	Min	Max
Turnout EU 24	100	50.58	16.05	21.22	82.87	100	52.09	14.79	22.51	78.31	200	49.92	15.22	19.74	77.31
Turnout EU 19	100	56.79	17	27.29	81.93	100	56.62	15.79	23.66	80.81	200	56.7	15.56	21.27	83.28
Center-Left Vote 22	100	24.77	8.66	8.11	46.32	100	23.53	7.95	5.77	43.88	200	25.25	7.69	6.56	50.19
M5S Vote 22	100	9.24	5.24	2.45	35.14	100	8.36	4.56	2.1	26.23	200	9.11	4.81	2.36	28.93
Third Pole Vote 22	100	6.62	4.8	1.48	35.36	100	5.15	3.62	0.75	33.62	200	5.82	4.64	0.91	37.56
Center-Right Vote 22	100	42.86	9.79	23.09	67.21	100	43.61	10.11	21.18	64.38	200	43.6	9.92	10.61	75.09
Concurrent Elections	100	47	50.16	0	100	100	47	50.16	0	100	200	42	49.48	0	100
Population	100	4794.14	1351.01	2502	7248	100	4574.23	1434.03	2505	7413	200	4617.12	1400.18	2515	7497
Digital Penetration Index	100	72.25	14	45.15	107.3	100	73.22	16.39	45.18	119.21	200	71.36	14.85	42.74	114.99
College Degree Share	100	7.38	2.27	3.86	16.4	100	7.59	2.02	3.53	14.69	200	7.46	2.17	2.82	17.49
Unemployment	100	11.27	6.31	3.21	28.52	100	11.56	6.64	2.4	29.38	200	11.36	6.17	2.94	34.83
Social Capital	100	0.46	0.55	0	2.63	100	0.4	0.58	0	3.16	200	0.53	0.89	0	6.9
Longitude	100	11.95	2.56	7.86	18.1	100	12.42	2.52	7.68	17.63	200	11.94	2.51	7.32	18.06
Latitude	100	42.58	2.78	37.5	46.29	100	42.33	2.98	37.44	46.14	200	42.61	2.68	37.05	46.51
Elevation of the city hall	100	294.76	253.82	1	1011	100	294.47	265.57	1	1106	200	302.68	240.96	2	1147

Back

Balance tests – Part I

<i>Dep. Variable:</i>	(1) Population	(2) Unemployment	(3) Education	(4) Social Capital	(5) Altitude	(6) Digital Penetration
T1	177.025 (135.658)	-0.096 (0.424)	-0.074 (0.289)	-0.070 (0.120)	-7.925 (30.610)	0.887 (1.830)
T2	-42.885 (213.274)	0.195 (0.478)	0.130 (0.220)	-0.133 (0.077)	-8.215 (30.610)	1.860 (1.599)
Quadruplet FEs	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	No	No	No	No	No
Mean	4,650.650	11.387	7.469	0.479	298.650	72.047
Observations	400	400	400	400	400	400

Balance tests – Part II

<i>Dep. Variable:</i>	(1) Past Turnout	(2) Concurrent Elections	(3) Center-Left	(4) M5S	(5) Center-Right	(6) Third Pole
External Threats (T1)	0.095 (1.158)	5.000 (4.944)	0.003 (0.007)	-0.000 (0.003)	-0.747 (0.976)	0.000 (0.004)
Common Challenges (T2)	-0.080 (1.024)	5.000 (4.578)	-0.009 (0.006)	-0.003 (0.004)	0.005 (0.660)	-0.005 (0.003)
Quadruplet FEs	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	No	No	No	No	No
Mean	56.700	44.500	0.160	0.132	43.419	0.058
Observations	400	400	400	400	400	400

[Back](#)

