

House Majority PAC NY-22 Multi-Mode Persuasion Test

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Overview

- Leading into the 2018 midterm elections, HMP and the progressive community want to know which modes, and combinations of modes, can best persuade voters to support Democratic candidates.
- In a 2015 [test](#) in ME-2, HMP and AI found that broadcast TV, mail, and digital ads combined had additive effects that increased persuasion, with broadcast TV dominating.
- The current test examines whether that finding replicates and how individually targeted and geographically targeted digital ads, both alone and in combination, influence voter persuasion.

Research Questions

- Between broadcast television, mail, and digital, what modes are most effective at persuading voters to support Democratic House challengers?
- Which are the most cost effective?
- What are the effects of adding mail and/or digital contact to a broadcast TV program?
- What digital advertising strategy is most effective in persuading voters?

Experiment Design

Context Spring 2018 in the NY-22 House race between incumbent Claudia Tenney (R) and Anthony Brindisi (D)			
Initial Universe 399,470 active registered voters in NY 22nd CD			
Pre-Treatment Measurement 5,785 pre-treatment surveys completed 4/2/18 - 4/5/18			
Persuasion Mail 2,692 voters 8 mail pieces between 4/17/18 - 5/14/18		No Mail 3,093 voters	
Indiv Targeted Digital Ads 1,341 voters 8 ZIP clusters	Geo Targeted Digital Ads 1,715 voters 8 ZIP clusters	Indiv + Geo Targeted Digital Ads 1,354 voters 8 ZIP clusters	No Digital Ads 1,375 voters 8 ZIP clusters
TV ads in Binghamton DMA 500 GRPs/week were broadcast from 4/17/18 - 5/14/18 2,300 voters		No TV ads in Syracuse and Utica DMAs 3,485 voters	
Post-Treatment Measurement 2032 post-treatment surveys completed 5/14/17 - 5/17/17			
Analysis & Results Survey results weighted to high-turnout midterm election			

As appropriate for a marginal district, mean partisanship score of respondents was near 50

	Weighted Respondents
Mean Partisanship Score	42
% Women	52%
% White	98%
Mean Age	59
Mean Vote Propensity Score	60
Voted 2016	87%
Voted 2014	69%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

TV Program

TV Program

- HMP ran 2,000 GRPs (500 GRPs / week) over 4 weeks in the Binghamton DMA (DMAs were not randomized).
- There were no other political ads running during this time.
- TV ads were the same as the 30 second ads run in the geographically targeted digital program.

TV Program



TV Program



Digital Program

Individually Targeted Digital Program

- Targeted specific voters in 16 of 32 randomly selected zip code clusters in the NY 22nd CD. Eight of the 16 zip clusters overlapped with the geographically targeted digital program.
- Video and static ads run on Facebook/Instagram, Youtube, and DSPolitical networks.
- Approximately 90% of the experimental universe found an online match--much higher than in previous tests (e.g., DCCC IE IA-3 in 2014 where it was 33%)
- The total program was 6 weeks long, but we measured initial outcomes 4 weeks in. A follow up survey will be conducted after 6 weeks.
- As of May 14, the campaign had 1,019,951 impressions and 299,656 complete video views.

Individually-Targeted Digital Program

**CLAUDIA TENNEY'S DISASTROUS HEALTHCARE
PLAN LOOKS PRETTY GOOD FROM HERE**




PAID FOR BY HOUSE MAJORITY PAC. THEHOUSEMAJORITYPAC.COM
NOT AUTHORIZED BY ANY CANDIDATE OR CANDIDATE'S COMMITTEE

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Claudia Tenney voted to cut taxes for the ultra-rich, leaving older New Yorkers holding the bill. She voted for a healthcare plan that would impose an Age Tax on older Americans, charging them up to FIVE TIMES more than younger consumers. Her actions make it clear: Tenney is not for you. [Bit.ly]



**CLAUDIA
TENNEY**
VOTED TO
CUT TAXES FOR
THE ULTRA-RICH

PAID FOR BY HOUSE MAJORITY PAC. THEHOUSEMAJORITYPAC.COM
NOT AUTHORIZED BY ANY CANDIDATE OR CANDIDATE'S COMMITTEE

Claudia Tenney is NOT for you >>>

Paid for by House Majority PAC. thehousemajoritypac.com. Not authorized by any candidate or candidate's committee.

 8.9K

425 Comments 826 Shares

Like

Comment

Share

Individually-Targeted Digital Program

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Claudia Tenney took big money from insurance and financial interests. She voted for a healthcare plan that would let insurance companies charge older Americans up to FIVE TIMES more than younger consumers. Tenney gets the cash, you pay the price. Learn more: [Bit.ly]



Claudia Tenney gets the cash, you pay the price
>>>

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   8.9K

425 Comments 626 Shares

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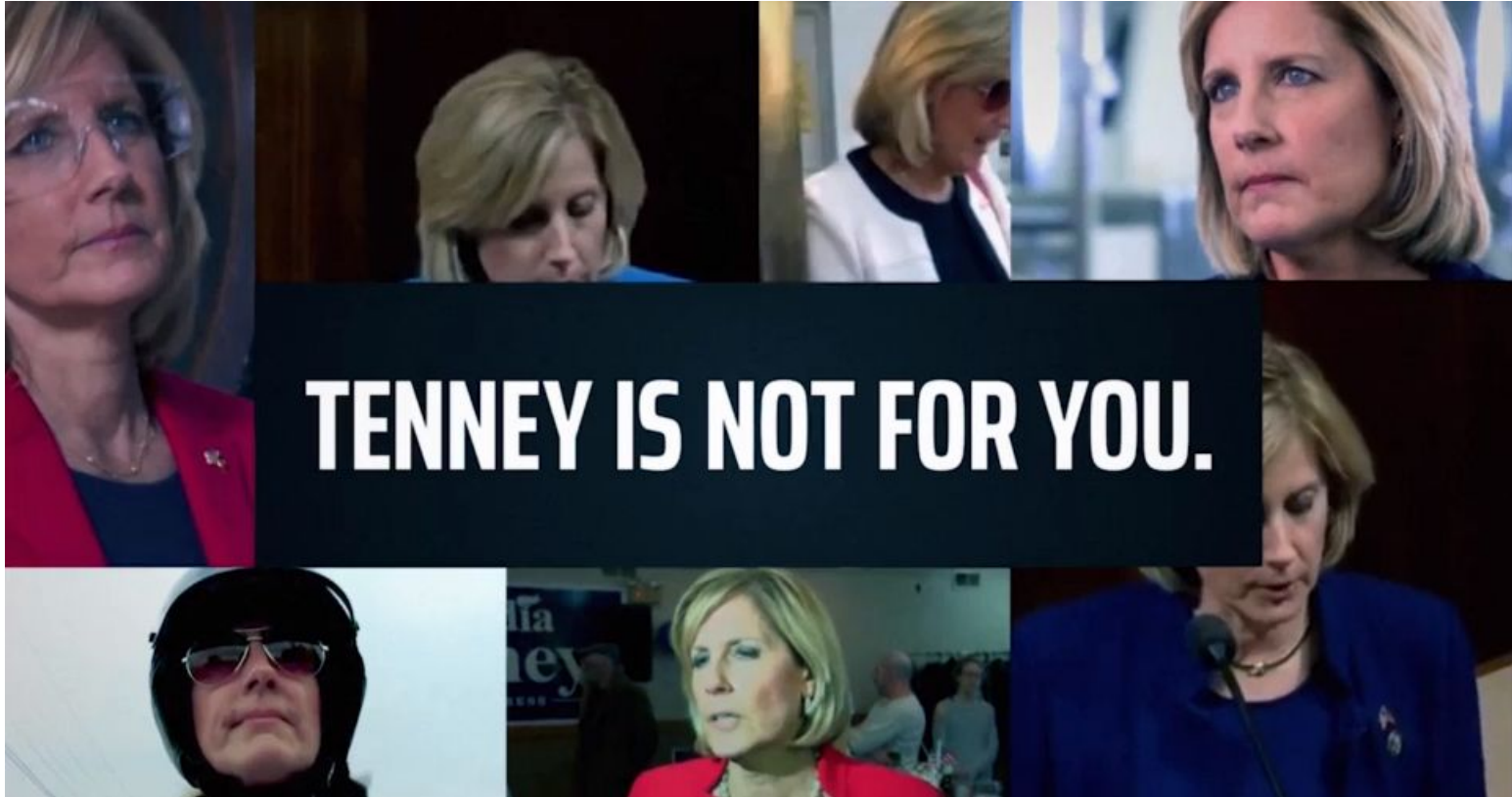
Geographically Targeted Digital Program

- Broadcast in 16 of 32 randomly selected zip code clusters in the NY 22nd CD. Eight of the 16 zip clusters overlapped with the individually targeted digital program.
- The video ads (15 and 30 seconds) appeared on premium digital content providers like CBS, CNN, Hulu, Youtube, and Vevo.
- The total program was 4 weeks long, from 4/17/18 - 5/14/18.
- The campaign had 3,989,843 impressions and had a 74% video completion rate.

Geographically Targeted Digital Program



Geographically Targeted Digital Program



Mail Program

Mail Program

- Included 8 pieces of anti-Tenney mail sent to voters over 4 week from 4/17/18 - 5/14/18.
- Targeted 2,692 randomly selected voters who answered the initial survey.
- Mail recipients were randomized to be evenly distributed across the geographies that received (and did not receive) digital and TV ads.

Mail Program

CLAUDIA TENNEY'S DISASTROUS HEALTHCARE PLAN LOOKS PRETTY GOOD FROM HERE.



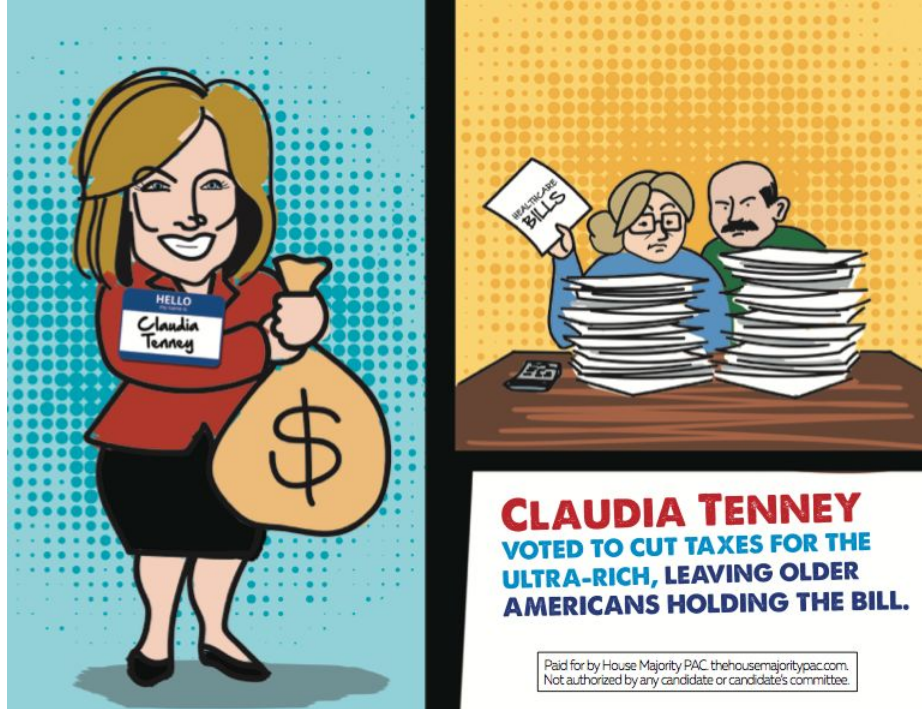
**Claudia Tenney's disastrous vote for an Age Tax
WOULD DROWN OLDER NEW YORKERS IN HEALTHCARE COSTS.**

AGE TAX **INSURANCE COSTS**
"American Healthcare Act Unaffordable for Older Adults"¹
"Older Americans slapped with 'age tax'
in GOP health-care bill"²
"AGE TAX IS UNFAIR AND UNAFFORDABLE"³
"AMERICAN HEALTH CARE ACT (AHCA)
WOULD SIGNIFICANTLY RAISE INSURANCE
COSTS FOR PEOPLE IN THEIR 50S AND 60S"⁴




1. AARP, 5/24/17 2. CNBC, 6/26/17 3. AARP, 2/15/17 4. Forbes, 3/14/17

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Mail Program



**Claudia Tenney
voted for the disastrous healthcare bill
even though it would:**

-  Impose an **Age Tax** on older Americans
-  Charge Americans age 50-64 up to **5x more**
-  Raise healthcare premiums on some older Americans **by more than \$3,000**

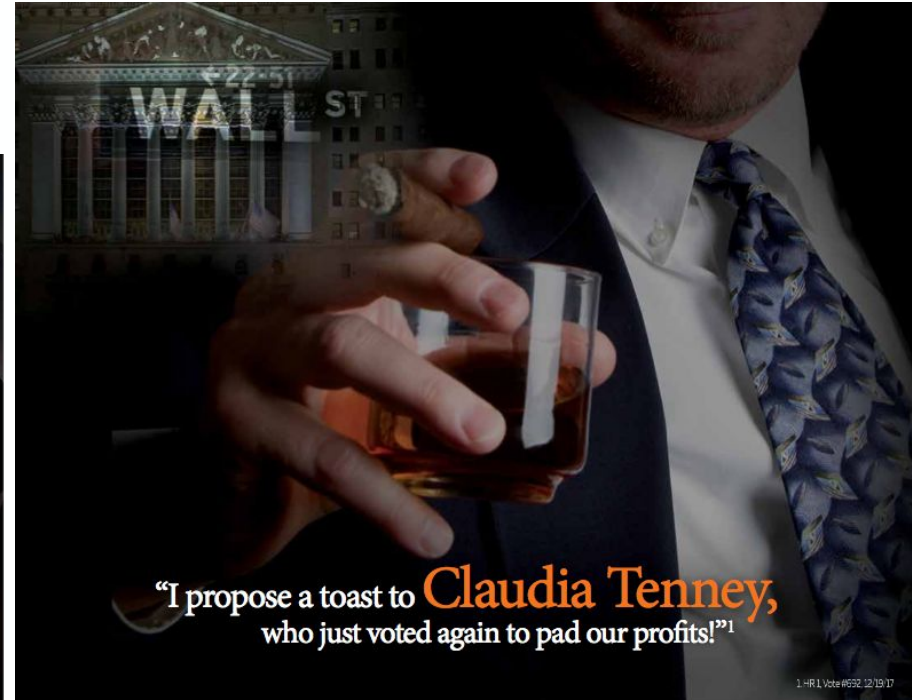
Claudia Tenney voted for a healthcare plan that included an Age Tax on older Americans, charging them up to five times more than younger consumers.
Source: AARP

"American Healthcare Act Unaffordable for Older Adults"
AARP

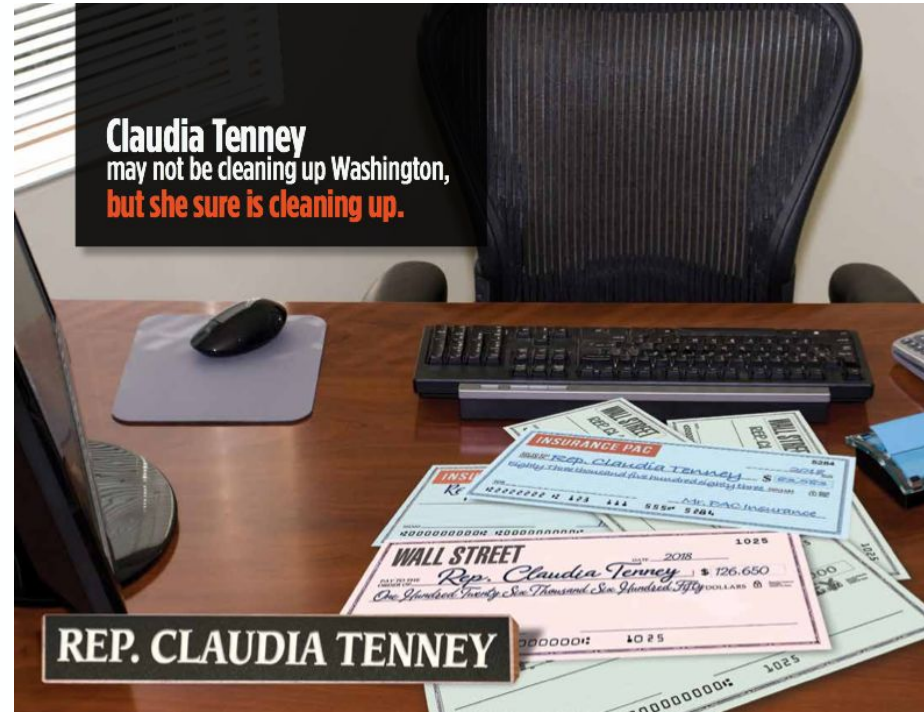
**CLAUDIA TENNEY REWARDED THE ULTRA-RICH,
SHIFTING THE TAX BURDEN ONTO THE MIDDLE CLASS.**

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Mail Program



Mail Program



Post-treatment Survey Toplines

Prior to our program, our Tenney fav/unfav numbers were similar to the GSG: voters' opinions were split

GSG Tenney Favorability 3/15 - 3/18	
Favorable	39%
Unfavorable	45%
Not sure	16%

AI Tenney Favorability 4/2 - 4/5	
Favorable	41%
Unfavorable	45%
Not sure	16%

District-wide, program increased Tenney's very unfav

AI Pre-Survey Tenney Favorability
4/2 - 4/5

Very favorable	19%
Somewhat favorable	22%
Somewhat unfavorable	14%
Very unfavorable	26%
Not sure	10%
Never heard of her	9%

AI Post-Survey Tenney Favorability
5/14 - 5/17

Very favorable	18%
Somewhat favorable	21%
Somewhat unfavorable	14%
Very unfavorable	31%
Not sure	10%
Never heard of her	6%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district. The pure control group actually slightly *increased* their opinion of Tenney.

