Vote to Give: Evaluating Voting Rules Using Consequential Elections

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Election Day

- There is substantial interest in changing voting rules
  - Growing polarization of politics (Foley and Maskin 2024)
  - Costliness of runoff elections (McGinnis 2022)
- November 5th multiple jurisdictions voted to replace plurality rule with Ranked Choice Voting (RCV)
  - As of now, all 5 of the cities, including Washington DC, that had RCV on the ballot look to adopt the voting rule
  - Each state that had RCV on the ballot failed to pass (Oregon, Colorado, Idaho, and Nevada)
- Potential downside? RCV is hard to understand
  - Alaska has a ballot measure to repeal RCV that is currently too close to call

Research Question

- How should we pick voting rules?
  - Axiomatic approach
  - Behavioral approach
  - These approaches are complementary
- Is there an effect of RCV on participation?
  - What is the mechanism driving potential changes?

Example

The 2022 United States House of Representatives election in Alaska came down to a three way race between Sarah Palin, Mary Peltola, and Nick Begich.

Candidate	% of First-choice Votes
Mary Peltola	36.80
Sarah Palin	30.20
Nick Begich	26.19

Why Participation?

- In recent U.S. elections, approximately 40% of eligible voters have not participated. Is this a problem?
  - Not necessarily, if this 40% represents individual disengagement or if non-participation is balanced (Feddersen, T. J., Pesendorfer, W. (1996))
  - Yes, if it reflects barriers to voting or disenfranchisement affecting certain groups disproportionately.
- There is empirical evidence that elections with low participation lead to outcomes are not representative (Hajnal and Trounstine 2005; Ocampo 2018)
- Key idea: Does the plurality voting system discourage participation from voters who might otherwise engage under a different voting method?

Example

Literature

- Effect of RCV
  - Bowler, S., Grofman, B. (2000); Tolbert and Kuznetsova (2021)
  - **Positive**: Juelich and Coll (2021); Dowling et al (2024); Shineman (2021); Squire and McCune(2023)
  - **Negative**: Kimball (2016); McDaniel (2019); Cormack (2023); Simmons and Waterbury (2024); Vishwanath (2024)
- How should we empirically evaluate elections?
- Current methods for evaluating voting rules:
  - Data from real elections
    - Significant identification issues
  - Simulate elections
  - Voting surveys and lab experiments
    - Can we measure participation in these settings?

Roadmap

1. **Model and Hypotheses**
   - Introduce a summary of the model and outline main hypotheses.
2. **Experimental Design**
   - **Step 1: Calibration** – Survey set up and results
   - **Step 2: Simulation** – Validate 1st stage
   - **Step 2: Elections** – Design of election process and conditions
3. **Analysis Plan**
   - Specify how the data will be analyzed to test the hypotheses.
4. **Results**
   - Present findings from the experimental analysis.

Preview of Results

- Is it possible to implement proxies for real political elections?
  - Yes, there is suggestive evidence that field elections can be calibrated to mirror behavior in political elections
- Provide first causal estimate of the effect of RCV on participation
  - Voters assigned to RCV elections are up to 11 percentage points more likely to participate in future elections

Summary of Simple Model of Participation

Agents

- Voters: A population of individuals choosing whether to vote or abstain
- Candidates: A finite set of candidates competing in the election
- Preferences: Each voter has a ranking of candidates, which may vary in strictness

Actions

- Voters choose to vote or abstain
- Voters submit ballots that maximize their utility from participating in the election.

Formal Model

Summary of Simple Model of Participation

How do voting rules enter the decision to vote?

- **Aggregation Rule:** Differences in how voting rules aggregate preferences change instrumental utility of voting
- **Ballot Structure:** Affects expressive utility: benefit from casting a vote that aligns closely with a voter's true preferences. This will matter more in elections where voters have strict preferences over candidates
- **Cost of Voting:** The potential burden of casting a vote, which may vary by voting system (e.g., RCV could introduce higher cognitive costs).

Hypotheses

- If a voting rule increases the costs associated with voting, we would expect to see a uniform decrease in participation.
- If a voting rule increases the expressiveness of voting, we would expect an increase in participation, particularly in elections where voters are more likely to hold strict preferences.
- If a voting rule increases instrumental utility, we would expect increased participation among voters who are able to influence the election outcome.

Methodology

- Ideal data generating process?
  - How close can we get?
  - Elections must map to political behavior and have consequential outcomes
- I hold a series of elections and randomly assign voters between different elections that use different voting rules (pre-registered)
- Elections are advertised to students as a charity funding initiative
  - Messages ask students to participate in a series of voting contests with the winning charity receiving $500
- Unit of observation: New participant in an election
- Outcomes: Rate of return to subsequent elections, binding donation decision, and answers to survey questions at the beginning and end of elections.

Treament Design

Vote for one

Candidate A	
Candidate B	x
Candidate C	

Rank up to three

	1	2	3
Candidate A		x	
Candidate B	x		
Candidate C			x

Multiple changes at once: Ability to affect election outcomes (pivotality) and ballot structure (expressiveness and complexity)

Treament Design

Vote for one: The candidate with the most votes wins

Candidate A	
Candidate B	x
Candidate C	

Rank up to three: The candidate with the most first-choice votes wins

	1	2	3
Candidate A		x	
Candidate B	x		
Candidate C			x

Rank up to three: The candidate with a majority of first-choice votes wins. The lowest-ranked is eliminated until a winner is found.

	1	2	3
Candidate A		x	
Candidate B	x		
Candidate C			x

TEXAS A&M UNIVERSITY

Welcome to our first voting contest! We sent a survey to your fellow Aggies and these were some of the most popular choices.

To submit your vote, please select the charity you would most like to win.