Treatment and control groups



Back

Main Outlets Programmatic Advertising

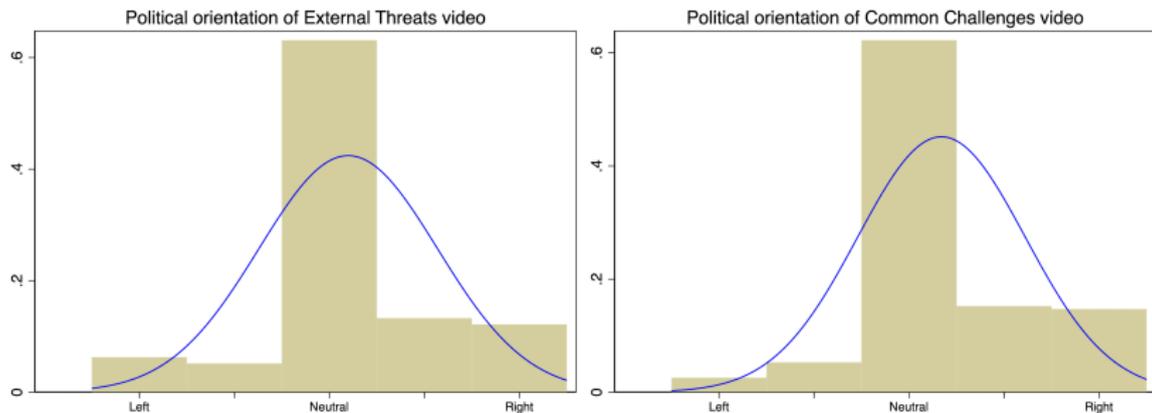
Category	External Threats (T1)		Common Challenges (T2)	
	Impressions	Share	Impressions	Share
News	197,599	35.98%	191,467	34.64%
Mail	90,779	16.53%	91,463	16.55%
Game	84,809	15.44%	98,882	17.89%
Weather	41,699	7.59%	37,734	6.83%
News (Sports)	28,029	5.10%	26,258	4.75%
Other (Legal Advice)	15,015	2.73%	16,132	2.92%
Culinary	14,957	2.72%	15,236	2.76%
Finance	14,104	2.57%	14,095	2.55%
Health & Wellbeing	9,093	1.66%	8,958	1.62%
Online Radio	8,602	1.57%	7,519	1.36%
Music	6,206	1.13%	6,728	1.22%
Tourism	6,092	1.11%	5,830	1.05%
Sports	5,187	0.94%	5,404	0.98%
Dictionary/Translator	3,660	0.67%	3,431	0.62%
Gaming	3,545	0.65%	4,145	0.75%
News (Psychology)	3,391	0.62%	3,072	0.56%
Streaming	3,105	0.57%	4,017	0.73%
E-Commerce	2,776	0.51%	2,871	0.52%
Pets	2,412	0.44%	2,183	0.39%
Sustainability	1,662	0.30%	1,580	0.29%
News (In-App)	1,545	0.28%	1,473	0.27%
Other (Car Sales)	1,267	0.23%	1,213	0.22%
Other (Caller ID App)	1,160	0.21%	1,157	0.21%
Other (File Manager)	1,121	0.20%	920	0.17%
Other (Study Advice)	429	0.08%	354	0.06%
Books	347	0.06%	264	0.05%
News (Music)	290	0.05%	164	0.03%
Instant Messaging	149	0.03%	84	0.02%
News (TV)	118	0.02%	73	0.01%
Astrology	0	0.00%	67	0.01%

Video completion rates

<i>Dep. Variable:</i>	(1) VCR 25%	(2) VCR 50%	(3) VCR 75%	(4) VCR 100%
Common Challenges (T2) vs External Threats (T1)	0.009 (0.010)	0.014 (0.014)	0.018 (0.015)	0.021 (0.017)
Quadruplet FEs	Yes	Yes	Yes	Yes
Turnout EU Elections 2019	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Mean	0.800	0.711	0.651	0.600
Observations	200	200	200	200