Before our program, horserace numbers were somewhat similar to GSG poll: Single-digit race

GSG Horserace 3/15 - 3/18	
Anthony Brindisi	43%
Claudia Tenney	41%
Not sure	16%

AI Horserace 4/2 - 4/5	
Anthony Brindisi	42%
Claudia Tenney	49%
Not sure	6%

District-wide, program increased Brindisi margin by 10 pts

AI Pre-Survey Horse Race

4/2 - 4/5

Anthony Brindisi	39%
Lean Brindisi	3%
Claudia Tenney	45%
Lean Tenney	4%
Other candidate	3%
Not sure	6%
<i>Margin</i>	-7%

AI Post-Survey Horse Race

5/14 - 5/17

Anthony Brindisi	45%
Lean Brindisi	3%
Claudia Tenney	42%
Lean Tenney	3%
Other candidate	3%
Not sure	5%
<i>Margin</i>	+3%

After we delivered our message, the horserace numbers were very similar to PPP: small Brindisi lead

AI Horserace 5/14 - 5/17	
Anthony Brindisi	48%
Claudia Tenney	45%
Not sure	7%

PPP Horserace 5/15 - 5/16	
Anthony Brindisi	46%
Claudia Tenney	42%
Not sure	12%

Voters trust Brindisi more on healthcare after the program ran

AI Pre-Survey Trust on Healthcare 4/2 - 4/5

Anthony Brindisi	30%
Lean Brindisi	5%
Claudia Tenney	32%
Lean Tenney	7%
Neither candidate	7%
Both candidates equally	1%
Not sure	17%

AI Post-Survey Trust on Healthcare 5/14 - 5/17

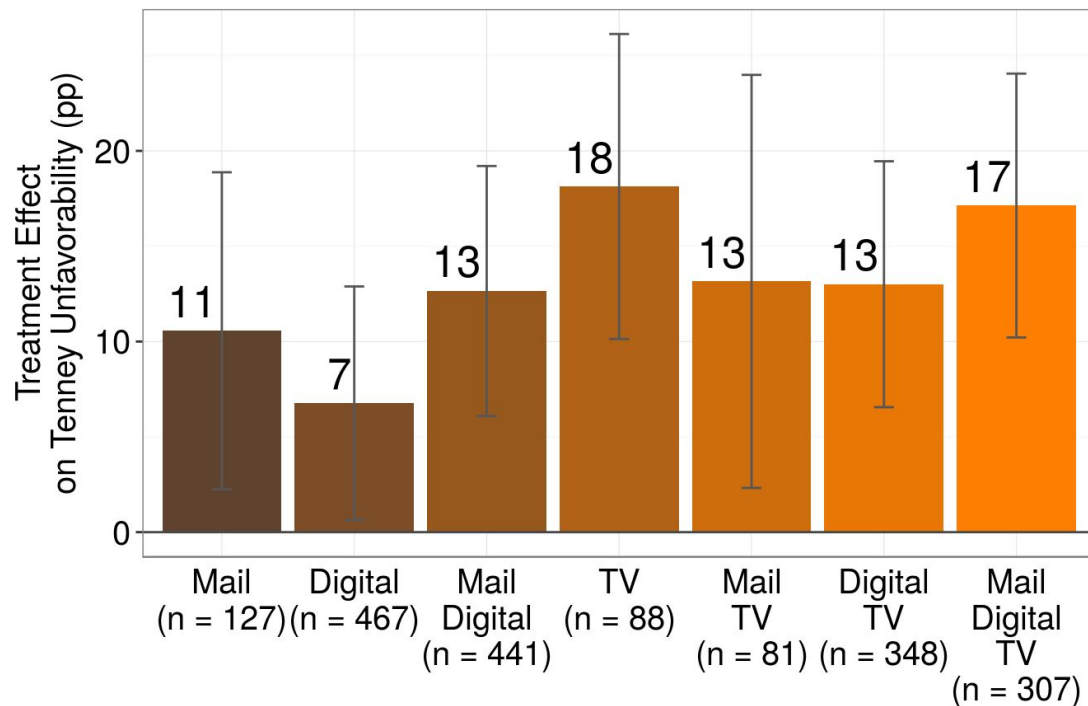
Anthony Brindisi	41%
Lean Brindisi	3%
Claudia Tenney	33%
Lean Tenney	4%
Neither candidate	9%
Both candidates equally	1%
Not sure	10%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Results: Broken Out Mode Combinations

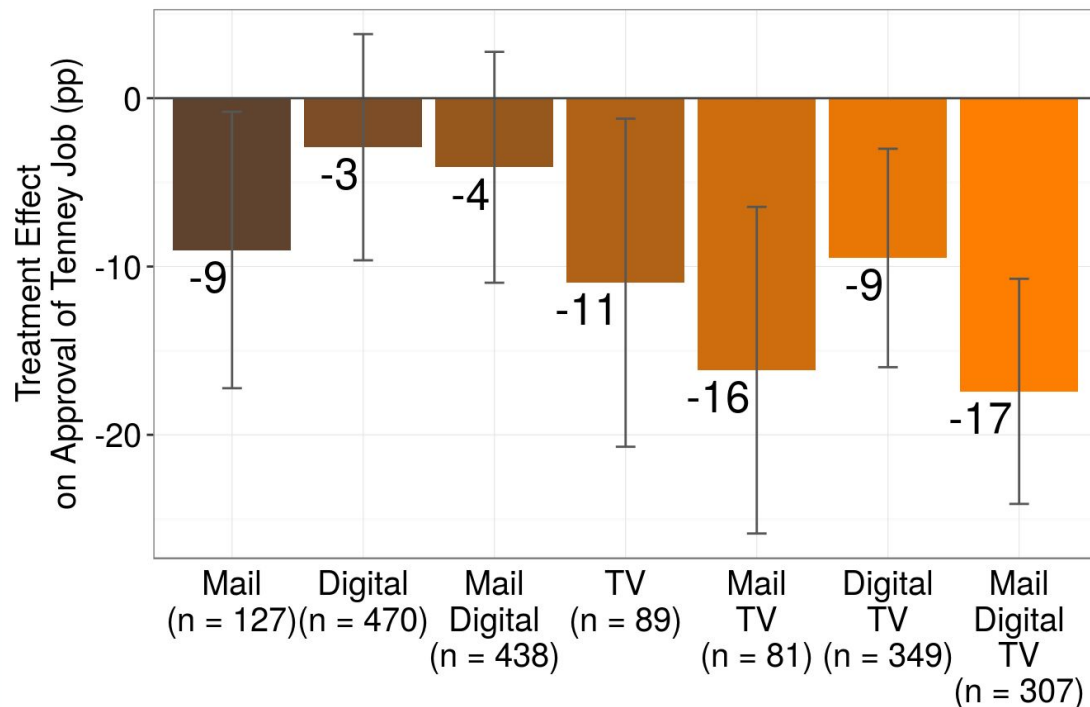
Mail + Digital + TV
Ads increased
Tenney
unfavorability by
17pp.

Tenney Unfavorability by Treatment Combinations
With no contact, 34% of voters had unfavorable view of Tenney.



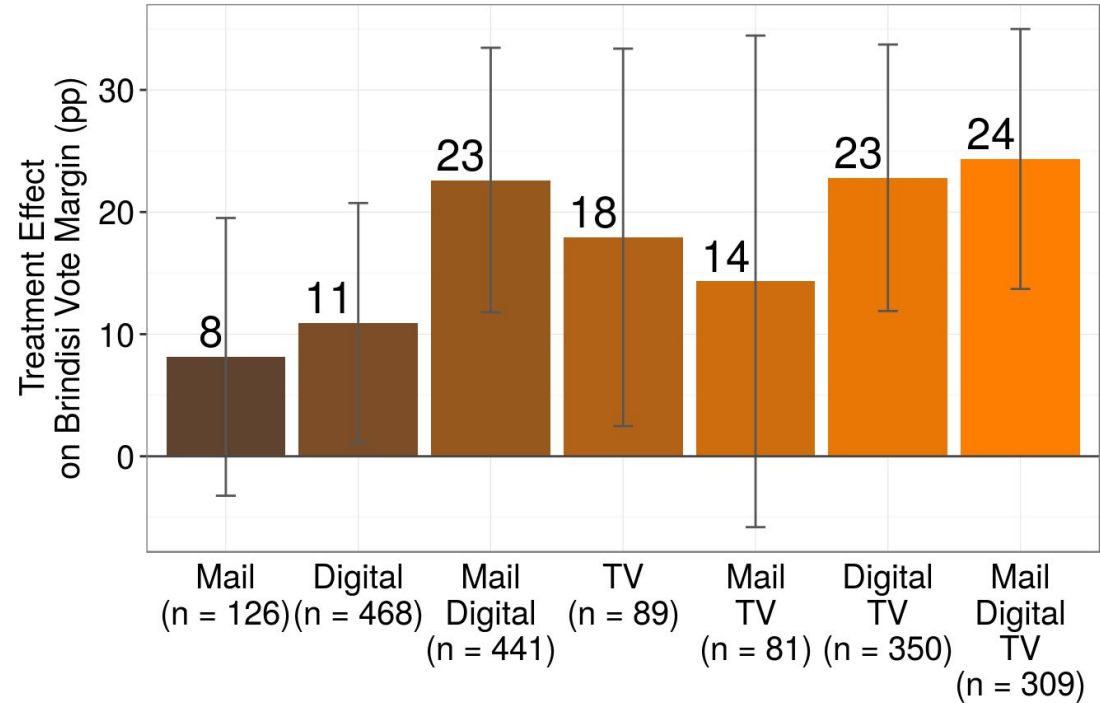
Mail + Digital + TV
Ads decreased
Tenney job approval
by 17pp.

Tenney Job Approval by Treatment Combinations
With no contact, 44% of voters approved of Tenney Job.



Large effect for vote margin as well

Brindisi Vote Margin by Treatment Combinations

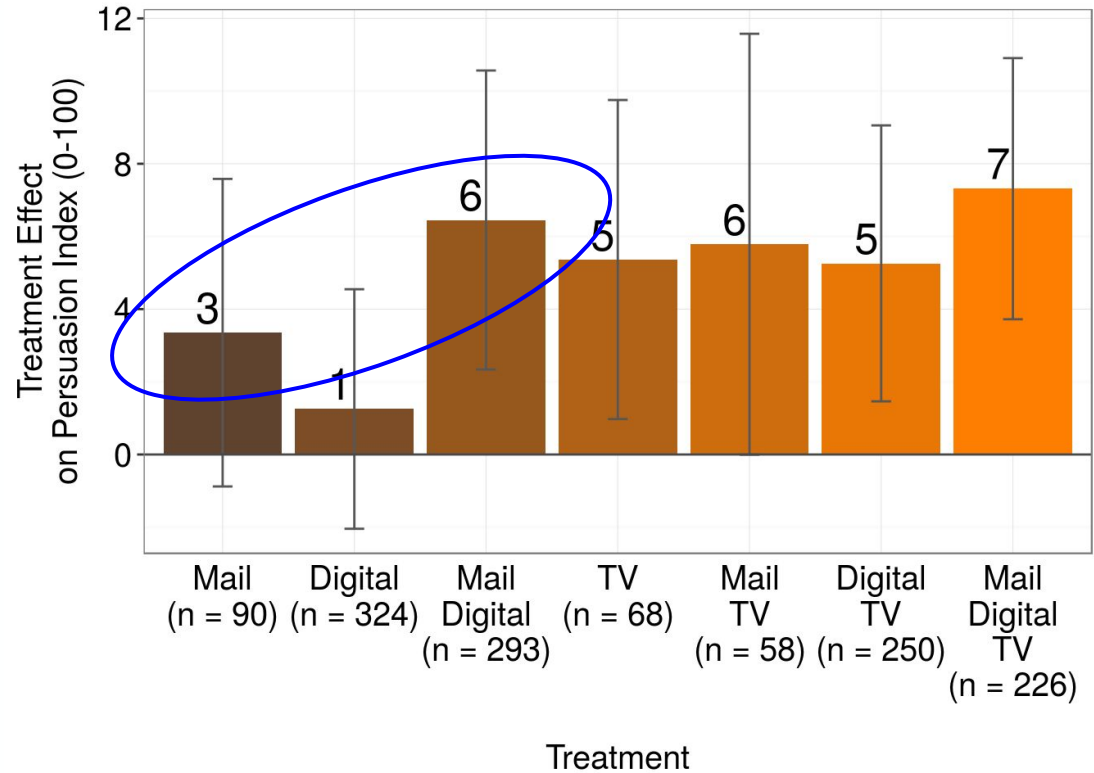


Pure control: -14

Tentatively:

- Effects of mail and digital (absent TV) were additive--they complemented each other

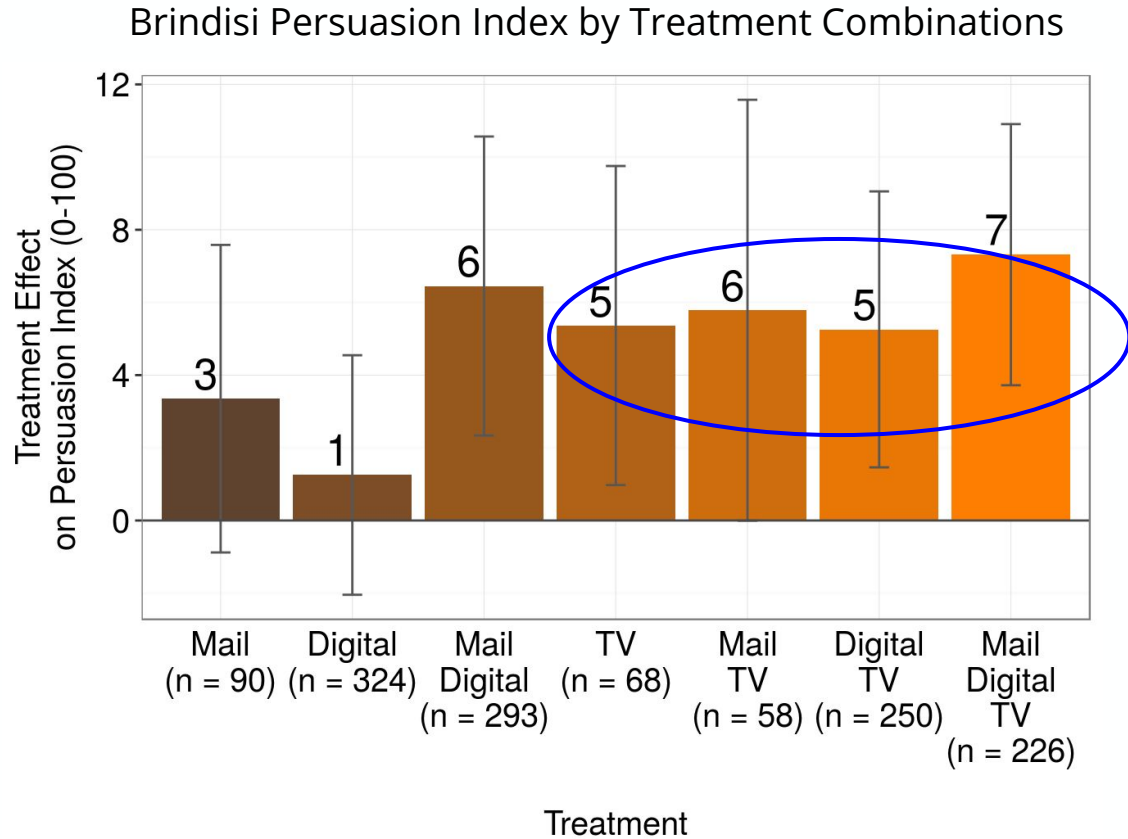
Brindisi Persuasion Index by Treatment Combinations



Control level = 47

Tentatively:

- Mail and digital did not add much to the effect of TV



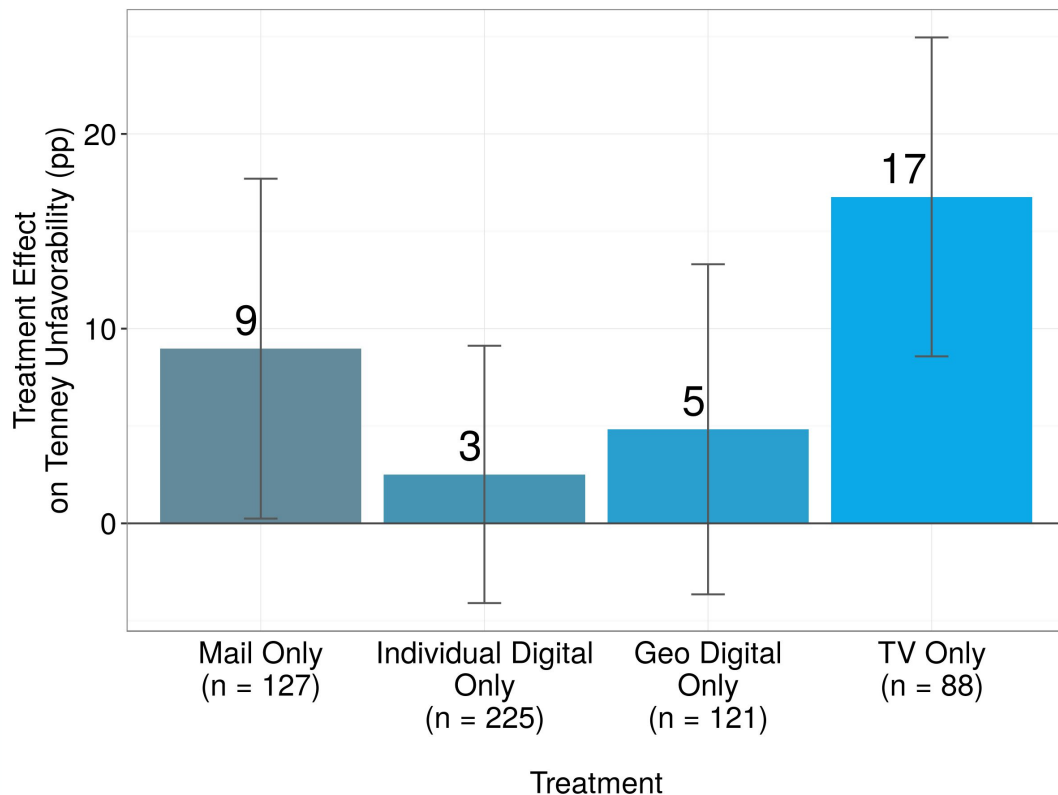
Control level = 47

Why does TV look better in this broken-out analysis?

- There was some diminishing returns* across mode, especially with television
- Television only aired in one of three markets in district (Binghamton), thus providing a quieter environment for mail and digital in other two markets
- Within Binghamton, 3/4ths of voters received some sort of digital, and half received mail, so only 1 of 8 voters received TV alone. This layering placed television at a disadvantage overall
- We'll examine cost per vote for overall topline and modes by themselves

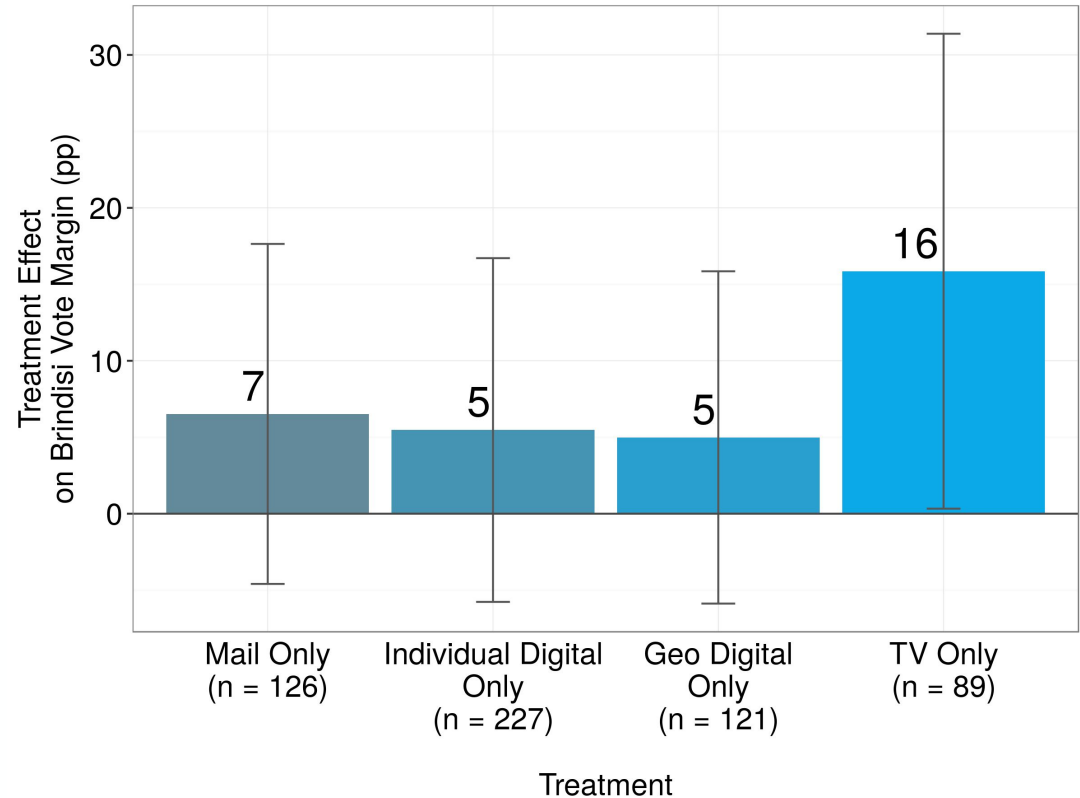
If you *had* to pick only one mode, it looks like TV increased Tenney unfavorability the most (low n size though)

One-mode only, Tenney Unfavorability
With no contact, 34% of voters had unfavorable view of Tenney.