The charity with the most vote wins $500!

- ○ **Brazos Valley Foodbank**
  Works to distribute nutritious food to bring the Brazos Valley closer to hunger-free
- ○ **Aggieland Humane Society**
  Works to provide humane care and placement for homeless and abandoned animals
- ○ **American Heart Association**
  Works to fund cardiovascular medical research, educate consumers on healthy living, and foster cardiac care

→

TEXAS A&M UNIVERSITY

Welcome to our first voting contest! We sent a survey to your fellow Aggies and these were some of the most popular choices.

To submit your vote, please rank the following charities in order. For example, your first choice is the charity you want to win the most.

Whichever charity receives the most amount of first choice votes, wins $500!

	1st Choice	2nd Choice	3rd Choice
Brazos Valley Foodbank Works to distribute nutritious food to bring the Brazos Valley closer to hunger-free	☐	☐	☐
Aggieland Humane Society Works to provide humane care and placement for homeless and abandoned animals	☐	☐	☐
American Heart Association Works to fund cardiovascular medical research, educate consumers on healthy living, and foster cardiac care	☐	☐	☐

→

Implementation

I propose a novel methodology of implementing proxies for real elections that can be used generally to evaluate electoral systems

1. Calibration Survey
   - Get distribution of preferences
2. Simulation
   - Use preferences to simulate elections and pick candidates for elections
3. Experiment
   - Run elections

Calibration Survey

Calibration Survey: Purpose and Design

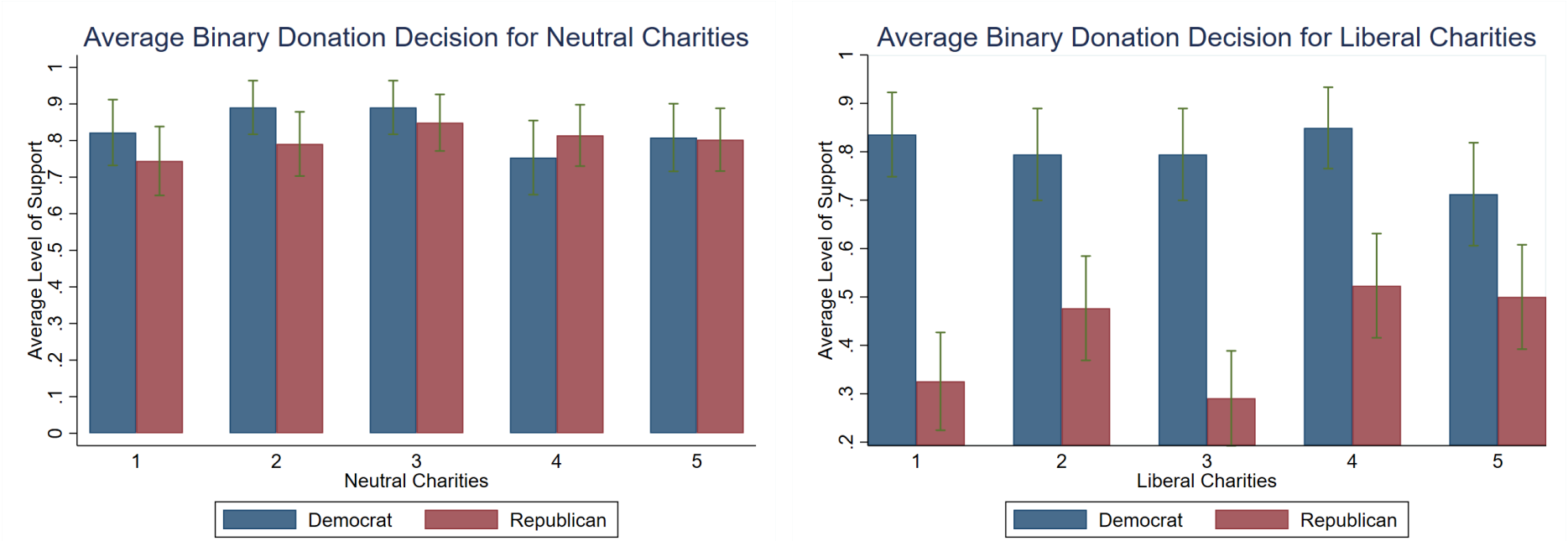
Purpose of Calibration Survey

- Establishes a baseline for voter charity and political preferences
- Test if preferences for charities are aligned with political preferences
- Provides data on how voters value different causes, helping design elections that mimic real-world voting dynamics.

Survey Design and Methodology

- Participants make incentivized decisions to approve, rank, and allocate donations to various charities
- Charities chosen to reflect neutral, conservative-leaning, and liberal-leaning causes. I define charities as polarizing if they show significantly different levels of support across political ideology.
- Data from responses allows identification of preference structures in order to be able to predict real world voting behavior

Affiliation and Charity Attitudes



Average Binary Donation Decision for Neutral and Liberal Charities

Conservative, $100 Allocation Decision, Rank Decision, Political Distributions

Simulation

Simulation: Purpose and Implementation

Purpose of Simulation

- Ensures that a selection criteria can be used to calibrate elections
- Allows for the identification of election scenarios (e.g., polarized, neutral) to represent realistic voting contexts.
- If the simulations are not able to predict real world outcomes, this invalidates the survey and experimental design

Simulation Process

- Combines preference data from the calibration survey to simulate outcomes for all three-candidate combinations.
- Selects scenarios to prevent predictable landslides and to capture complex dynamics, such as vote splitting