Back

Political orientation of Treatments



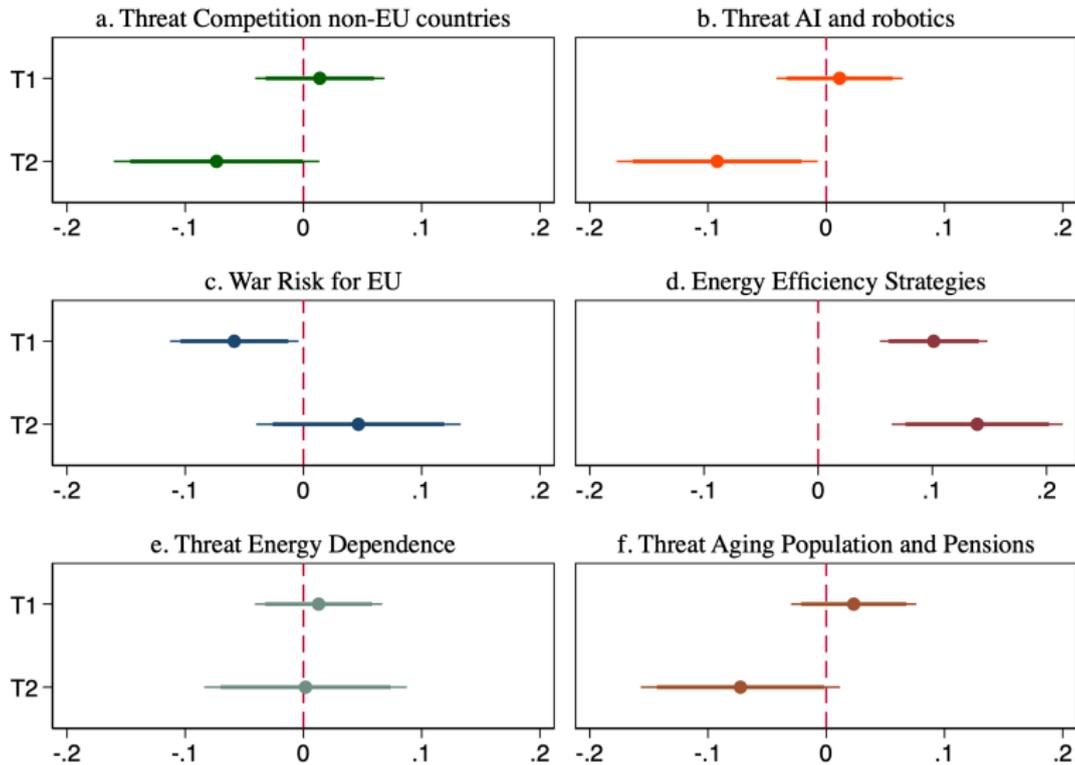
Back

Effects on Vote Share for Political Parties

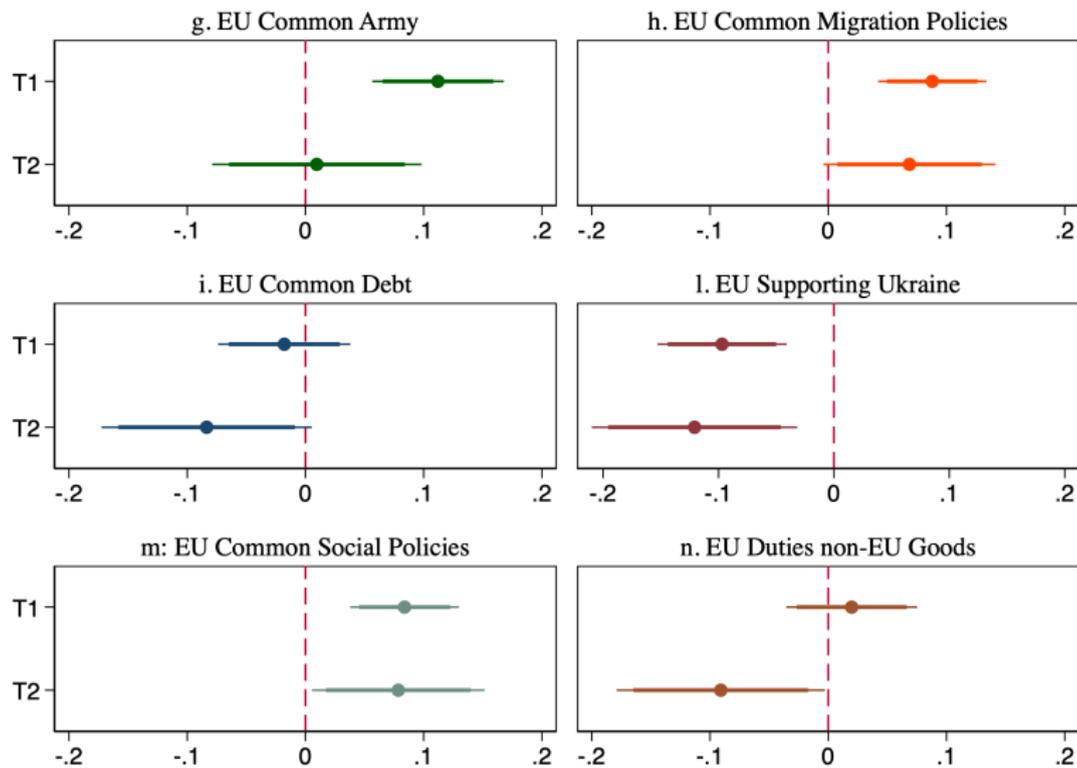
<i>Dep. Variable:</i>	(1) Center-Left	(2) Movimento 5 Stelle	(3) Third Pole	(4) Center-Right
External Threats (T1)	-0.697 (0.630)	0.108 (0.195)	0.920 (0.604)	0.338 (0.665)
Common Challenges (T2)	-0.387 (0.796)	-0.612 (0.389)	-0.470 (0.315)	2.478 (1.633)
Quadruplet FEs	Yes	Yes	Yes	Yes
Vote Share political party 2019	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Mean	24.699	8.956	5.853	49.689
Observations	400	400	400	400

[Back](#)