Same result for vote margin

One-mode only, Brindisi vote margin
With no contact, vote margin was -14 points.



Cost Efficiency

All modes had impressive effects, with digital modes producing votes most efficiently

Mode	Vote Margin Effect	Voters Targeted	Votes generated	Cost	Cost per Targeted Voter	Votes per \$1k	Cost per Dem vote
Direct Mail	7.0pp	2,692	188	\$9,691	~\$3.60	19	\$51
Individually Targeted Digital	7.8pp	25,000	1,675	\$27,144	~\$1.10	62	\$16
Geo Targeted Digital	9.3pp	116,557	10,490	\$155,886	~\$1.30	67	\$15
TV	6.8pp	84,883	5772	\$139,686	~\$1.60	41	\$24

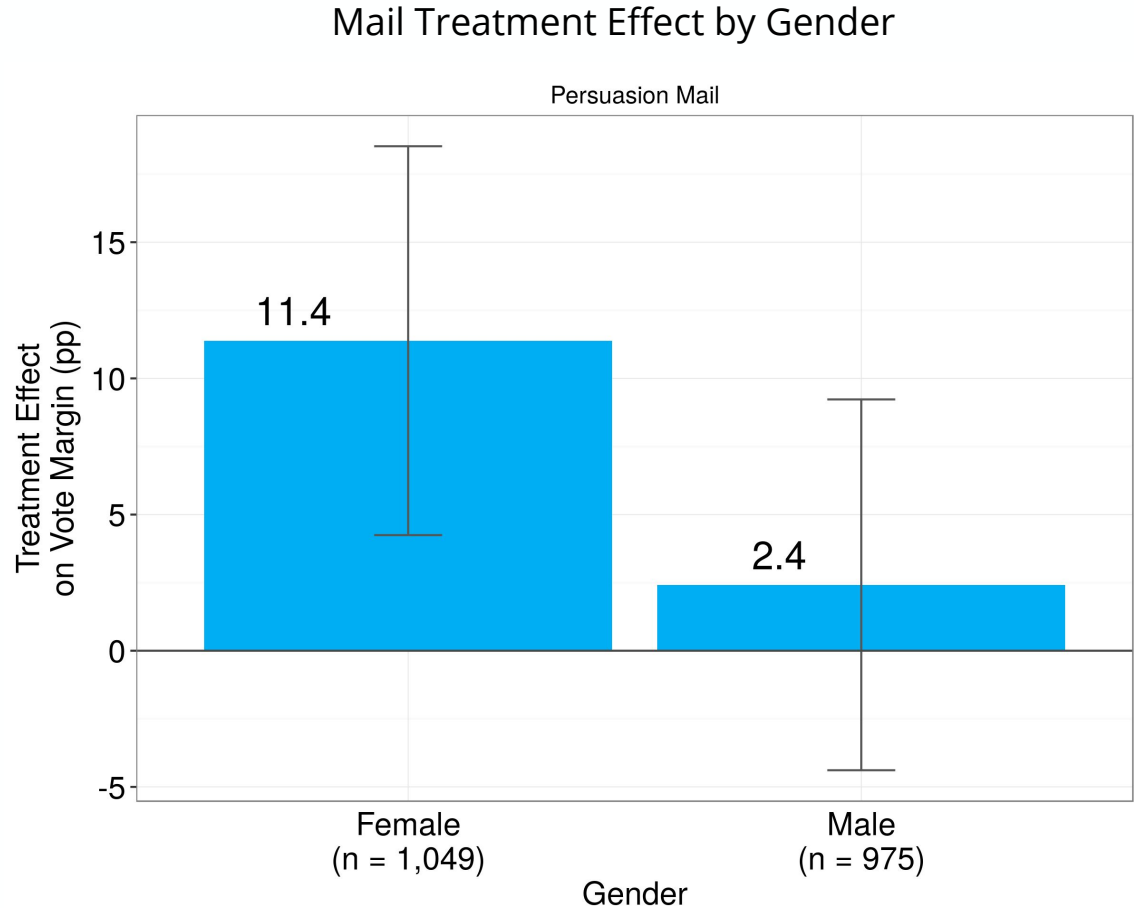
Restricting to effect sizes when modes are *alone*, television would have been most efficient

Mode	Vote Margin Effect	Voters Targeted	Votes generated	Cost	Cost per Targeted Voter	Votes per \$1k	Cost per vote
Mail Alone	8pp	2,692	215	\$9,691	~\$3.60	22	\$45
Indiv Targ'd Digital alone	6pp	25,000	1,500	\$27,144	~\$1.10	55	\$18
Geo Targeted Digital Alone	6pp	116,557	6,993	\$155,886	~\$1.30	45	\$22
TV Alone	18pp	84,883	15,279	\$139,686	~\$1.60	109	\$9

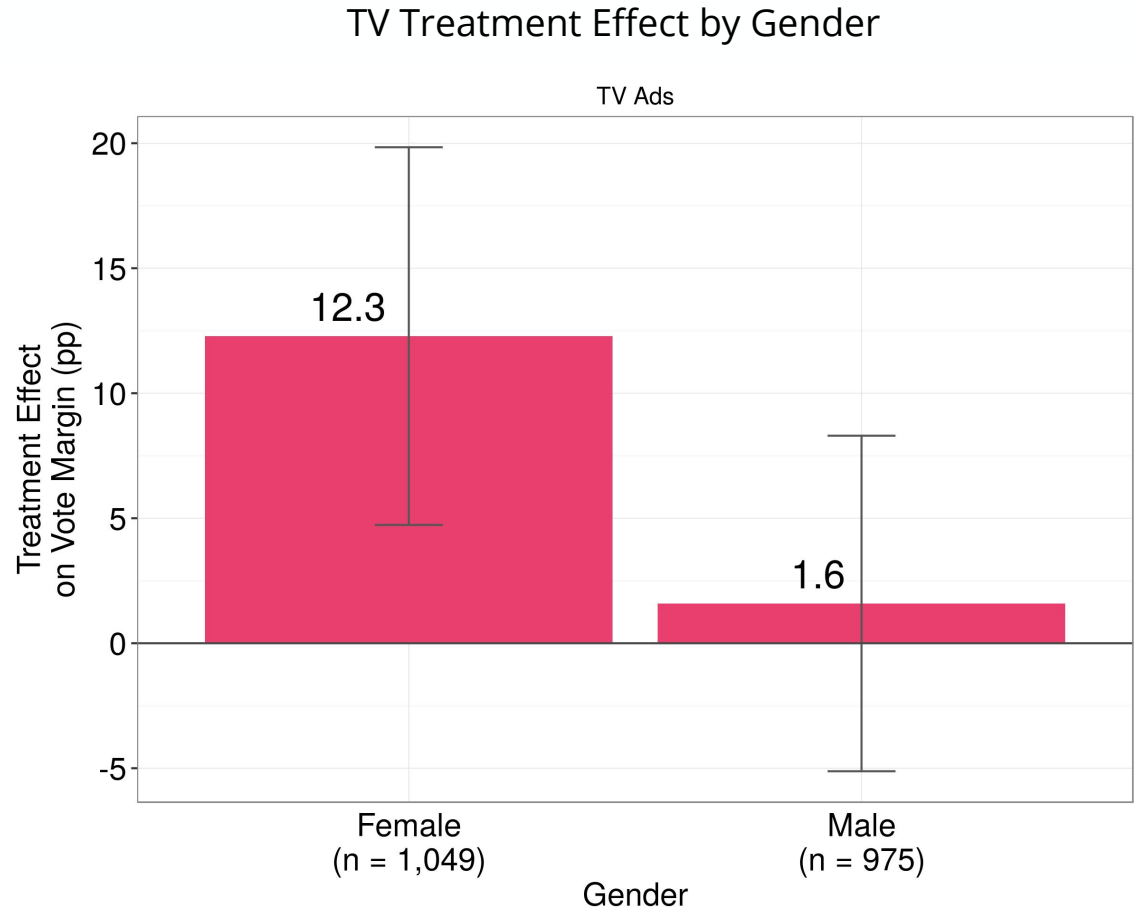
Subgroup Results

Gender

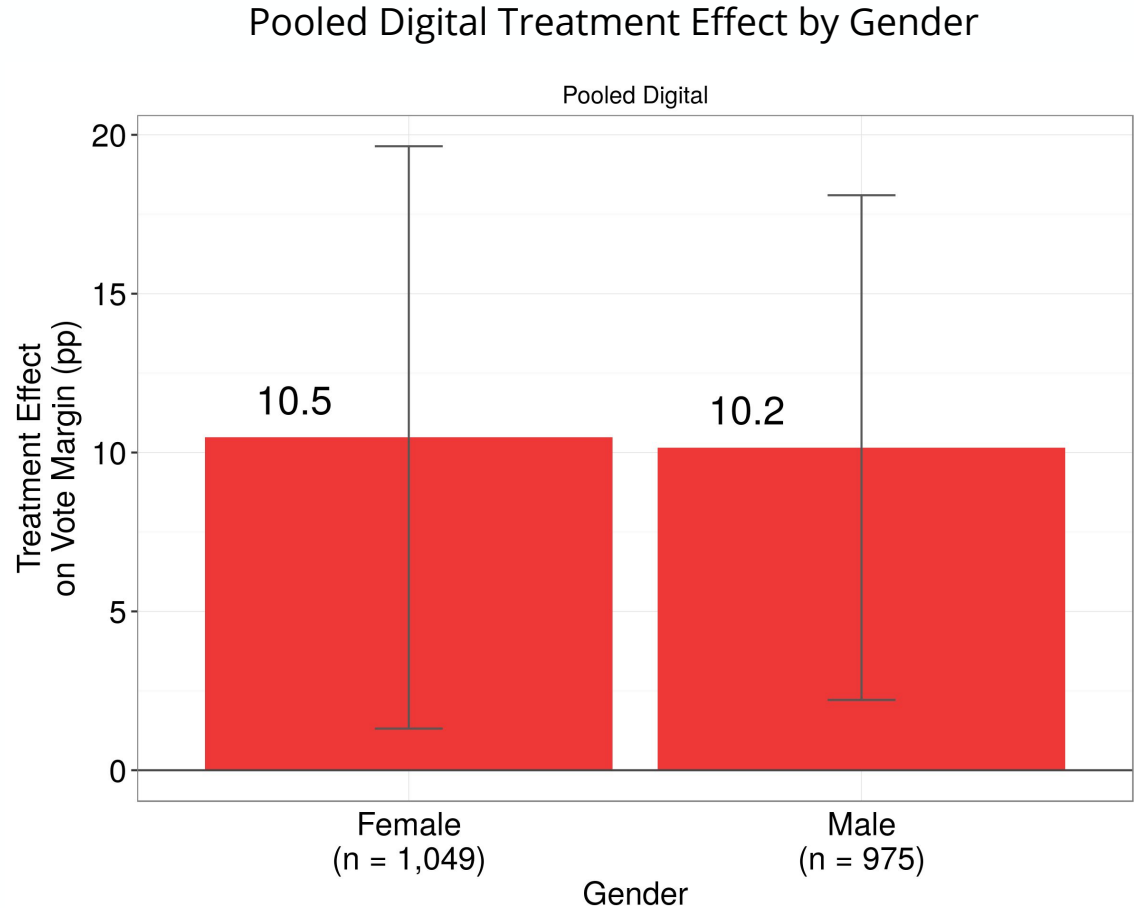
Women appeared
to be more
responsive to mail...



...and TV.



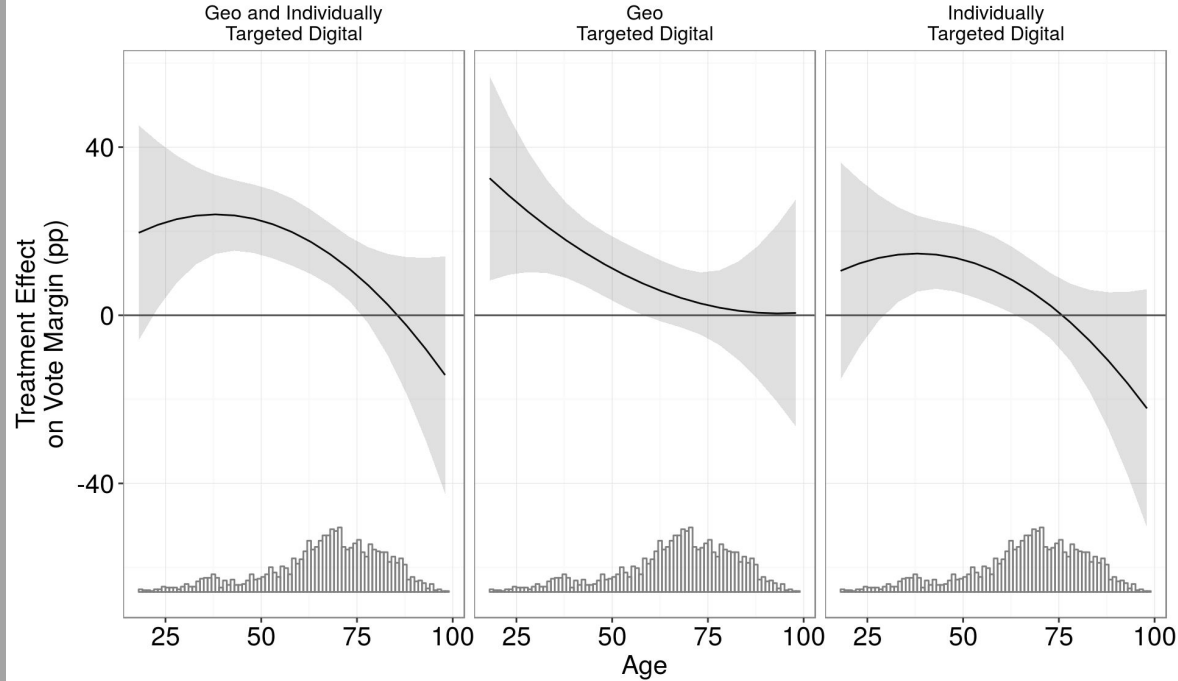
However, men and women appeared equally persuaded by digital ads.



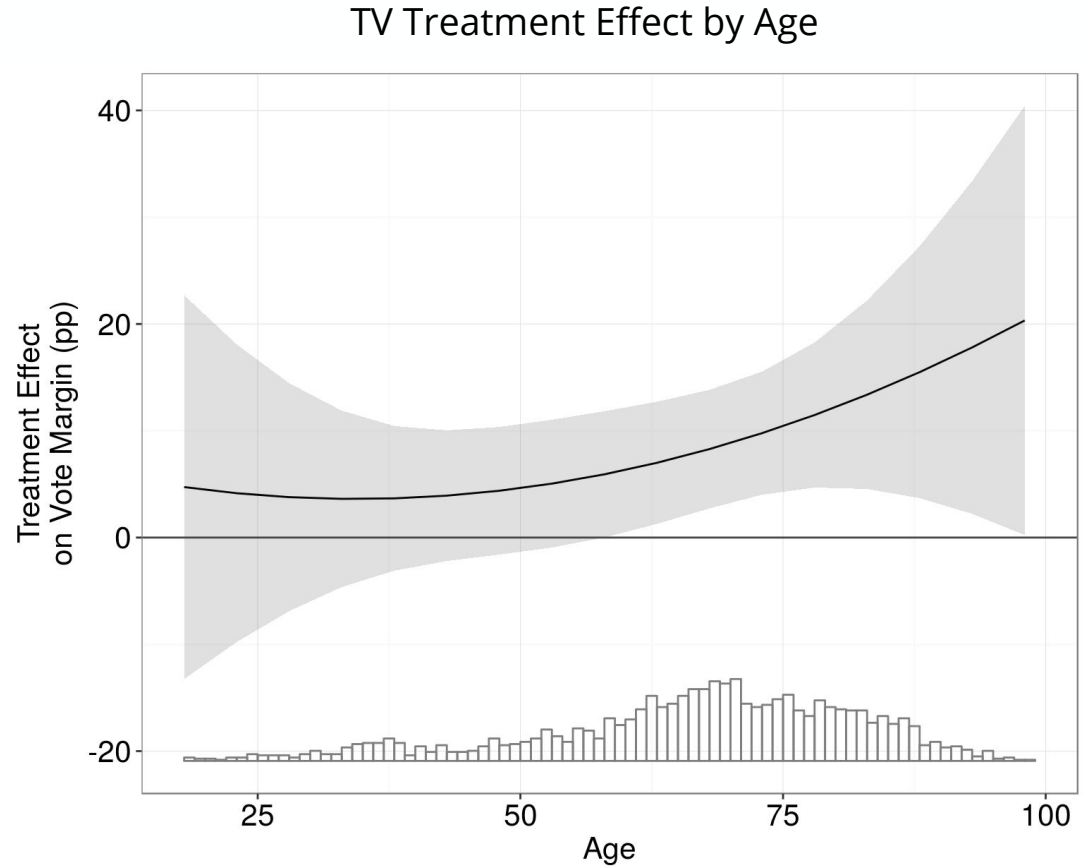
Age

The effects of digital ads on vote margin were higher among younger voters.