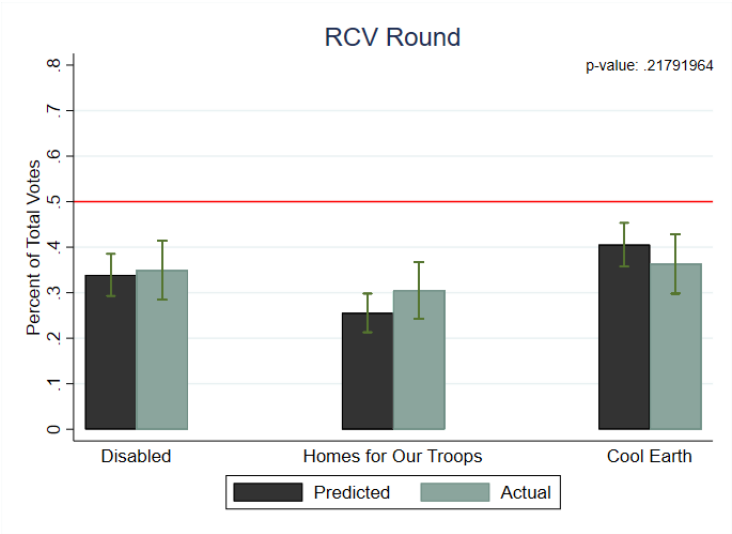
Selection Criteria

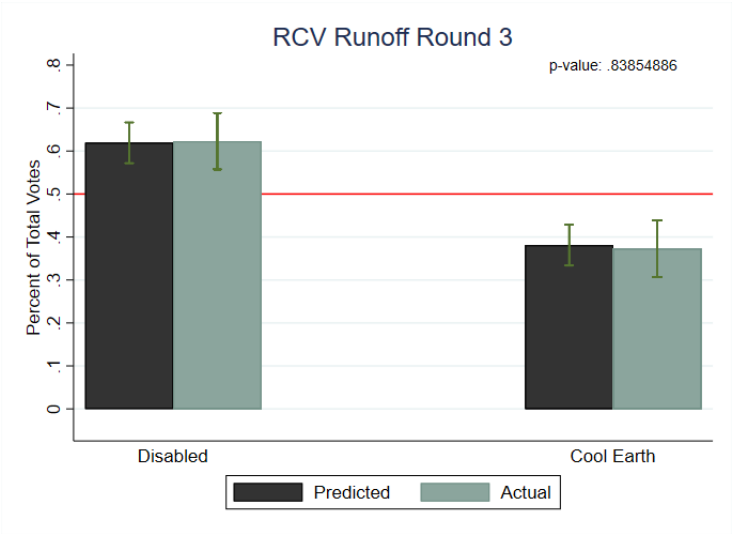
1. **Neutral**: American Heart Association, Aggieland Humane Society, and Brazos Valley Foodbank
2. **Lesser of Two Evils**: Planned Parenthood, Interfaith Alliance, and Parkinson's Foundation
3. **Polarized w/Liberal Split**: Disabled American Veterans, Homes for Our Troops, and Cool Earth
4. **Polarized w/Conservative Split**: Planned Parenthood, National Women's Law Center, and Samaritan's Purse

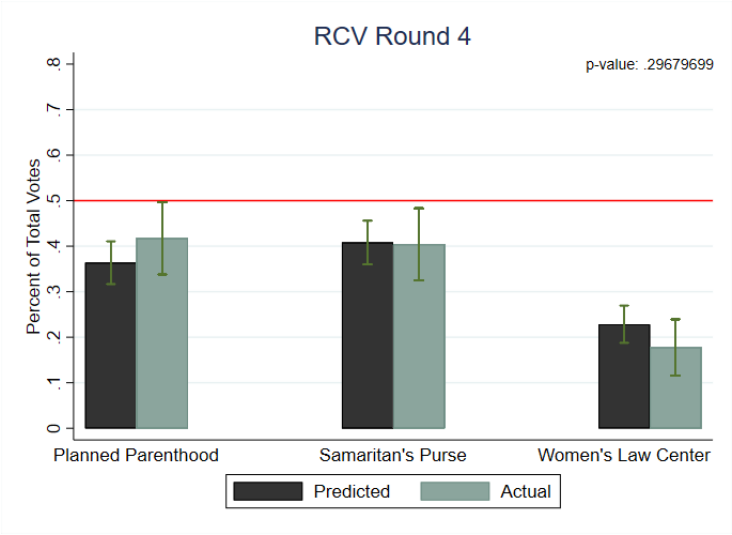
Simulated vs Actual Election

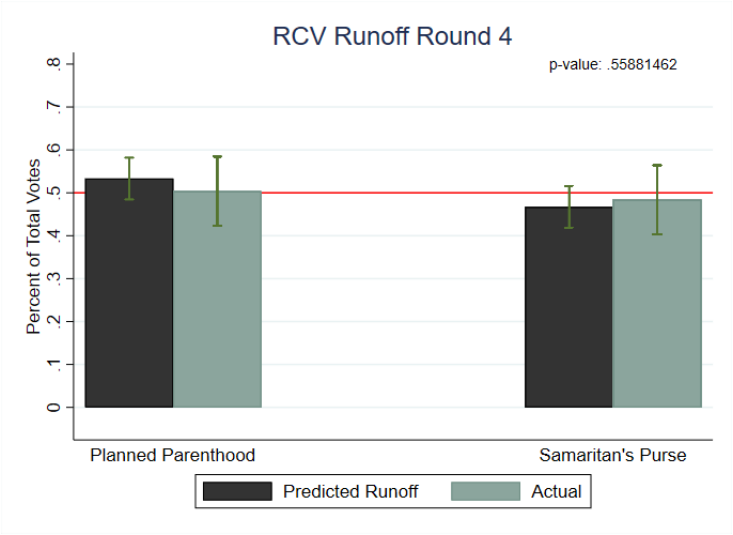
- Simulations accurately predicted 11 out of 12 election outcomes
  - Could be due to survey incentives
  - Pilot conducted without an incentivized survey performed worse
- An F-test comparing the variances of simulated and actual votes across all rounds yields a p-value of 0.501, indicating no significant difference between predicted and actual outcomes