European Issues



European Common Policies



Second experiment: Italian politics vs European politics

<i>Dep. Variable:</i>	(1)	(2)	(3)
	<i>Turnout EU 24</i>		
Italian Politics	-0.339 (1.844)	0.655 (1.453)	0.535 (1.228)
European Politics	-0.107 (1.173)	0.707 (0.669)	-0.094 (0.382)
<i>Wald Test (p-value)</i>			
T3 = T4	0.890	0.966	0.577
T3 + T4 = 0	0.875	0.524	0.783
Quadruplet FEs	Yes	Yes	Yes
Turnout EU Elections 2019	No	Yes	Yes
Controls	No	No	Yes
Mean	49.813	49.813	49.813
Observations	400	400	400

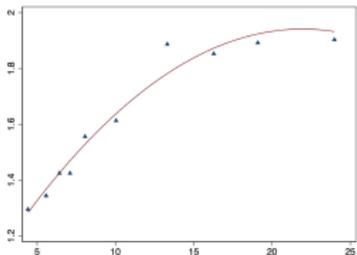
Heterogeneity analysis (common challenges)

- Estimate heterogeneous treatment effects via *causal forest*, i.e., the distribution of treatment effects conditional on the whole array of local characteristics (*Athey and Imbens 2016; Wager and Athey 2018*)

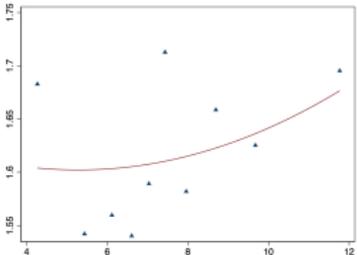
	(1)	(2)	(3)	(4)
	CATE		Std. diff.	MHT p-value
Baseline characteristics	Below median	Above median	(1)-(2)	(1)-(2)
Unemployment Rate	6.951	15.904	-2.006	0.001
Education	7.399	7.599	-0.094	0.811
Past EU Elections	66.185	47.153	1.537	0.001
Digital Penetration Index	71.535	72.426	-0.058	0.612
Population	4953.307	4252.333	0.513	0.001
Concurrent Municipal Elections	0.667	0.207	1.043	0.001
Distance Borders	161.787	549.563	-1.943	0.001
Distance East Borders	223.231	614.268	-2.155	0.001
Social Capital Index	0.615	0.356	0.327	0.032

- The treatment has a larger impact in municipalities with higher unemployment, lower (past) turnout, and smaller populations

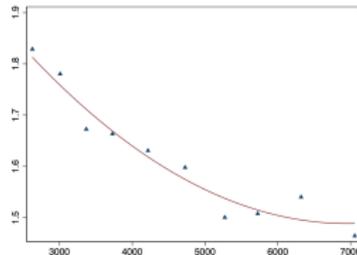
Heterogeneity analysis (common challenges) (2)



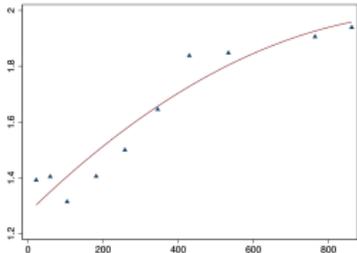
(a) CATE and unemployment



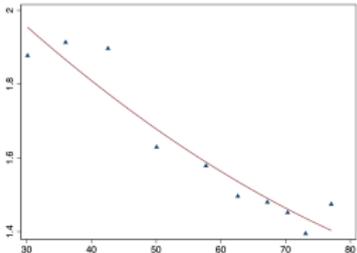
(b) CATE and education



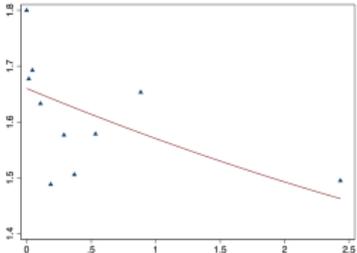
(c) CATE and population



(d) CATE and distance country borders



(e) CATE and past turnout



(f) CATE and social capital

Persuasion Rates

Following DellaVigna & Gentzkow (2010), the persuasion rate is defined as:

$$f = 100 \times \frac{y_T - y_C}{(e_T - e_C) \times (1 - y_0)}$$

where

- y_T is the turnout rate in the treatment group,
- y_C is the turnout rate in control group,
- e_T is the fraction of individuals exposed to the treatment,
- e_C is the fraction of individuals in the control group exposed to the treatment, which is equal to zero,
- y_0 is the fraction of individuals who would have voted in the absence of the intervention, which is equal to the turnout rate of the control group, y_C .

⇒ Persuasion rate: 4.41% when using the crude exposure rate and **7.11%** when adjusting for video completion rate.