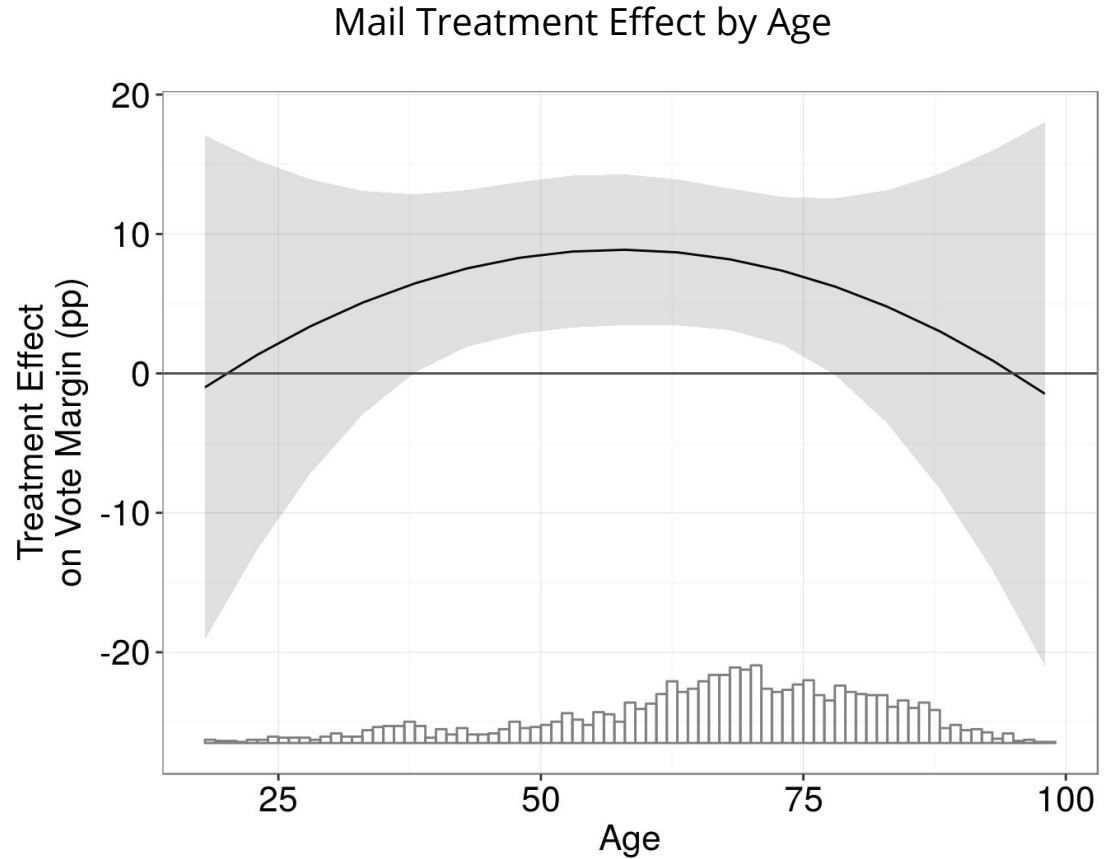
Digital Treatment Effects by Age



While TV may have been more effective among older voters.



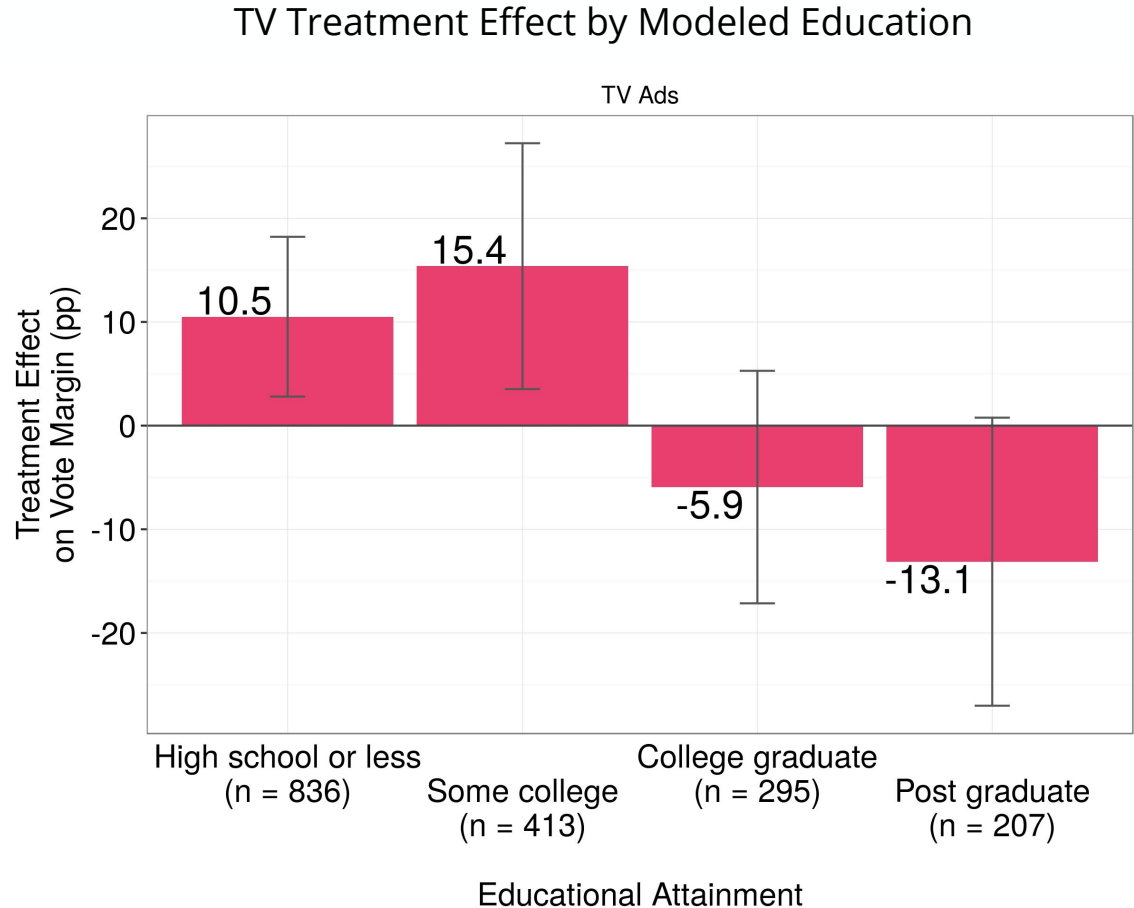
The effects of mail generally did not vary much by age, but may have been more effective among people in the middle of the age spectrum.



Education

TV ads may have been more effective among viewers with less (modeled) education.

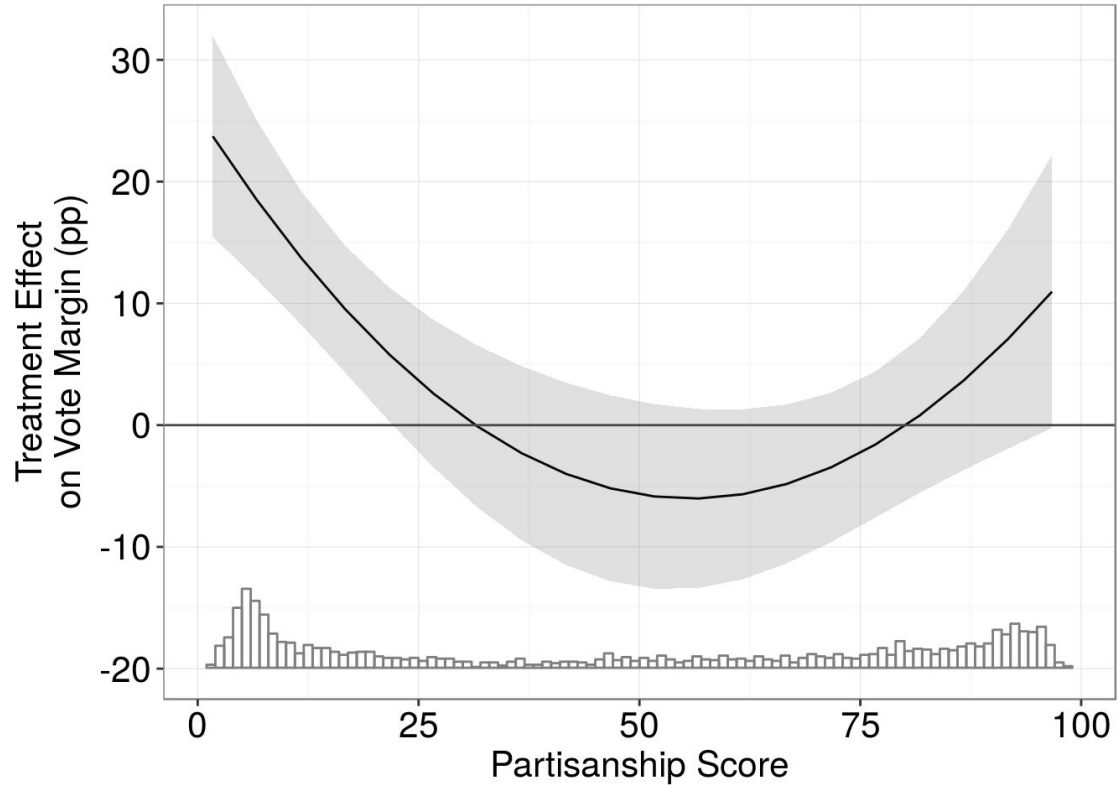
Differences by education were not apparent for mail and digital ads.



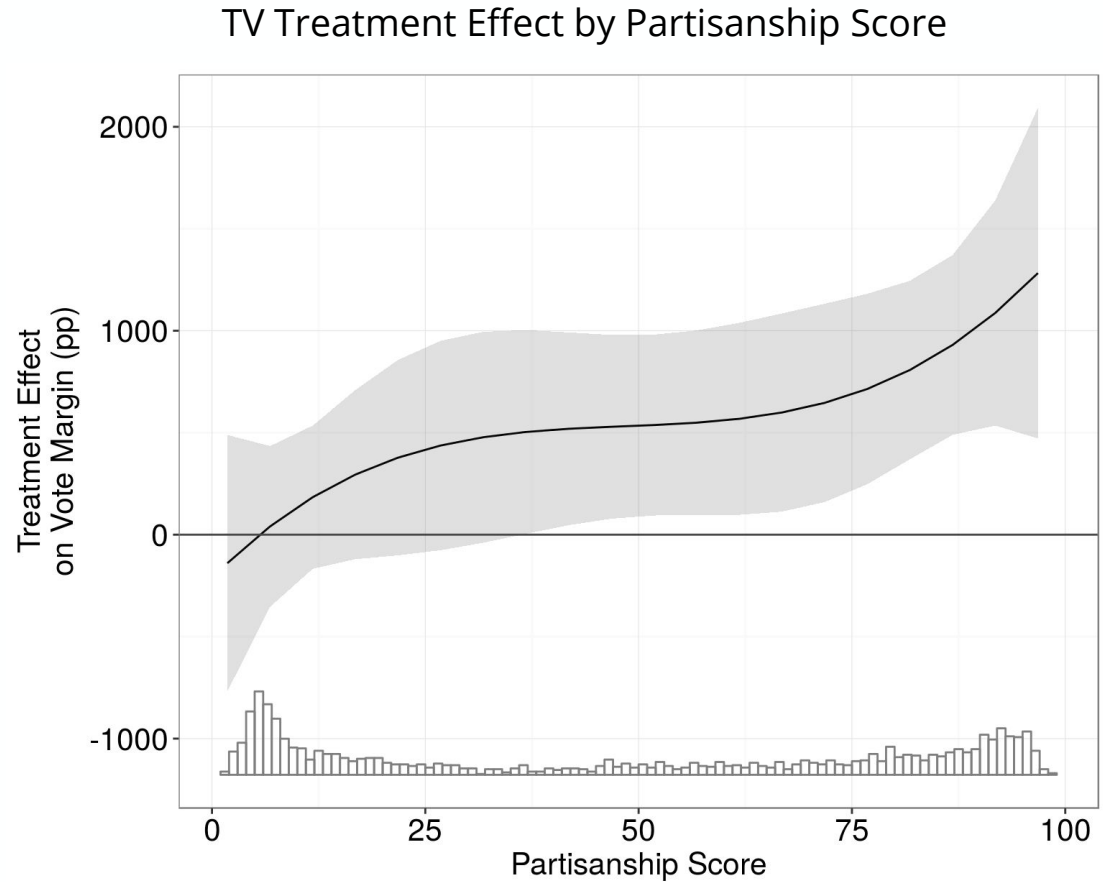
Partisanship Score

Mail may have persuaded Republicans more than Democrats.

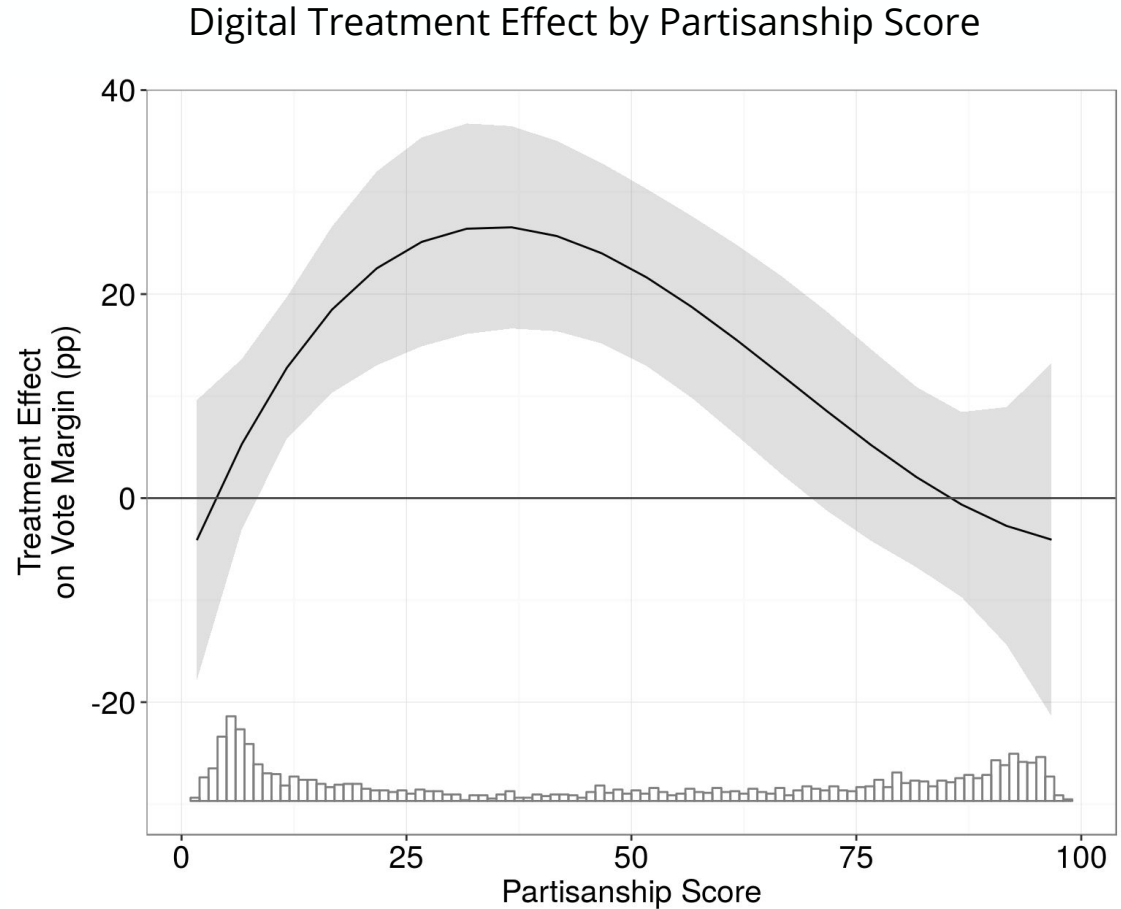
Mail Treatment Effect by Partisanship Score



While television ads may have persuaded Democrats more than Republicans.

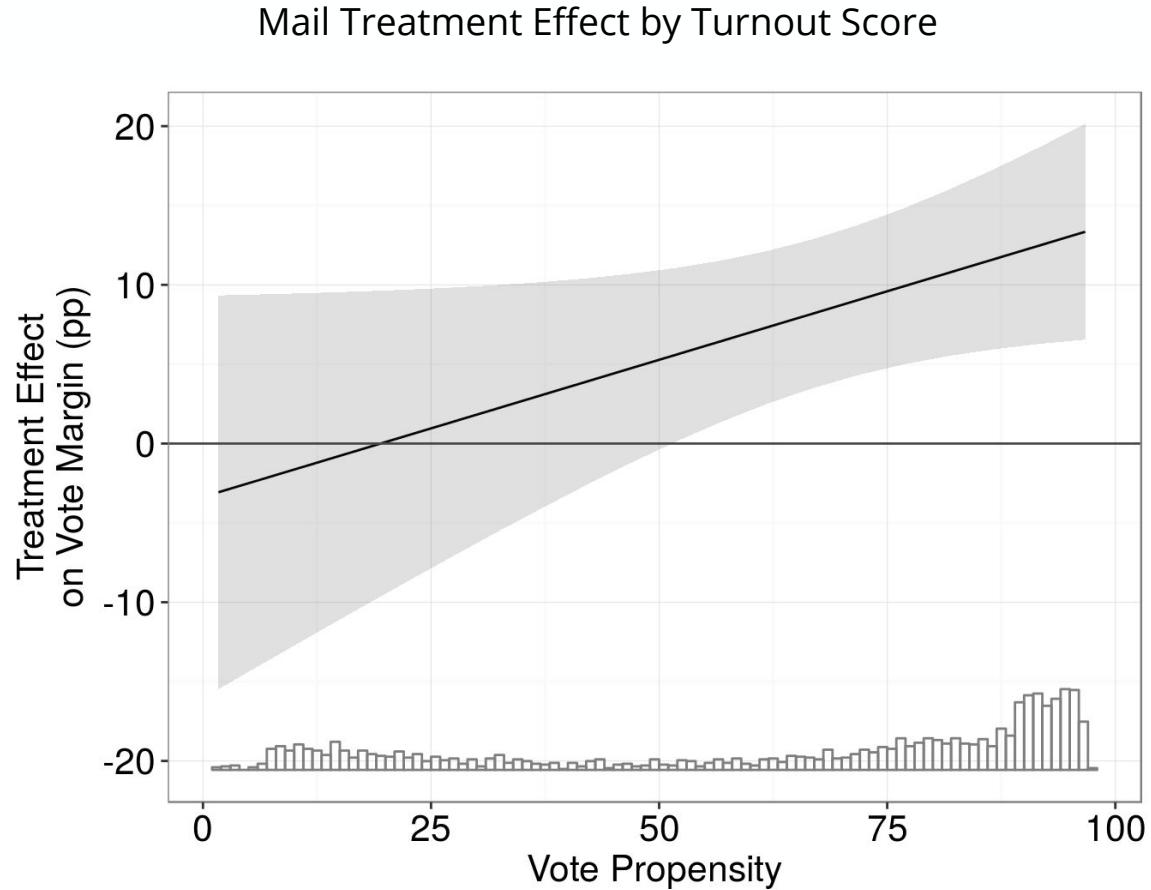


Finally, digital ads may have had the biggest effects among voters in the middle of the partisan spectrum.