Simulated vs Actual Election





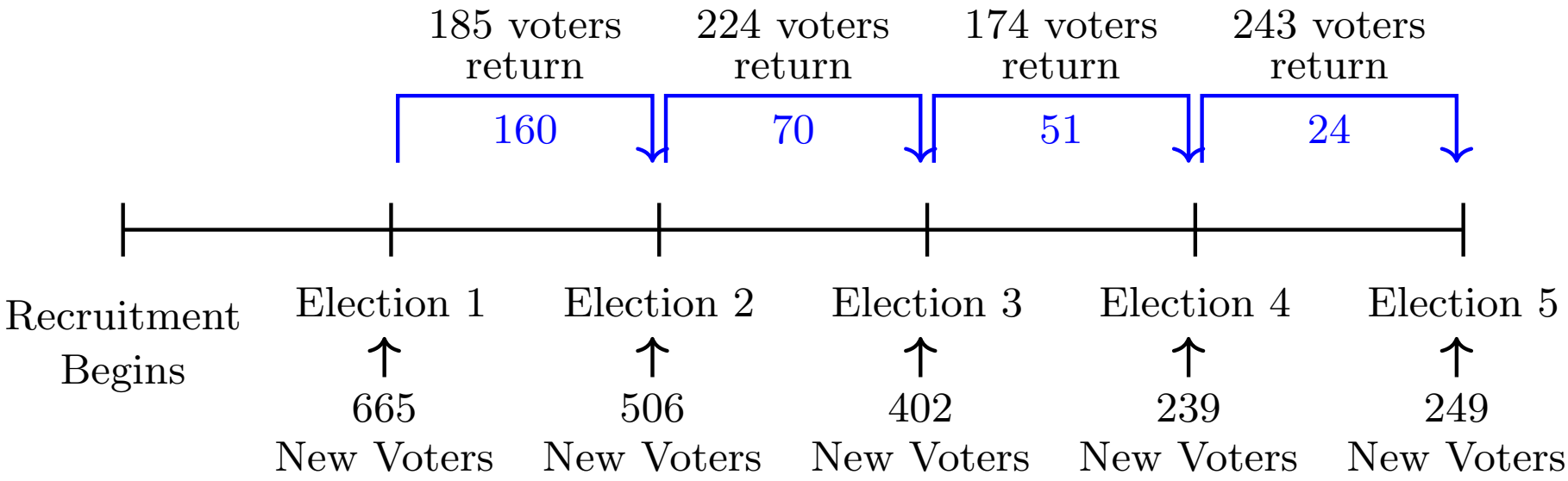




All Graphs

Elections

Overview


185 voters return
224 voters return
174 voters return
243 voters return
160
70
51
24
Recruitment Begins
Election 1
Election 2
Election 3
Election 4
Election 5
665 New Voters
506 New Voters
402 New Voters
239 New Voters
249 New Voters