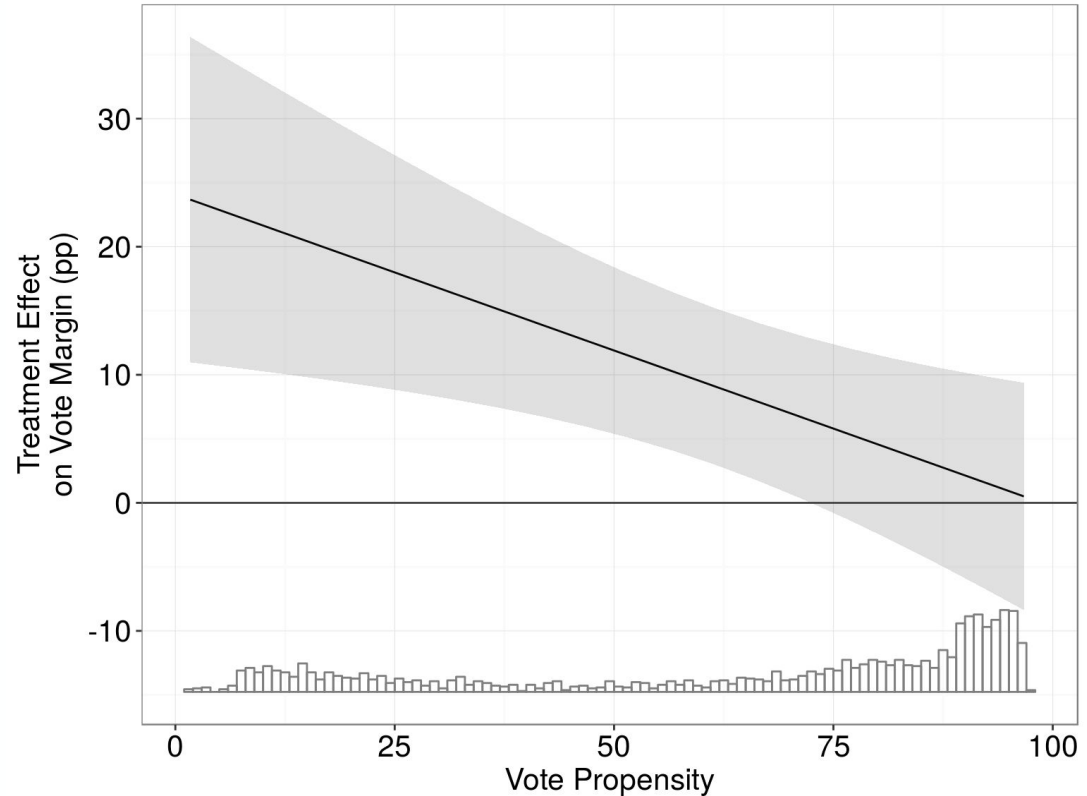
Turnout Score

Voters with higher 2018 turnout scores may have been influenced more by mail...

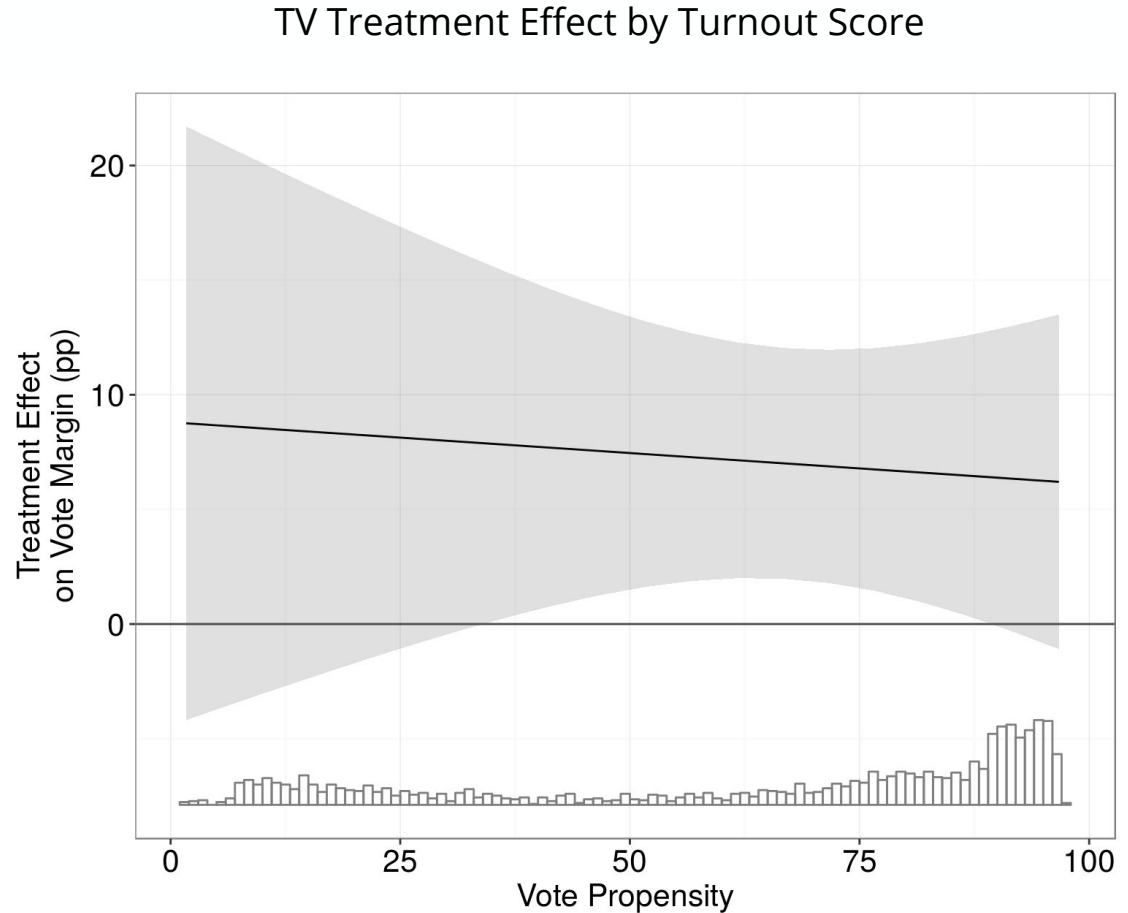


...while voters with lower turnout scores seem to have been persuaded more by digital ads.

Digital Treatment Effects by Turnout Score



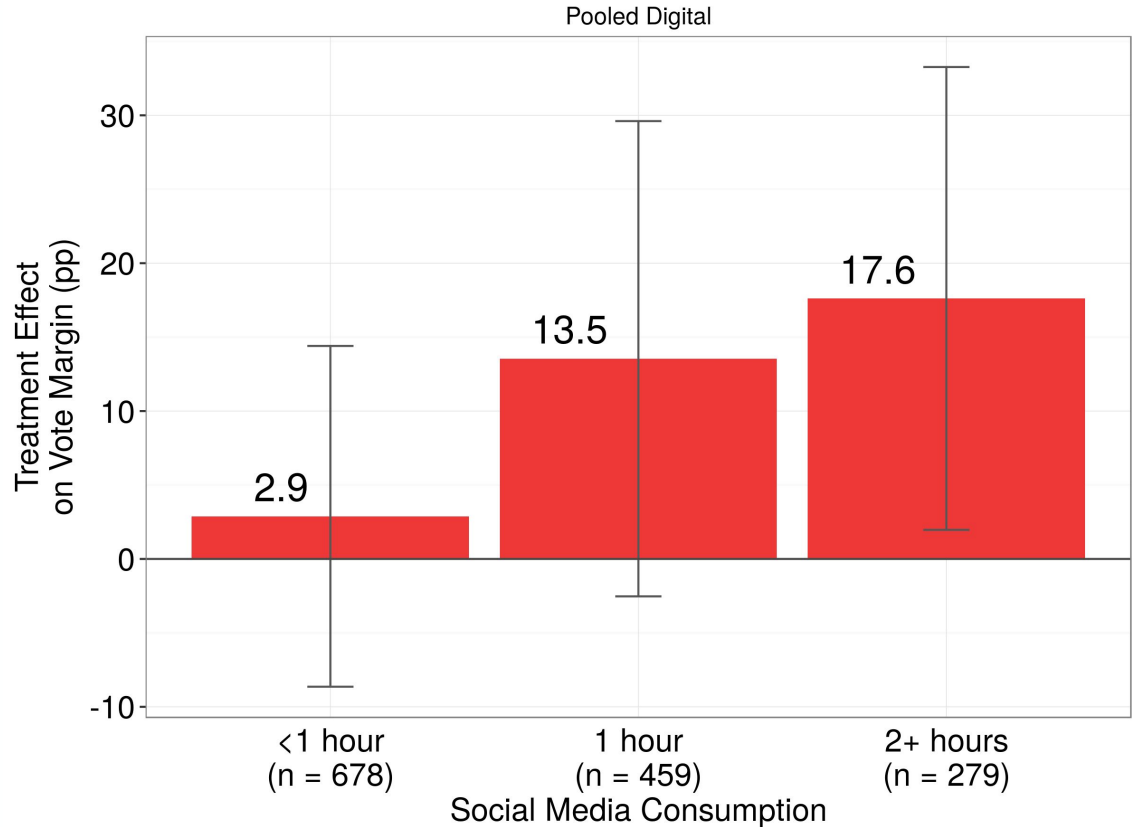
The persuasive effect of TV did not shift based on voter turnout score.



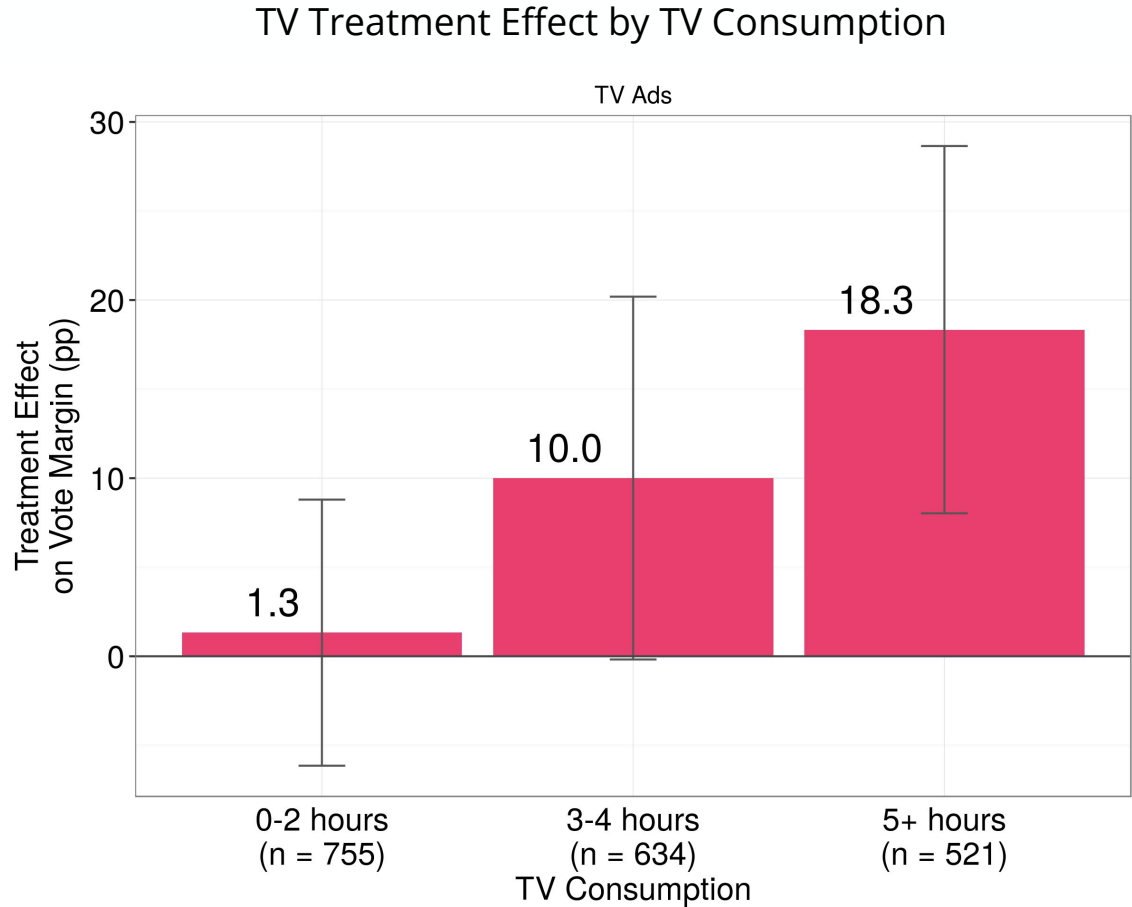
Media Consumption

Voters who reported spending more time on social media showed larger effects for digital ads.

Digital Treatment Effects by Social Media Consumption



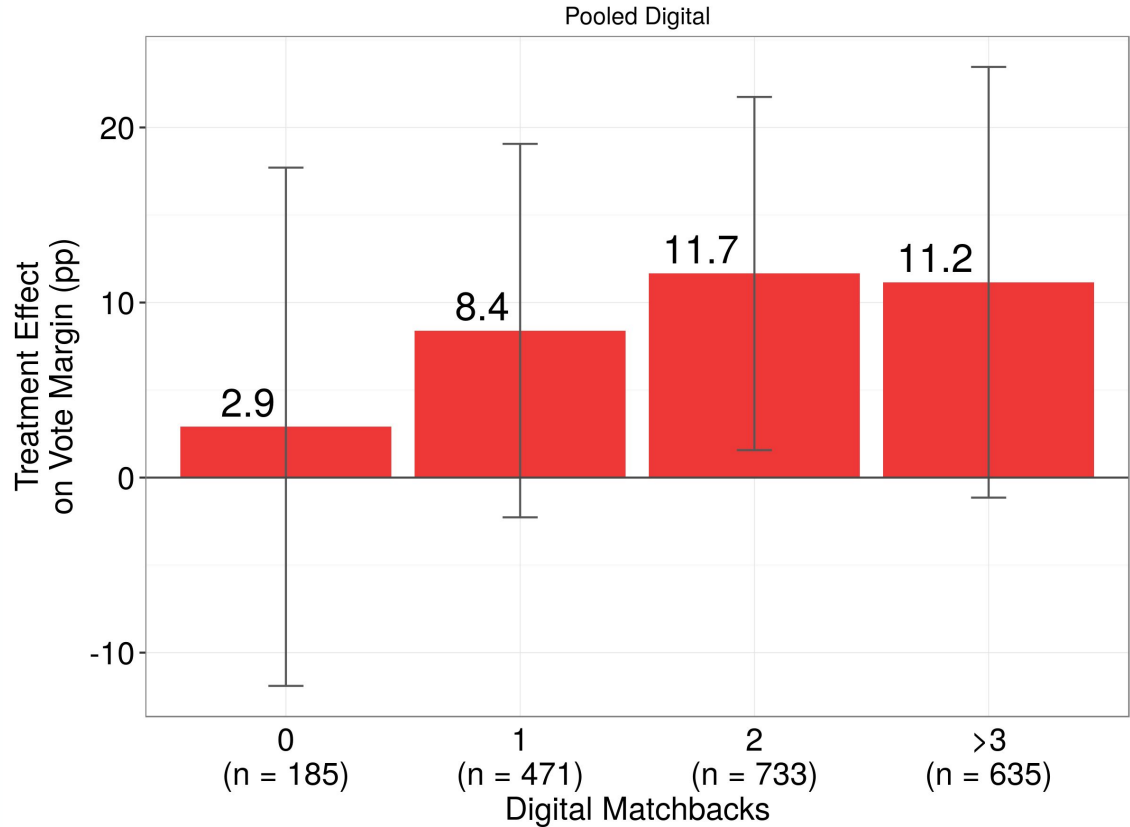
And voters who reported watching more TV were more influenced by TV ads.



Matchbacks

Voters who found a digital match with more than two onboarders were probably not more persuaded than those with 1-2 matchbacks.

Pooled Digital Treatment Effect by Matchback Number



Summary & Discussion

Summary

- Mail, digital, and television modes all had impressive effects on Brindisi vote margin, Tenney unfavorability, Tenney job approval, and trust to handle healthcare.
- Both digital modes proved effective, and their combination had additive effects on persuasion targets--especially in absence of TV.
- Both digital modes and TV were very cost effective, producing around 50 votes per \$1,000, or \$20 per vote.
- Mail was less cost effective (~20 votes per \$1,000), though larger runs with fewer pieces (4-6 may be as good as 8) might change that.

Summary (cont.)

- In some cases, different modes may have complementary effect on different parts of the target population.
- Mail may persuade voters with higher turnout scores, while digital ads appeared to be more influential among lower turnout score targets.
- Also, digital ads appear to be more effective among younger voters, while television ads probably influenced older voters more.
- Overall, mail and digital effects were additive. In the Binghamton DMA, however, mail and digital had modest effects on top of television--a more tentative finding given uncertainty in results.
- Decay results coming!

Discussion and Takeaways

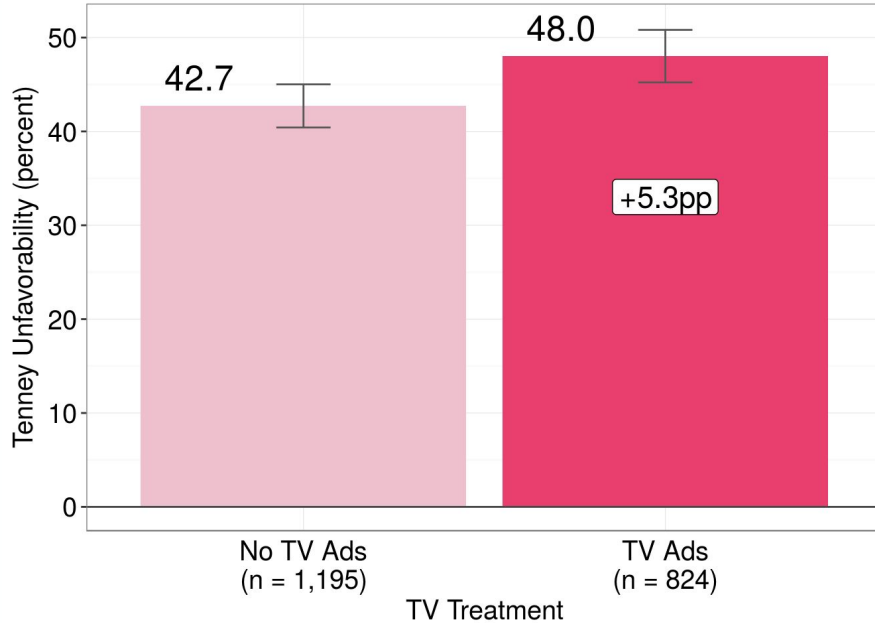
- We should be cautious about projecting these estimates into a more crowded fall electoral environment. There was no competing political communications that we are aware of when these programs ran.
- Consider investing across modes and across types of digital targeting. Mail and digital and pick up the slack where TV is too expensive.
- Divvying up the pie:
 - Can use self-reported media consumption from multi-modal surveys to understand where voters are spending their time.
 - Could then model self-reports onto electorate and target
 - And use experiments to understand effects across, say, partisanship

Thank You HMP, GMMB,
Rising Tide, Metropolitan
Public Strategies, Three
Point Media, GSG and PPP!