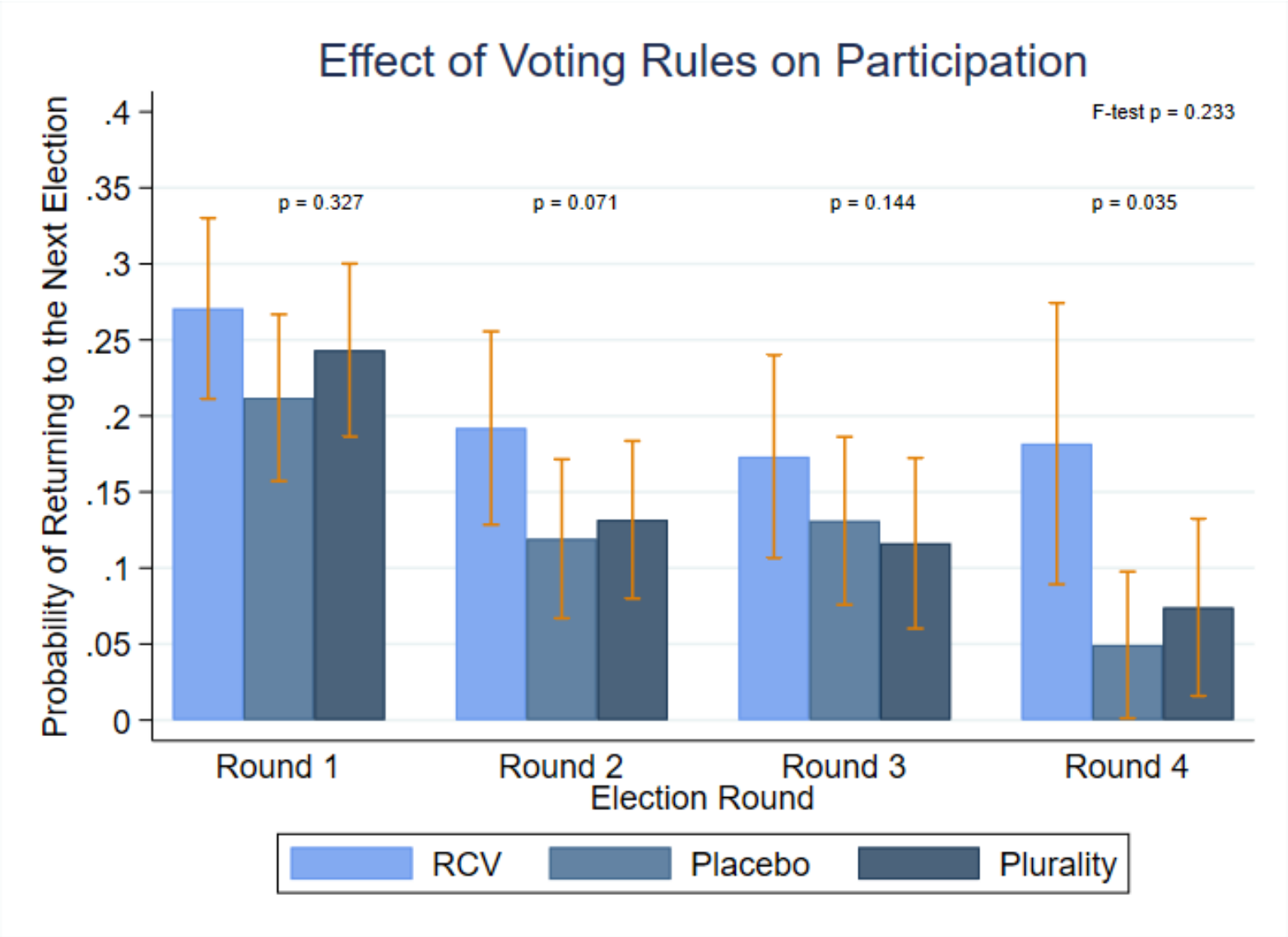
Balance

Summary Statistics for Elections

	All		Plurality	Placebo	RCV	p-value
	Mean	SD	Mean	Mean	Mean	Diff.
Gender						
Female	0.59	0.49	.61	.60	.57	0.46
Race						
White	0.49	0.50	.47	.49	.49	0.74
Black	0.04	0.20	.05	.04	.03	0.37
Hispanic	0.26	0.44	.26	.29	.24	0.14
Asian	0.16	0.38	.17	.14	.20	0.10
Other	0.05	0.18	.05	.03	.04	0.34
Political Affiliation						
Republican	0.35	0.48	.37	.36	.32	0.09*
Democrat	0.26	0.44	.25	.24	.29	0.26
Other	0.39	0.49	.38	.40	.38	0.71
Observations	1963		698	593	770	
Joint Test						0.16

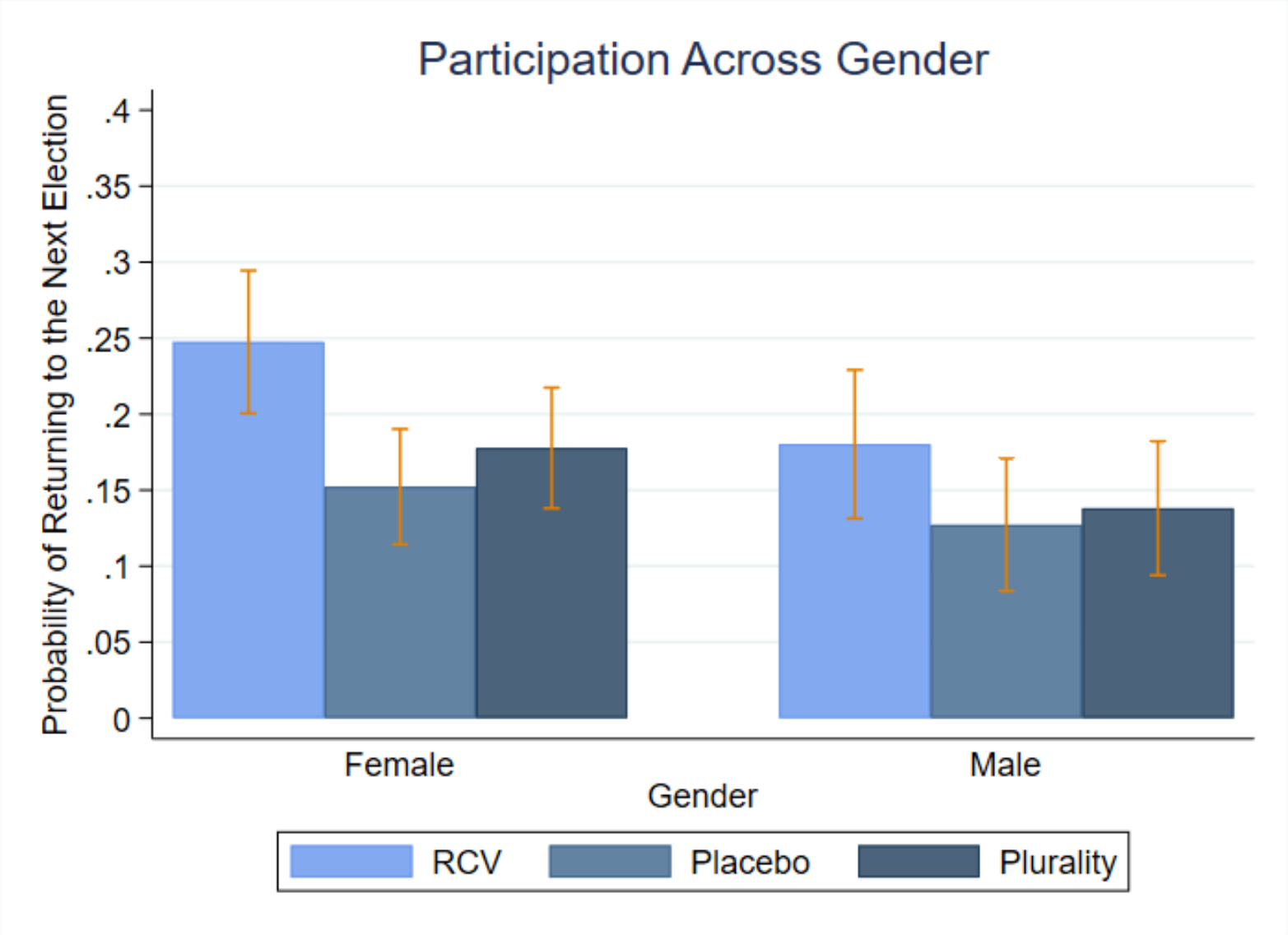
Note: The p-value reflects the statistical difference across the three voting treatments.