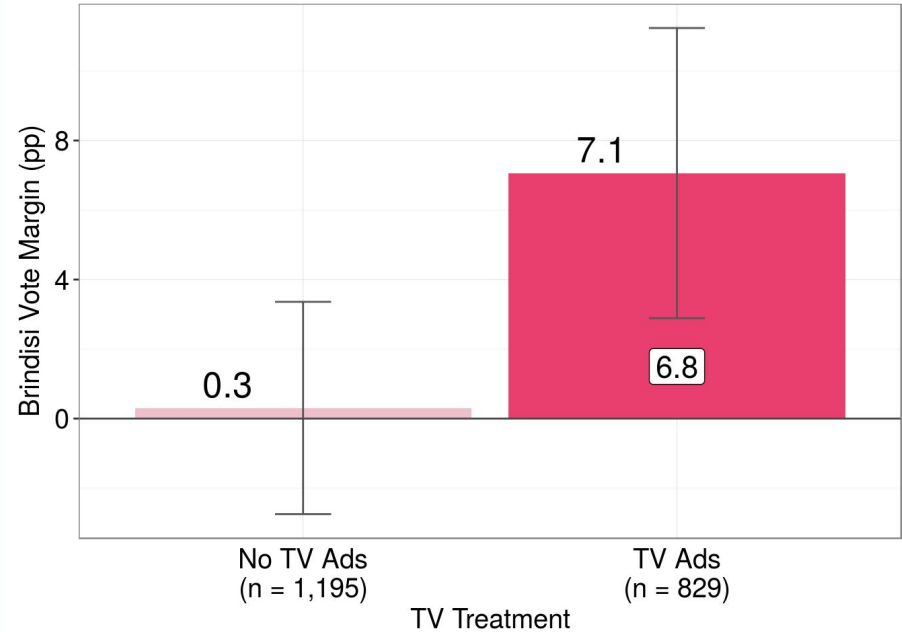
Results: TV

Note: TV DMAs were not randomized to receive ads. As a result, we should interpret the results with some caution.

TV ads increased Tenney unfavorability by 5pp and Brindisi vote margin by 7pp



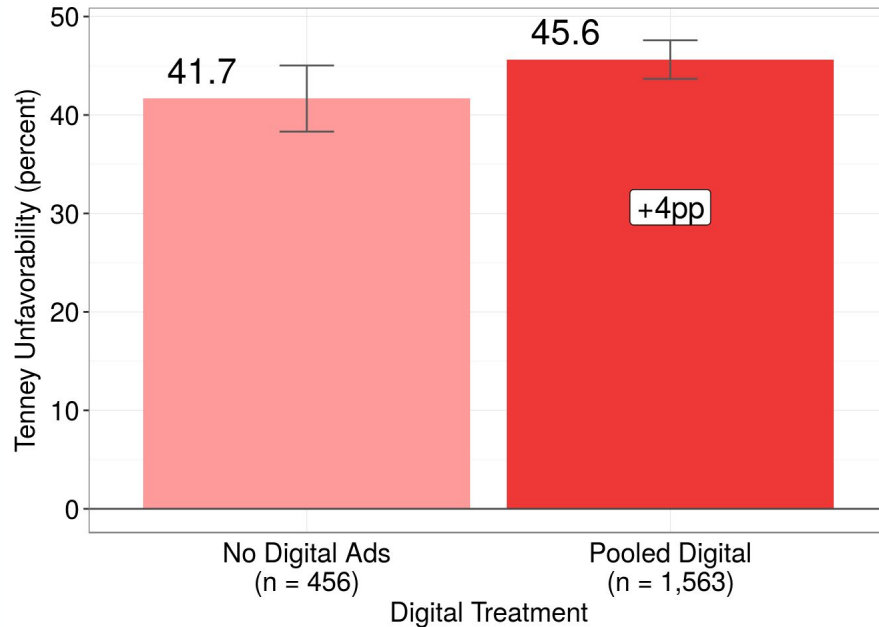
p = 0.03



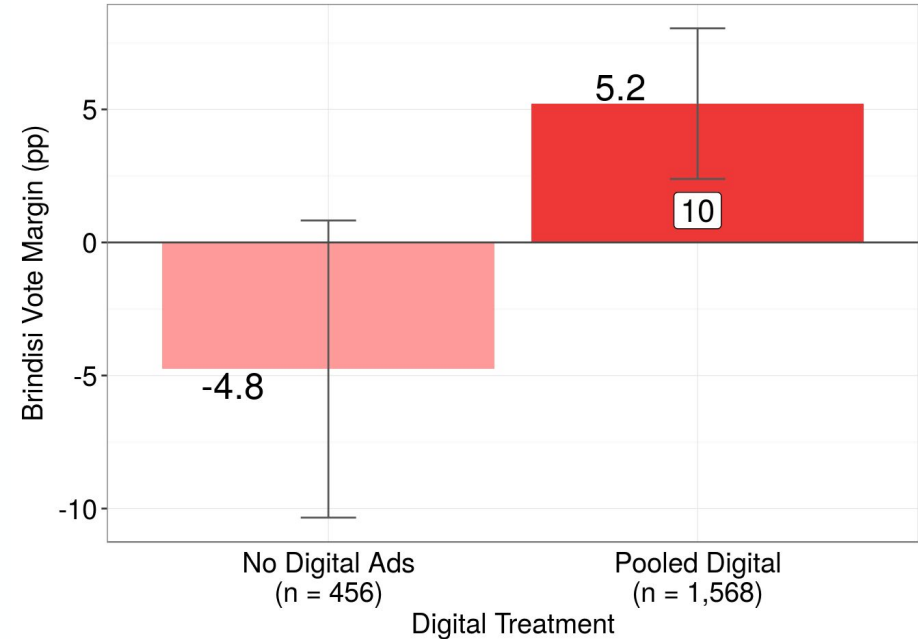
p = 0.03

Results: Digital

Digital ads overall increased Tenney unfavorability by 4pp and Brindisi vote margin by 10pp

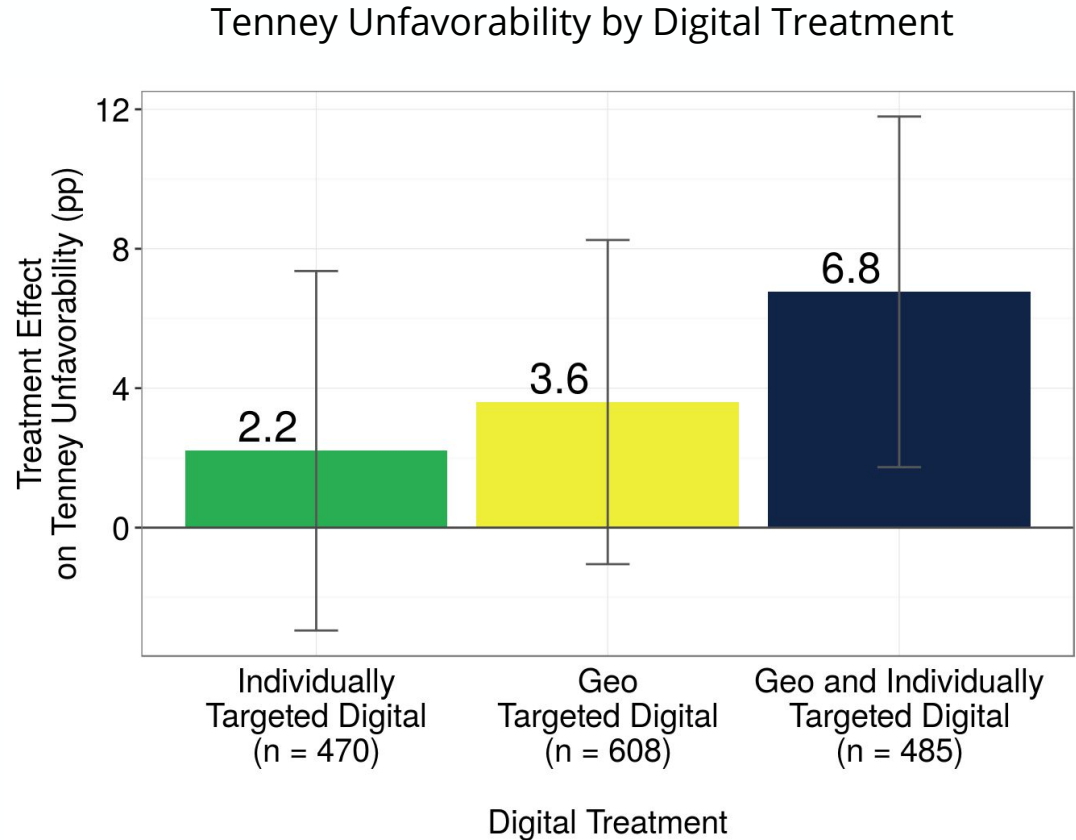


p = 0.1



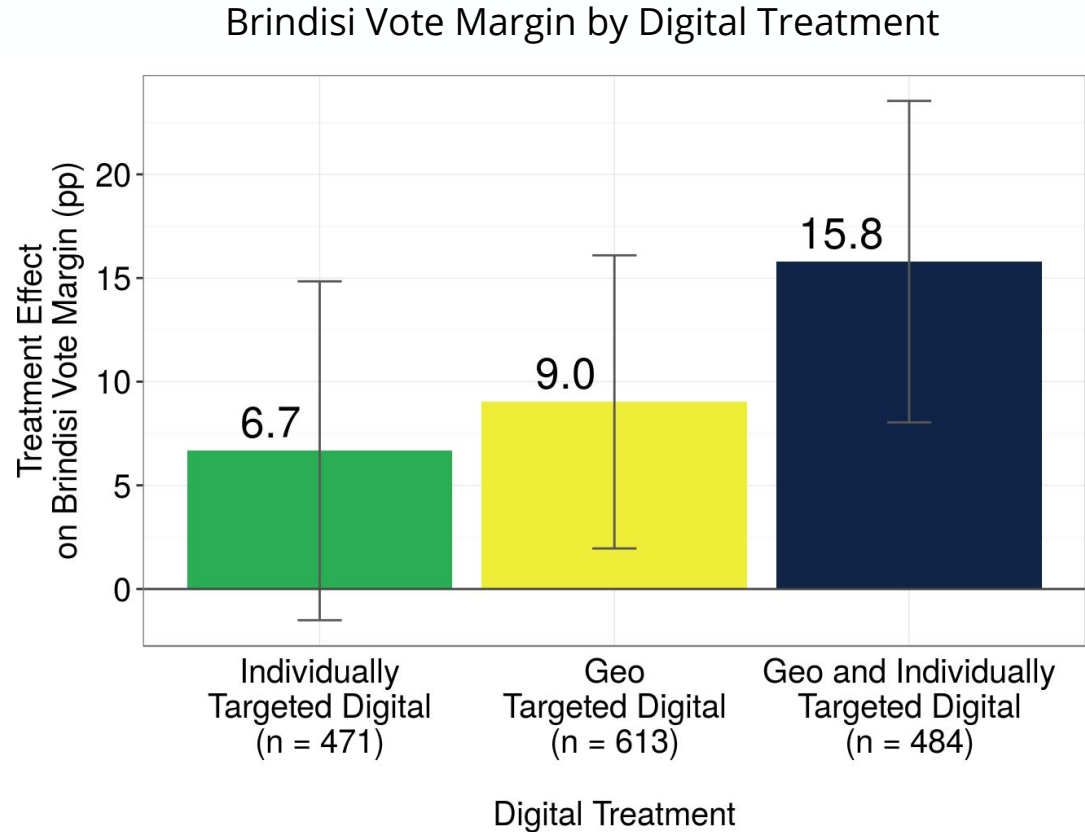
p = 0.01

The combination of geo and individually targeted digital increased Tenney unfavorability by 7pp.



p = 0.48 for individually targeted digital; p = 0.2 for geo targeted digital; p = 0.03 for combined digital targeting.

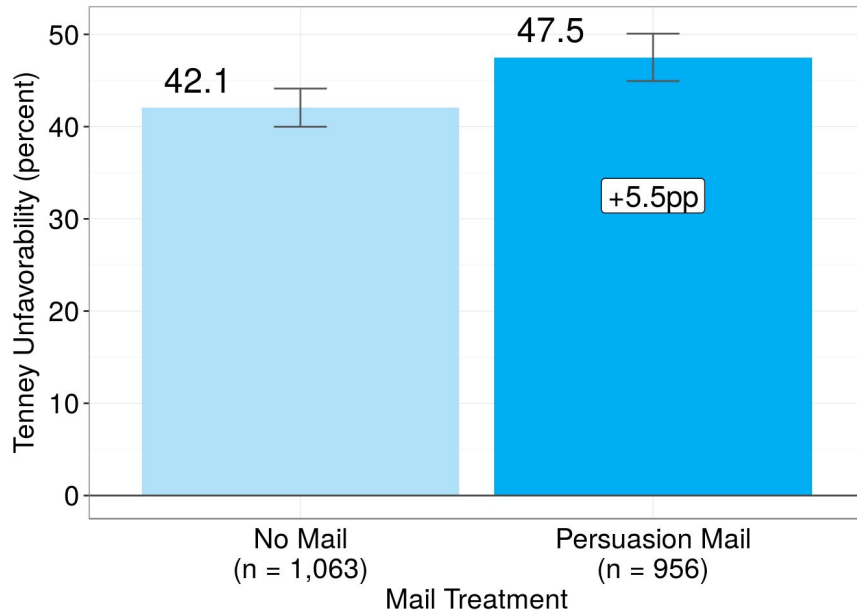
The combination of geo and individually targeted digital increased Brindisi vote margin by an impressive 16pp.



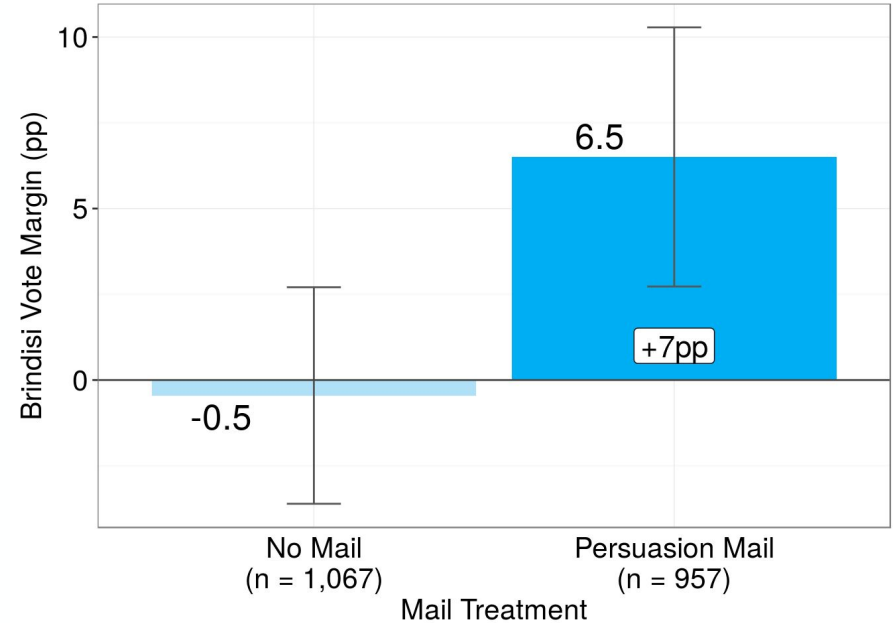
$p = 0.18$ for indiv-targeted digital; $p = 0.04$ for geo-targeted digital; $p < 0.01$ for combined digital targeting.

Results: Mail

Mail increased Tenney unfavorability by 6pp and Brindisi vote margin by 7pp

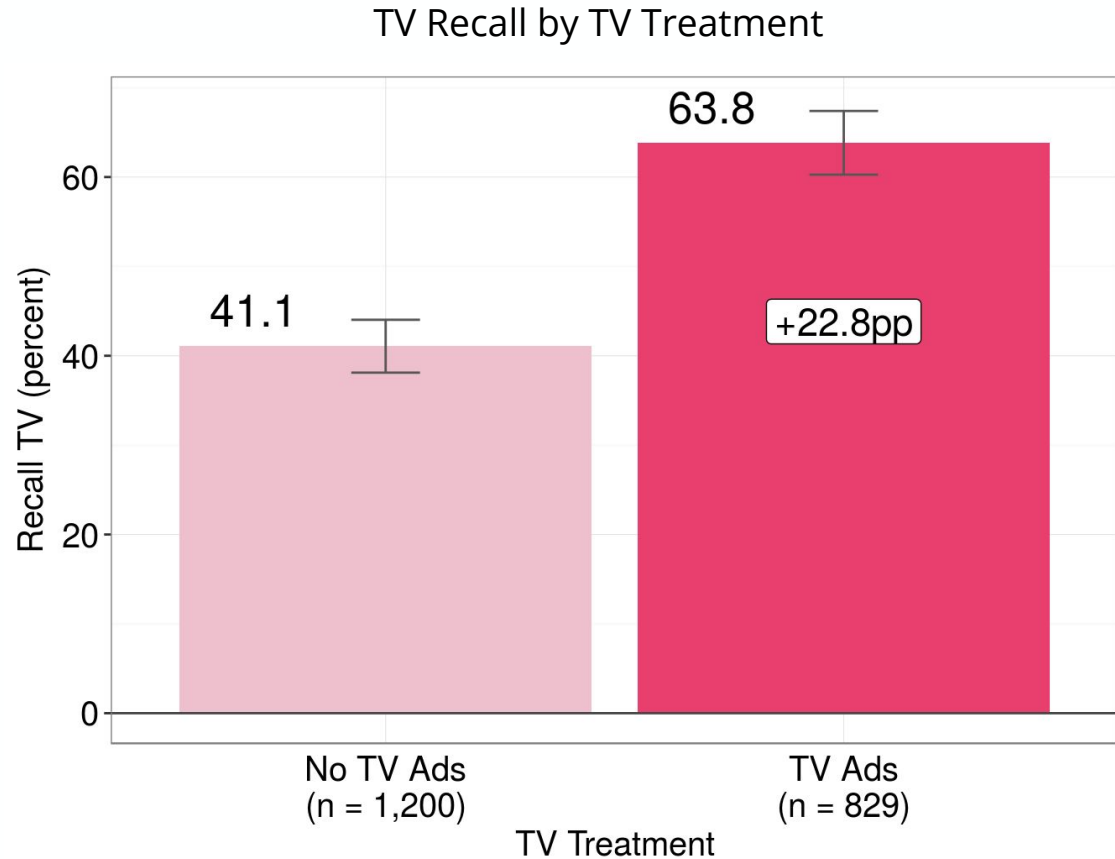


$p < 0.01$



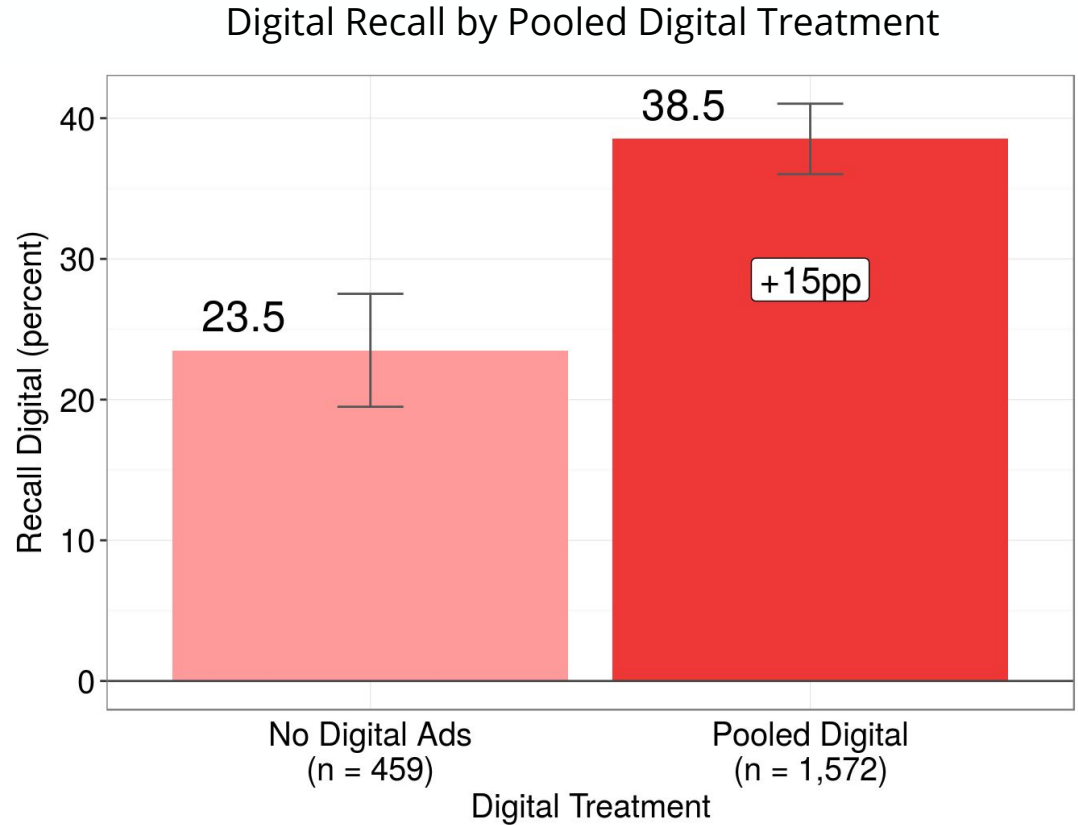
$p = 0.02$

TV recall was 23pp higher in the treatment group.