Results

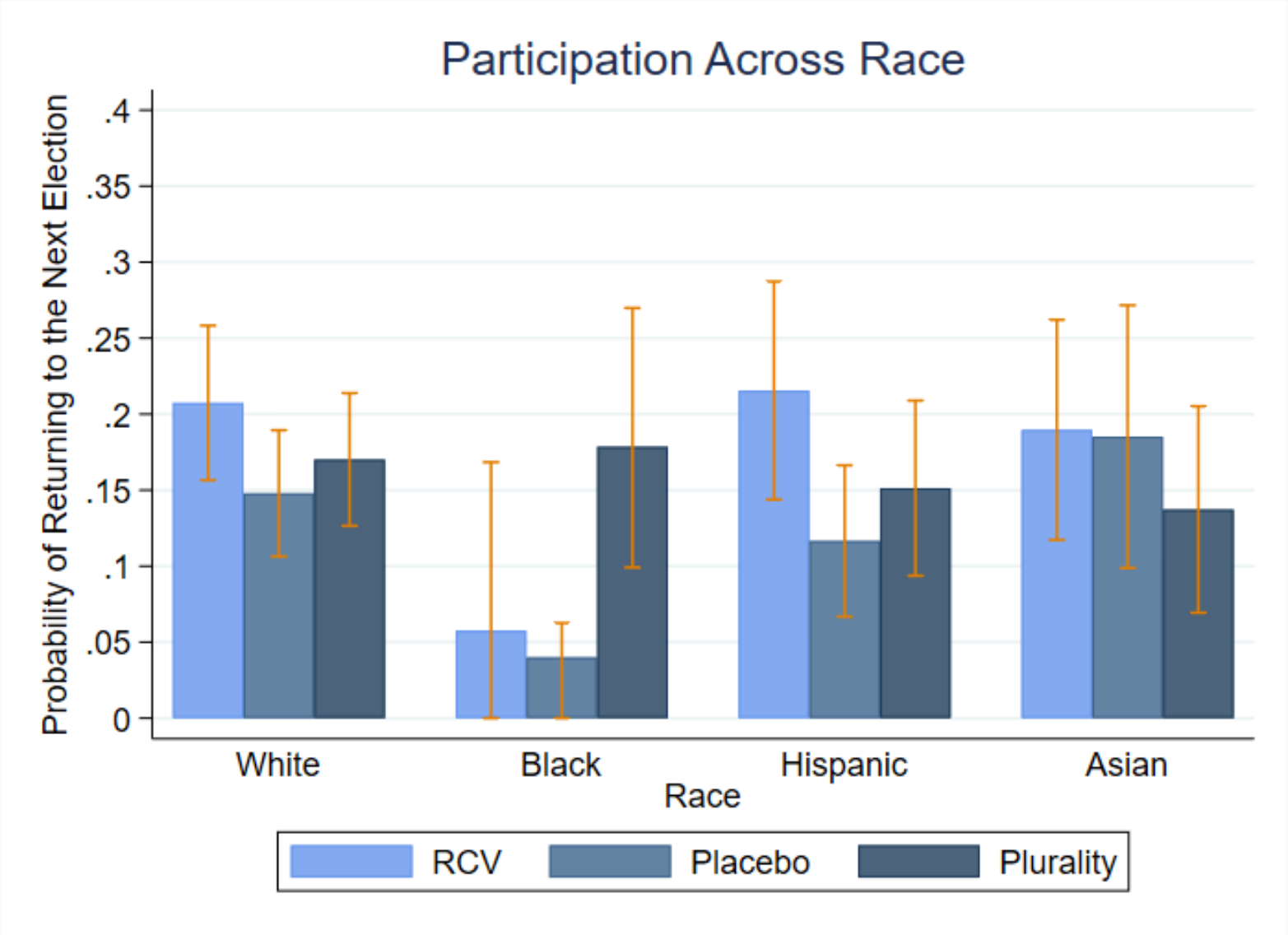


p-values are derived from t-tests comparing the means between RCV and plurality treatments. Regression Results

Heterogeneity



Heterogeneity



Mechanisms

- Possible reason why people like RCV?
  - We can eliminate reasons like novelty and expressiveness because of our placebo treatment
  - Potential ways RCV is affecting participation:
    - Outcomes: Voters prefer the winners RCV selects
    - Preference for the aggregation rule itself
    - Perceived pivotality: More people think they affect election outcomes

Losers vs Winners

Sample	*New Voters*			
Dep. Var:	*1{Return}*			
	(1)	(2)	(3)	(4)
Loser	-0.152***	-0.147***	-0.202***	-0.211***
	(0.028)	(0.030)	(0.054)	(0.055)
RCV	0.061	0.065*	0.098**	0.116**
	(0.039)	(0.039)	(0.042)	(0.044)
× Loser	0.126**	0.121**	0.067*	0.052
	(0.049)	(0.048)	(0.033)	(0.0336)
Placebo	-0.038	-0.010	0.011	-0.012
	(0.037)	(0.045)	(0.017)	(0.0169)
× Loser	0.065	0.063	0.052	0.054
	(0.051)	(0.049)	(0.032)	(0.032)
Controls	No	Yes	No	Yes
Observations	1838	1838	1305	1305
Pseudo R-squared	0.01	0.02	0.00	0.01

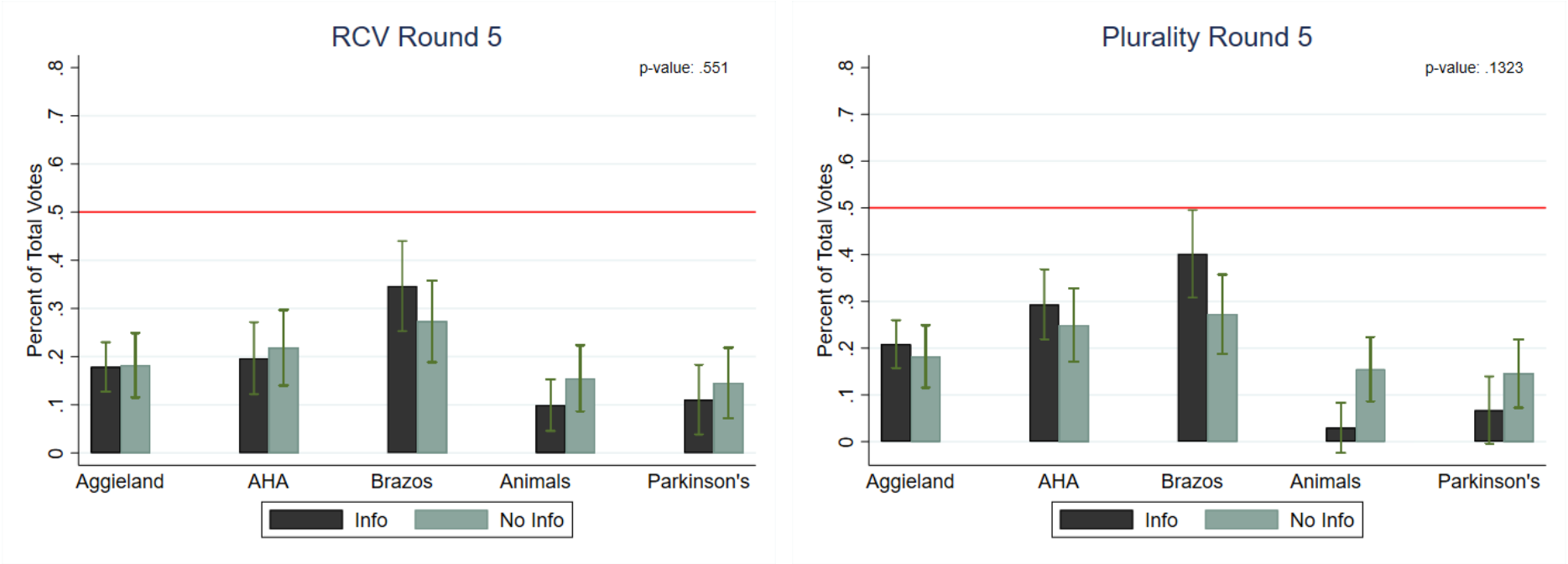
All results are from a probit random effects model with delta-method standard errors in parentheses. Models (1) and (2) define "loser" as voters who did not vote or whose first-choice did not win; Models (3) and (4) apply a stricter definition, where "loser" is a voter who third-ranked the winner.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Graph

Testing Strategic Voting in Round 5

- Round 5 serves as a final opportunity to analyze strategic voting behavior, as voters have no option to participate in subsequent rounds.
- In this round, voters are assigned to elections conducted under either RCV or plurality rules. Within each election type, half of the participants receive a polling treatment, which displays survey results for the five competing candidates.
  - The polling treatment introduces an opportunity for strategic behavior by providing information on candidate popularity.
  - There is evidence of strategic voting if voters concentrate support on more popular charities, avoiding less popular ones.

Strategic Voting



Distribution of Votes in Round 5

- Even though the distribution of votes are not statistically different with or without polling information, the average level of votes for Friends for Animals is (p-value 0.0468).
- Evidence that plurality leads to more strategic voting, which is consistent with the literature

Conclusion

- Researchers and policymakers view low voter turnout as a problem
  - Huge get out to vote literature on how to influence individual voting behavior
  - Even very intensive treatments yield small changes in participation
  - This paper investigates how changing incentives through institutional design serves a promising alternative than influencing behavior directly
- Looking ahead
  - This is a highly educated sample of people, do the results still hold for a more representative sample?
  - Use similar methodology for other question about electoral design like the differences between proportional vs single winner elections.

Simple Model of Participation

How do voting rules enter the decision to vote?

- Population of voters $N = \{1, ..., N\}$ that must choose to vote or abstain
- Finite set of candidates $Z \subset \mathbb{R}_{++}$ with cardinality $m = |Z|$
- Preferences: $\succ_i \subset Z \times Z \cup \{\emptyset\}$ where $\succ_i$ is a transitive, reflexive, and complete relation over Z representing voter i's ranking of candidates
  - Define $A_1, ..., A_k$ as equivalence classes of candidates. For instance, if x and y belong to A_j, then $(x, y) \in A_j \times A_j \rightarrow (x, y), (y, x) \in \succ_i$
  - Each voter has a preference profile that is represented as a tuple $\pi_i = (A_1, ..., A_k)$ capturing voter i's rankings
  - Π is the set of all transitive and reflexive preference profiles over Z

Simple Model of Participation

Different voting systems allow different types of ballots. Define $\mathcal{B}$ as the space of all possible ballots allowed under a specific voting rule.