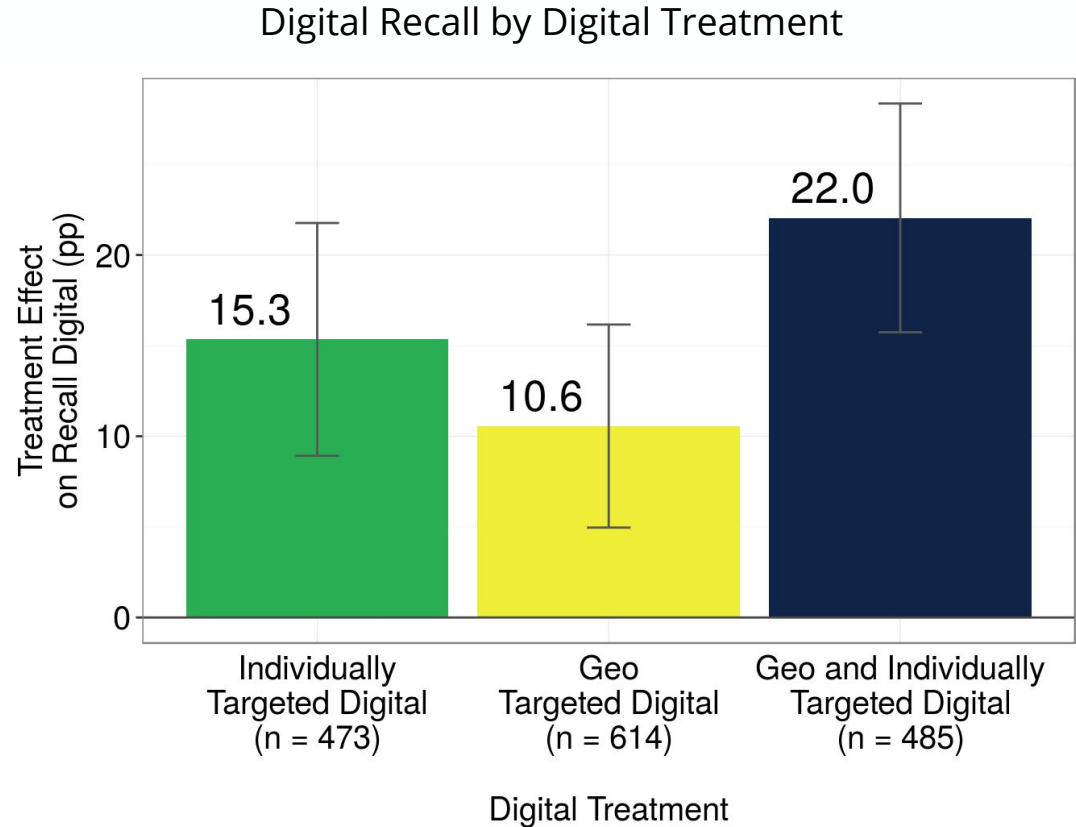
$p < 0.01$

Digital recall was 15pp higher in the treatment group.



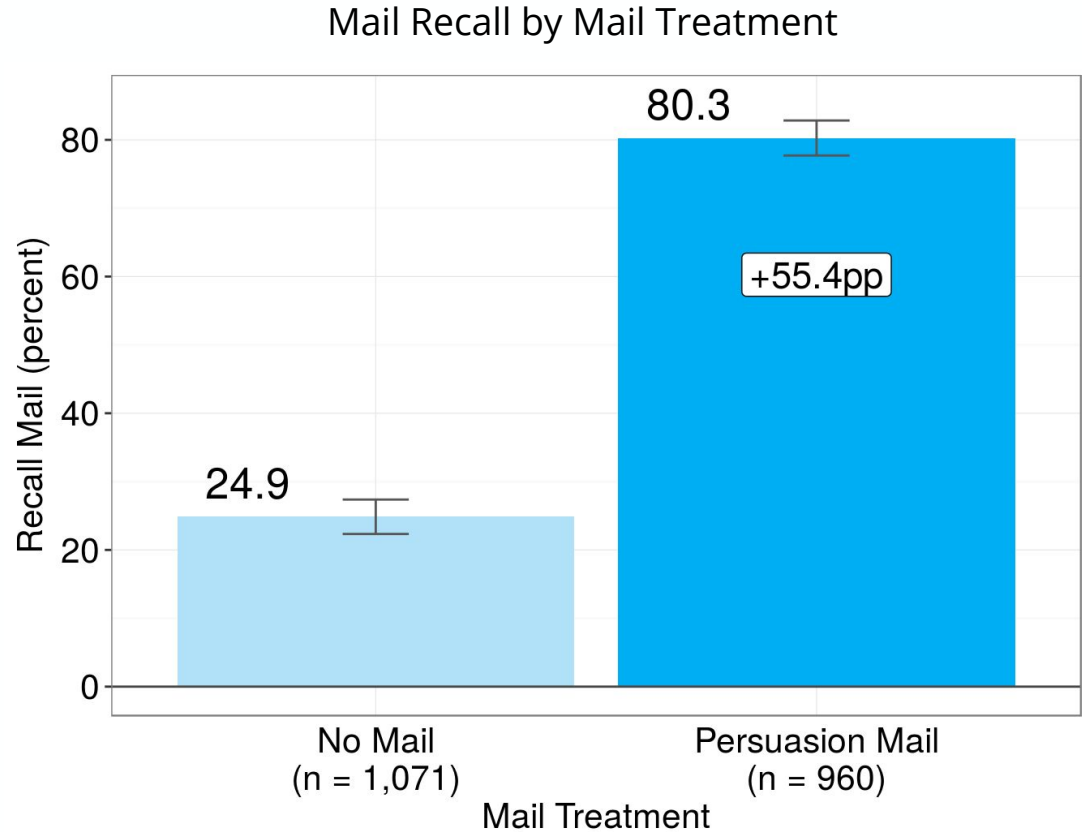
$p < 0.01$

The combination of geo and individually targeted digital had a recall rate 22pp higher than control.



$p < 0.01$ for indiv-targeted digital; $p < 0.01$ for geo-targeted digital; $p < 0.01$ for combined digital targeting.

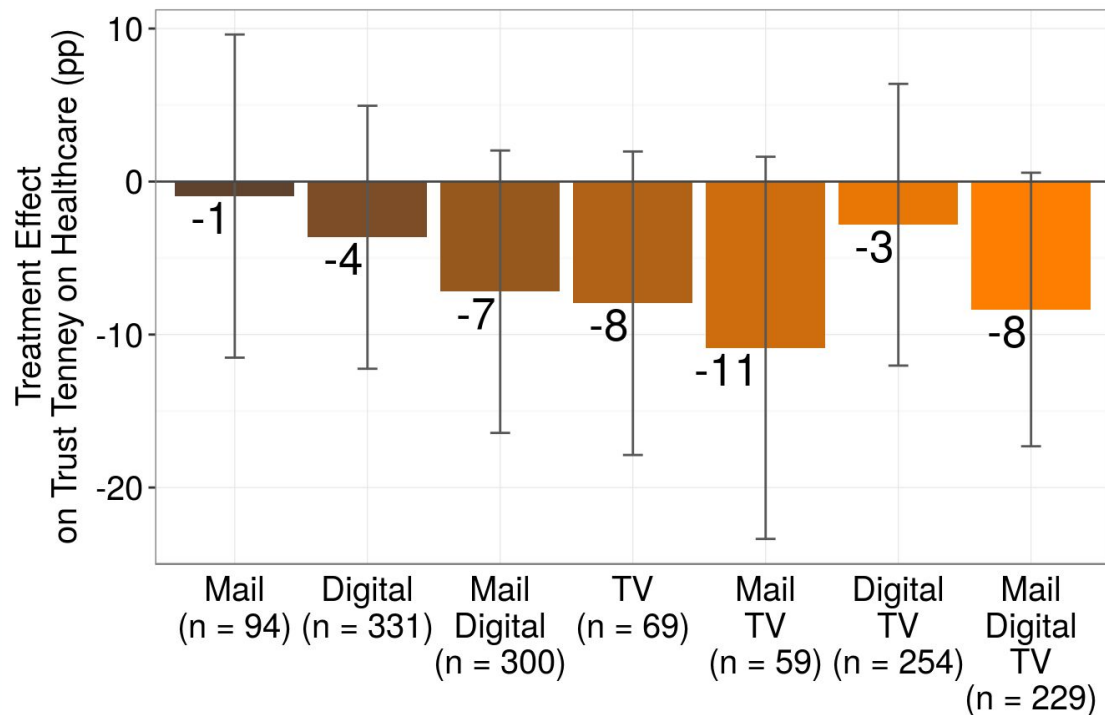
Mail recall was 55pp higher in the mail treatment group.



$p < 0.01$

Mail + Digital + TV
Ads decreased trust
in Tenney on
healthcare by 8pp.

Trust Tenney on Healthcare Issue by Treatment Combinations

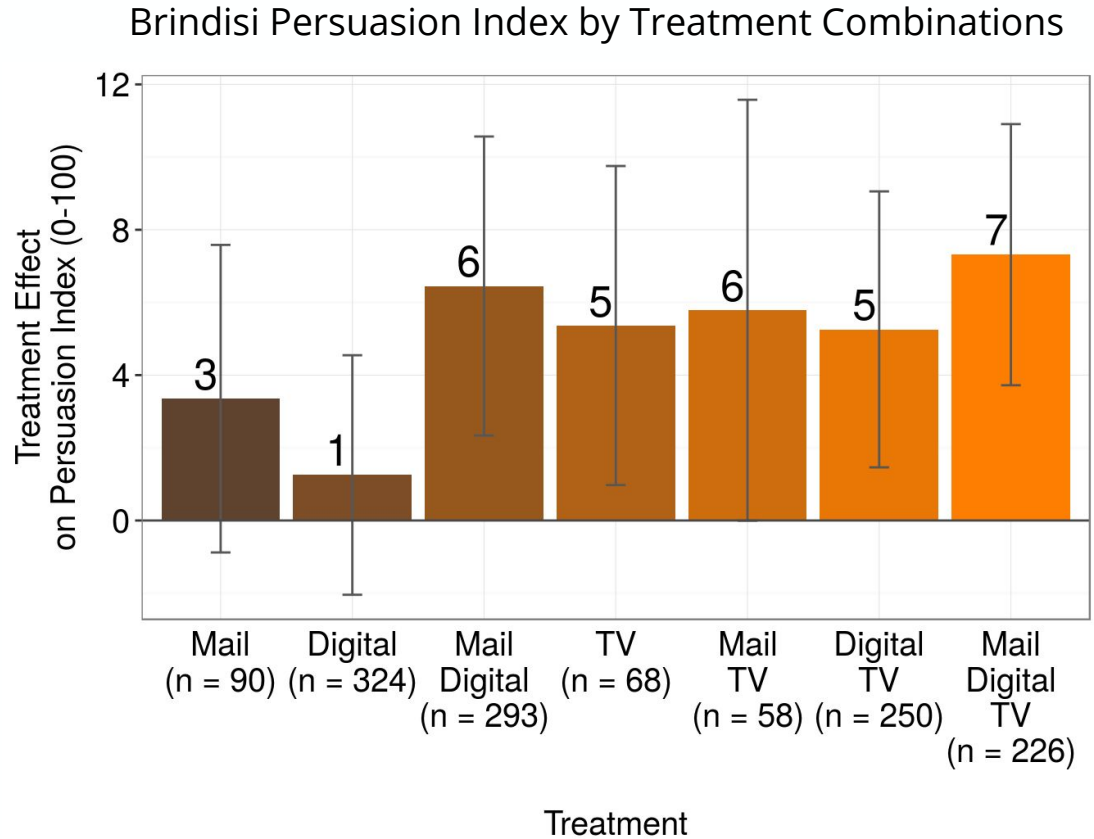


Control level = 39%

Persuasion Index Explained

- Our persuasion index combines the results of all of the persuasion-related questions in the survey: Tenney unfavorability, Brindisi favorability, horserace, Tenney job approval, and trust on healthcare issue.
- We created a single index out of all of these questions, using a technique called factor analysis, that attempts to capture the average underlying movement away from Tenney and towards Brindisi.
- We then scaled this index from 0-100.

Mail + Digital + TV
Ads increased
Brindisi persuasion
index by 7 points.

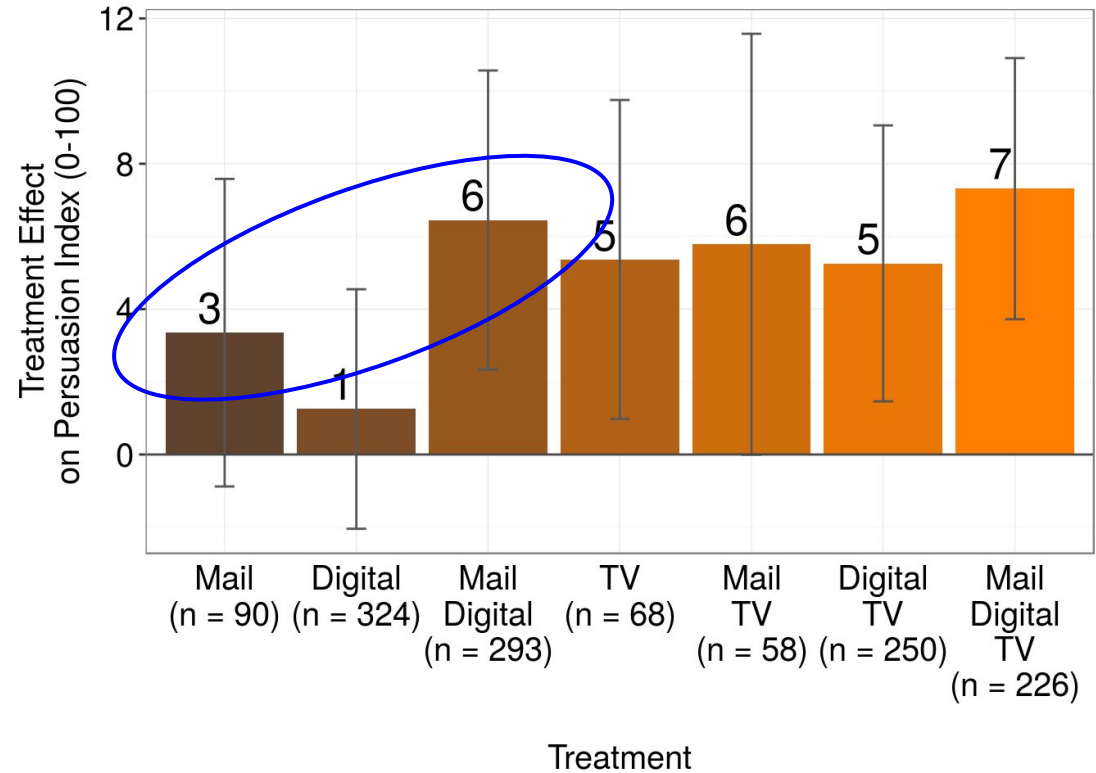


Control level = 47

Tentatively:

- Effects of mail and digital (absent TV) were additive--they complemented each other

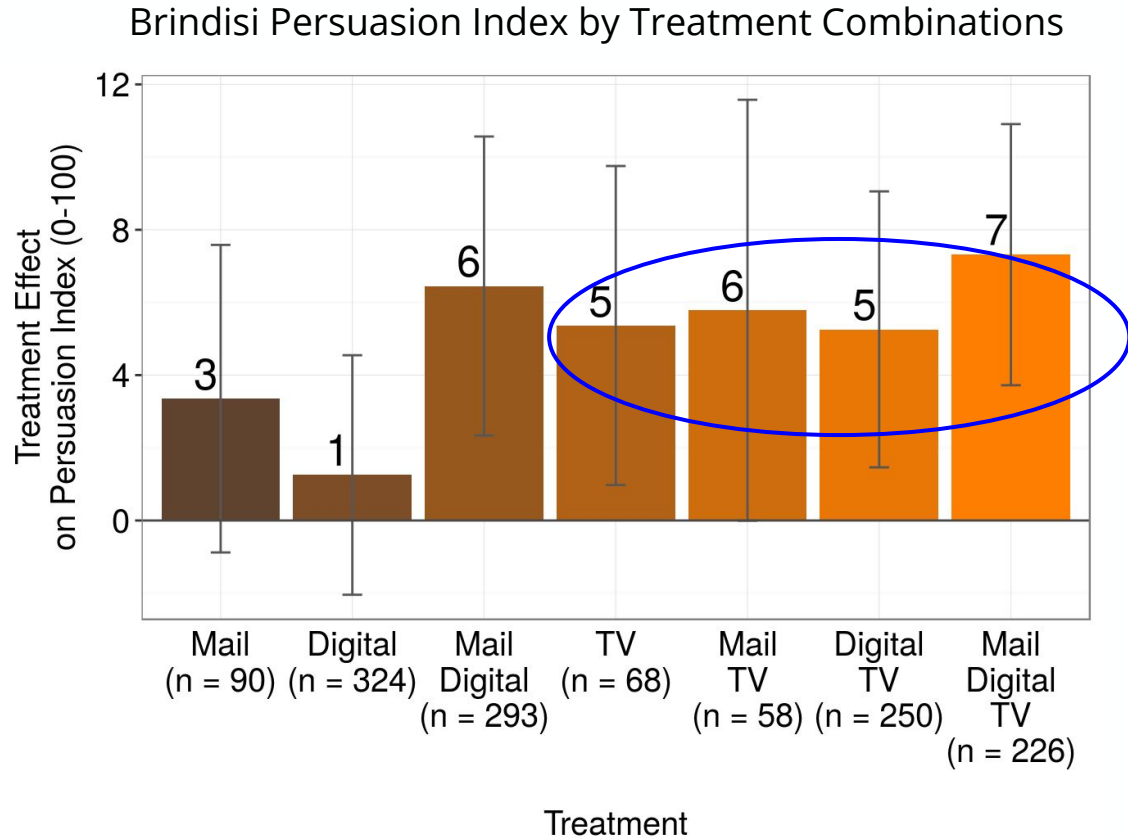
Brindisi Persuasion Index by Treatment Combinations



Control level = 47

Tentatively:

- Mail and digital did not add much to the effect of TV



Control level = 47

Tenney Favorability by Treatment Condition

Tenney Favorability: Digital Only

Pre-Survey Tenney Favorability N = 471	
Very favorable	22%
Somewhat favorable	22%
Somewhat unfavorable	16%
Very unfavorable	26%
Not sure	9%
Never heard of her	4%

Post-Survey Tenney Favorability N = 471	
Very favorable	23%
Somewhat favorable	20%
Somewhat unfavorable	15%
Very unfavorable	30%
Not sure	8%
Never heard of her	5%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Tenney Favorability: Individually Targeted Digital Only

Pre-Survey Tenney Favorability N = 228	
Very favorable	22%
Somewhat favorable	17%
Somewhat unfavorable	18%
Very unfavorable	29%
Not sure	7%
Never heard of her	6%

Post-Survey Tenney Favorability N = 225	
Very favorable	25%
Somewhat favorable	20%
Somewhat unfavorable	12%
Very unfavorable	31%
Not sure	9%
Never heard of her	2%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Tenney Favorability: Geo Targeted Digital Only

Pre-Survey Tenney Favorability N = 121	
Very favorable	19%
Somewhat favorable	31%
Somewhat unfavorable	16%
Very unfavorable	22%
Not sure	8%
Never heard of her	4%

Post-Survey Tenney Favorability N = 121	
Very favorable	24%
Somewhat favorable	20%
Somewhat unfavorable	13%
Very unfavorable	27%
Not sure	7%
Never heard of her	10%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Tenney Favorability: Geo + Indiv Targeted Digital Only

Pre-Survey Tenney Favorability N = 122	
Very favorable	25%
Somewhat favorable	21%
Somewhat unfavorable	13%
Very unfavorable	27%
Not sure	12%
Never heard of her	2%

Post-Survey Tenney Favorability N = 121	
Very favorable	18%
Somewhat favorable	20%
Somewhat unfavorable	22%
Very unfavorable	29%
Not sure	6%
Never heard of her	5%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Tenney Favorability: Mail Only

Pre-Survey Tenney Favorability
N = 128

Very favorable	22%
Somewhat favorable	25%
Somewhat unfavorable	15%
Very unfavorable	27%
Not sure	8%
Never heard of her	5%

Post-Survey Tenney Favorability
N = 127

Very favorable	23%
Somewhat favorable	21%
Somewhat unfavorable	11%
Very unfavorable	33%
Not sure	9%
Never heard of her	3%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Tenney Favorability: TV Only

Pre-Survey Tenney Favorability
N = 89

Very favorable	9%
Somewhat favorable	21%
Somewhat unfavorable	14%
Very unfavorable	31%
Not sure	17%
Never heard of her	9%

Post-Survey Tenney Favorability
N = 81

Very favorable	11%
Somewhat favorable	16%
Somewhat unfavorable	14%
Very unfavorable	40%
Not sure	13%
Never heard of her	7%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Tenney Favorability: Pure Control Only

Pre-Survey Tenney Favorability N = 161	
Very favorable	23%
Somewhat favorable	21%
Somewhat unfavorable	12%
Very unfavorable	21%
Not sure	13%
Never heard of her	10%

Post-Survey Tenney Favorability N = 160	
Very favorable	18%
Somewhat favorable	30%
Somewhat unfavorable	18%
Very unfavorable	22%
Not sure	16%
Never heard of her	7%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Horserace by Treatment Condition

Horserace: Digital Only

Pre-Survey Horserace
N = 454

Anthony Brindisi	43%
Lean Brindisi	3%
Claudia Tenney	40%
Lean Tenney	4%
Undecided/Other	9%
<i>Margin</i>	<i>2%</i>

Post-Survey Horserace
N = 455

Anthony Brindisi	46%
Lean Brindisi	3%
Claudia Tenney	43%
Lean Tenney	2%
Undecided/Other	6%
<i>Margin</i>	<i>4%</i>

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Horserace: Individually Targeted Digital Only

Pre-Survey Horserace N = 219	
Anthony Brindisi	41%
Lean Brindisi	4%
Claudia Tenney	41%
Lean Tenney	4%
Undecided/Other	11%
<i>Margin</i>	<i>0%</i>

Post-Survey Horserace N = 220	
Anthony Brindisi	44%
Lean Brindisi	4%
Claudia Tenney	46%
Lean Tenney	3%
Undecided/Other	3%
<i>Margin</i>	<i>-1%</i>

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Horserace: Geo Targeted Digital Only

Pre-Survey Horserace
N = 119

Anthony Brindisi	44%
Lean Brindisi	4%
Claudia Tenney	38%
Lean Tenney	5%
Undecided/Other	9%
<i>Margin</i>	<i>5%</i>

Post-Survey Horserace
N = 120

Anthony Brindisi	43%
Lean Brindisi	1%
Claudia Tenney	42%
Lean Tenney	1%
Undecided/Other	13%
<i>Margin</i>	<i>1%</i>

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Horserace: Geo + Indiv Targeted Digital Only

Pre-Survey Horserace
N = 116

Anthony Brindisi	47%
Lean Brindisi	2%
Claudia Tenney	40%
Lean Tenney	5%
Undecided/Other	7%
<i>Margin</i>	<i>4%</i>

Post-Survey Horserace
N = 115

Anthony Brindisi	52%
Lean Brindisi	2%
Claudia Tenney	38%
Lean Tenney	2%
Undecided/Other	6%
<i>Margin</i>	<i>14%</i>

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Horserace: Mail Only

Pre-Survey Horserace
N = 123

Anthony Brindisi	31%
Lean Brindisi	3%
Claudia Tenney	52%
Lean Tenney	3%
Undecided/Other	12%
<i>Margin</i>	<i>-21%</i>

Post-Survey Horserace
N = 122

Anthony Brindisi	34%
Lean Brindisi	3%
Claudia Tenney	53%
Lean Tenney	1%
Undecided/Other	10%
<i>Margin</i>	<i>-17%</i>

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Horserace: TV Only

Pre-Survey Horserace
N = 83

Anthony Brindisi	41%
Lean Brindisi	8%
Claudia Tenney	37%
Lean Tenney	5%
Undecided/Other	8%
<i>Margin</i>	<i>7%</i>

Post-Survey Horserace
N = 87

Anthony Brindisi	49%
Lean Brindisi	3%
Claudia Tenney	35%
Lean Tenney	1%
Undecided/Other	12%
<i>Margin</i>	<i>16%</i>

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Horserace: Pure Control Only

Pre-Survey Horserace N = 153	
Anthony Brindisi	32%
Lean Brindisi	2%
Claudia Tenney	57%
Lean Tenney	0%
Undecided/Other	9%
<i>Margin</i>	<i>-23%</i>

Post-Survey Horserace N = 153	
Anthony Brindisi	31%
Lean Brindisi	0%
Claudia Tenney	51%
Lean Tenney	7%
Undecided/Other	11%
<i>Margin</i>	<i>-27%</i>

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

More Overall Survey Toplines

Tenney Job Approval Underwater

Post-Survey Tenney Job Approval	
Approve strongly	18%
Approve somewhat	19%
Disapprove somewhat	11%
Disapprove strongly	32%
Not sure	21%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Voters still spend a lot of time per day watching TV

Post-Survey TV Consumption (per day)	
<1 hour	9%
1 hour	18%
2 hours	23%
3 hours	16%
4 hours	13%
5+ hours	21%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Most voters spend an hour or less per day using social media or watching digital video

Post-Survey Social Media Consumption (per day)	
<1 hour	42%
1 hour	34%
2 hours	12%
3 hours	6%
4 hours	2%
5+ hours	4%

Post-Survey Digital Video Consumption (per day)	
<1 hour	50%
1 hour	32%
2 hours	9%
3 hours	3%
4 hours	2%
5+ hours	4%

Survey respondents were weighted back to the average of the 2014 & 2016 turnout universes in the district.

Effects Tables and Balance Graphs

Appendix: TV Vote Margin Toplines

Treatment Group	Predicted Level (pp)	Difference From Control	Standard Error of Difference
Control	0.003		
TV Ads	0.071	0.068	0.032

Appendix: Pooled Digital Vote Margin Toplines

Treatment Group	Predicted Level (pp)	Difference From Control	Standard Error of Difference
Control	-0.048		
Digital Ads	0.052	0.100	0.039

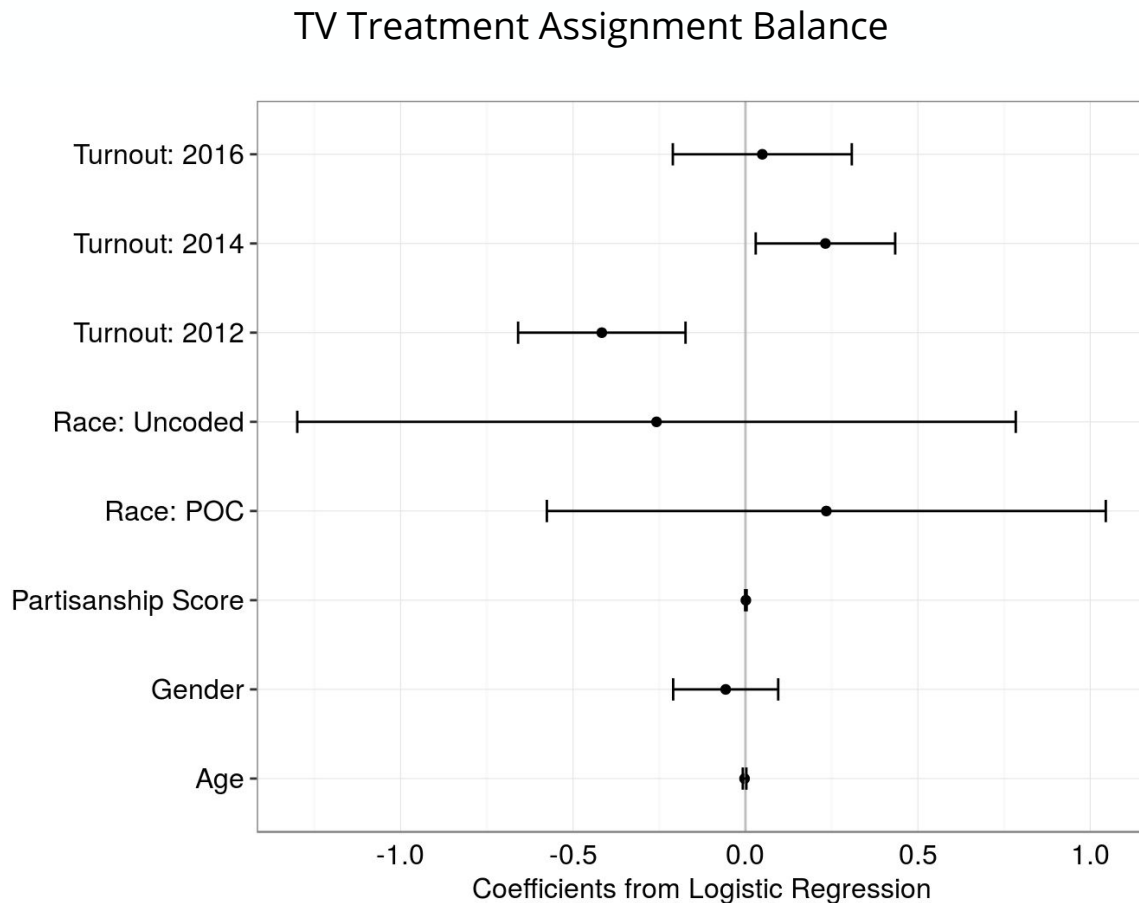
Appendix: Digital Vote Margin Toplines

Treatment Group	Predicted Level (pp)	Difference From Control	Standard Error of Difference
Control	-0.050		
Individually Targeted Digital Ads	0.016	0.067	0.050
Geo Targeted Digital Ads	0.040	0.090	0.043
Geo + Individually Targeted Digital Ads	0.107	0.158	0.047

Appendix: Mail Vote Margin Toplines

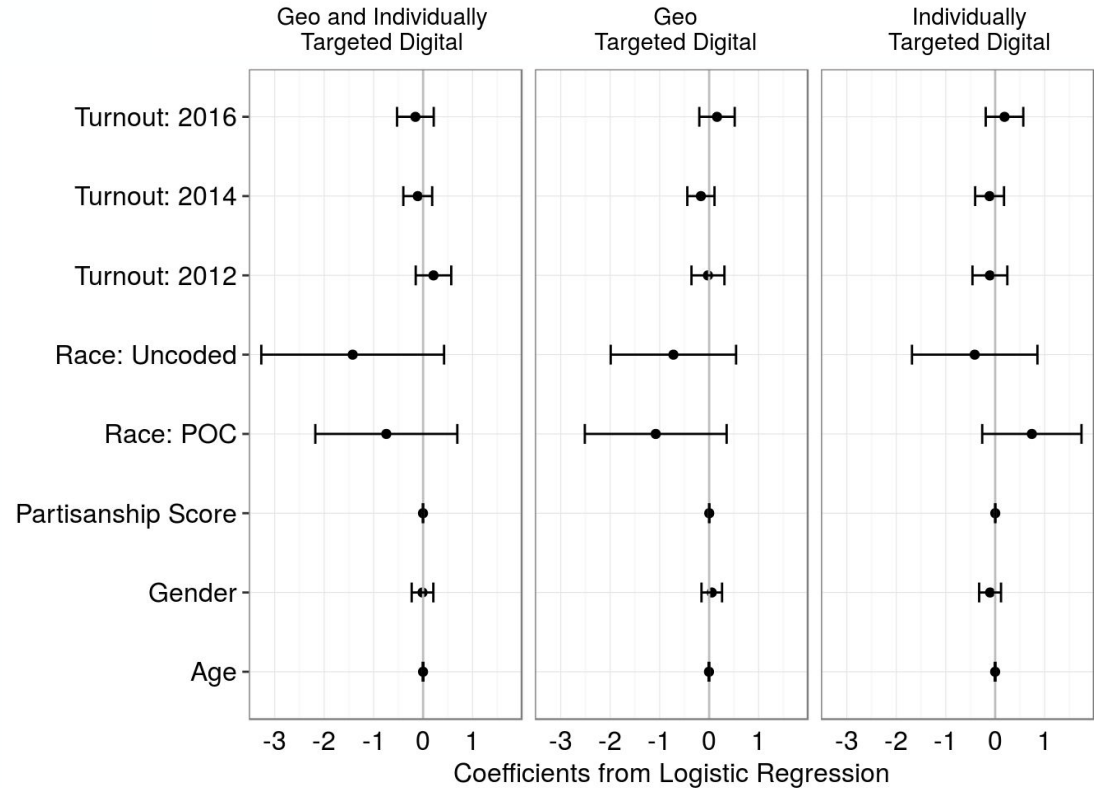
Treatment Group	Predicted Level (pp)	Difference From Control	Standard Error of Difference
Control	-0.005		
Mail	0.065	0.070	0.030

TV treatment assignment (which was not randomized) was mostly balanced across individual-level characteristics among survey respondents.

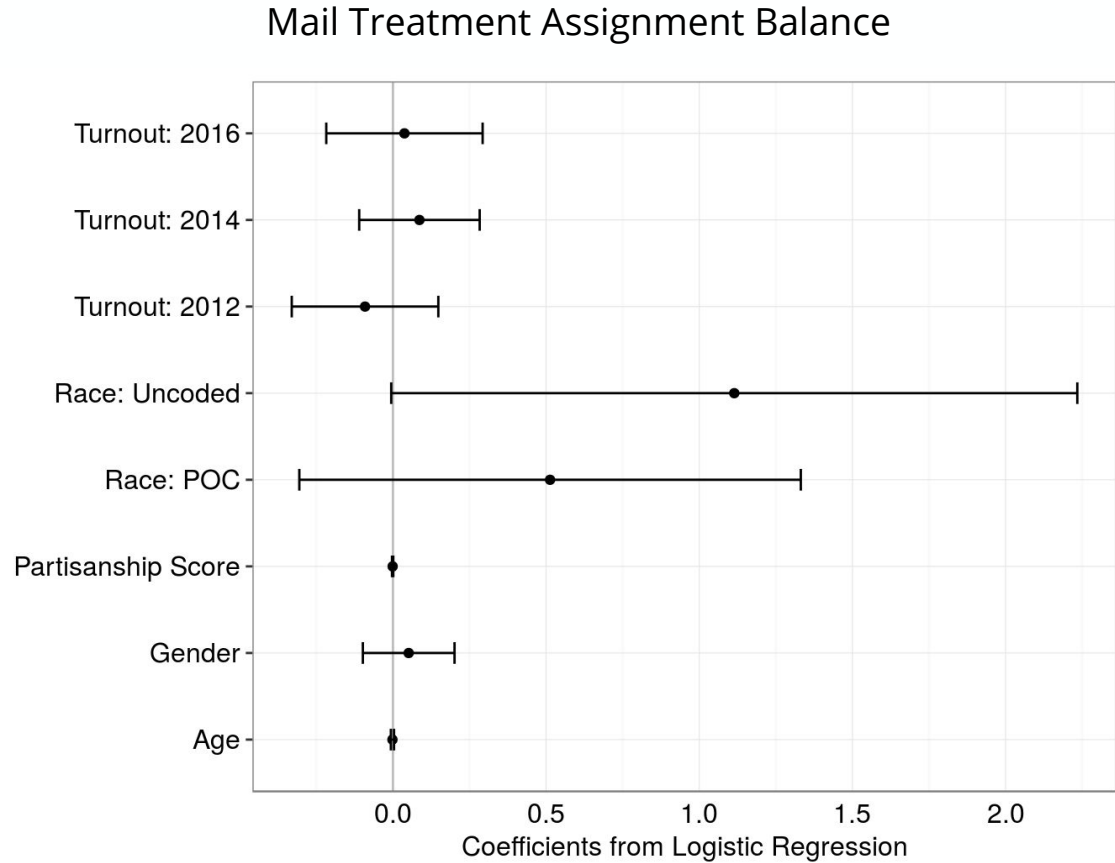


Digital ad treatment assignment (randomized at the zip cluster level) was largely balanced across individual-level characteristics among survey respondents.

Digital Treatment Assignment Balance



Mail treatment assignment was largely balanced across individual-level characteristics among survey respondents.



Our Post-Experiment Tenney fav/unfav numbers were similar to PPP poll: Tenny now underwater

AI Tenney Favorability 5/14 - 5/17	
Favorable	39%
Unfavorable	45%
Not sure	16%

PPP Tenney Favorability 5/15 - 5/16	
Favorable	35%
Unfavorable	50%
Not sure	15%