- **Plurality Voting:** Each ballot $b \in \mathcal{B}$ selects one candidate from Z.
  - Ballot space: $\mathcal{B} = \{b \mid b \in Z\}$
  - Outcome function: Define $f_{\text{Plurality}}(b_1, \ldots, b_N)$ as follows:

$$f_{\text{Plurality}}(b_1, \ldots, b_N) = \arg\max_{z \in Z} \sum_{i=1}^{N} \mathbb{1}_{\{b_i = z\}}$$

where $\mathbb{1}_{\{b_i = z\}}$ is an indicator function that is 1 if voter i voted for candidate z, and 0 otherwise. The candidate with the most votes wins.

Simple Model of Participation

- **Ranked Choice Voting (RCV):** Each ballot $b \in \mathcal{B}$ represents a ranking of candidates. Let $\sigma(b)$ denote the order of preferences on ballot b.
  - Ballot space: $\mathcal{B} = \{(z_{\sigma(1)}, ..., z_{\sigma(m)}) \mid \sigma \text{ is a permutation of } \{1, ..., m\}\}$
  - Outcome function: Define $f_{\text{RCV}}(b_1, \ldots, b_N)$ using an iterative elimination process:
    1. Initialize: Let $Z^{(0)} = Z$ (the set of all candidates).
    2. For each round t, count the first-choice votes for each candidate in $Z^{(t-1)}$. If any candidate has a majority, they are the winner:

$$f_{\text{RCV}} = \arg \max_{z \in Z^{(t-1)}} \sum_{i=1}^{N} \mathbb{1}_{\{\sigma(b_i)=z \text{ in round } t\}}$$

    3. If no candidate has a majority, eliminate the candidate with the fewest first-choice votes, update $Z^{(t)} = Z^{(t-1)} \setminus \{\text{candidate eliminated in round } t\}$, and redistribute votes according to the next preference on each ballot.
    4. Repeat until a candidate has a majority of the votes.

Simple Model of Participation

Ballots can also be mapped to preference profiles $v_i : B \to \Pi$

Plurality

$A \succ B \backsim C \backsim D$

RCV

$A \succ B \succ C \succ D$

Voters choose to vote or abstain based on which action will maximize their utility from voting.

$$U_i(b_i, v_i, v_i^*) = P\beta(b_i) + G - C(b_i) - \lambda_i \frac{d(R(v_i), R(v_i^*))}{d_{max}(R(v_i), R(v_i^*))} \quad (1)$$

- Three ways voting rules impacts the decision to vote: Instrumental utility, expressive utility, and costliness of voting

Return

Simple Model of Participation

- Three ways voting rules impacts the decision to vote:
  - $P\beta(b_i)$: Instrumental utility (probability-weighted influence of the vote)
  - $C(b_i)$: Cost of voting, which may vary by voting system (e.g., RCV could introduce higher cognitive costs).
  - λ_i: Weight voters place on voting expressively
- $R(v_i)$ is a function that returns a ranking vector for a given preference profile

$$R_Z(\succ_i, z) = 1 + |x \in Z : x \succ_i z|, \forall z \in Z$$

$$R_Z(\succ_i, Z) = (R_Z(\succ_i, 1), R_Z(\succ_i, 2), ..., R_Z(\succ_i, m))$$

Return

Simple Model of Participation

- To evaluate how closely a voter's submitted ballot aligns with their true preferences, we calculate the distance between the ranking vector for their true preference profile and their submitted vote

$$d(R_Z(\succ_i, Z), R_Z(\succ_i', Z)) = \sum_{k=1}^{m} |R_Z(\succ_i, k) - R_Z(\succ_i', k)|$$

- The utility function includes a term that normalizes this distance by dividing by the maximum possible distance

$$\lambda_i \frac{d(R(v_i), R(v_i^*))}{d_{max}(R(v_i), R(v_i^*))}$$

- This ratio is a measure of closeness between the submitted ranking and the true ranking. A ratio close to 0 means the submitted ranking is very similar to the true ranking, while a ratio close to 1 means there is a significant deviation.

Return

Regression Results

Sample	*New Voters*			
Dep. Var:	*1{Return}*		*1{Donation}*	
	(1)	(2)	(3)	(4)
RCV	.044	0.032	0.015	0.018
	(0.042)	(0.041)	(0.0466)	(0.0466)
× Round 2	0.061**	0.102**	0.002	0.000
	(0.045)	(0.044)	(0.0518)	(0.0516)
× Round 3	0.081*	0.080*	0.001	0.006
	(0.046)	(0.046)	(0.0597)	(0.0598)
× Round 4	0.114**	0.126**	-0.051	-0.054
	(0.057)	(0.059)	(0.0774)	(0.0771)
Placebo	-0.011	-0.017	-0.021	-0.017
	(0.041)	(0.040)	(0.0464)	(0.0464)
× Round 2	0.025	0.027	-0.024	-0.026
	(0.042)	(0.041)	(0.0513)	(0.0513)
× Round 3	0.025	0.026	0.006	0.003
	(0.045)	(0.045)	(0.0593)	(0.0593)
× Round 4	-0.029	-0.032	-0.028	-0.029
	(0.053)	(0.053)	(0.0762)	(0.0759)
Round 2	-0.096**	-0.126**	-0.053*	-0.053*
	(0.032)	(0.074)	(0.0288)	(0.0287)
Round 3	-0.113**	-0.182***	-0.002	-0.001
	(0.033)	(0.080)	(0.0311)	(0.0312)
Round 4	-0.138***	-0.188***	-0.002	0.001
	(0.042)	(0.044)	(0.0372)	(0.0373)
Controls	No	Yes	No	Yes
Observations	1838	1838	1838	1838
Pseudo R-squared	0.00	0.01	0.00	0.01

Delta-method standard errors are reported in parentheses. Table shows results from a probit random effects model with and without controls.

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

Return

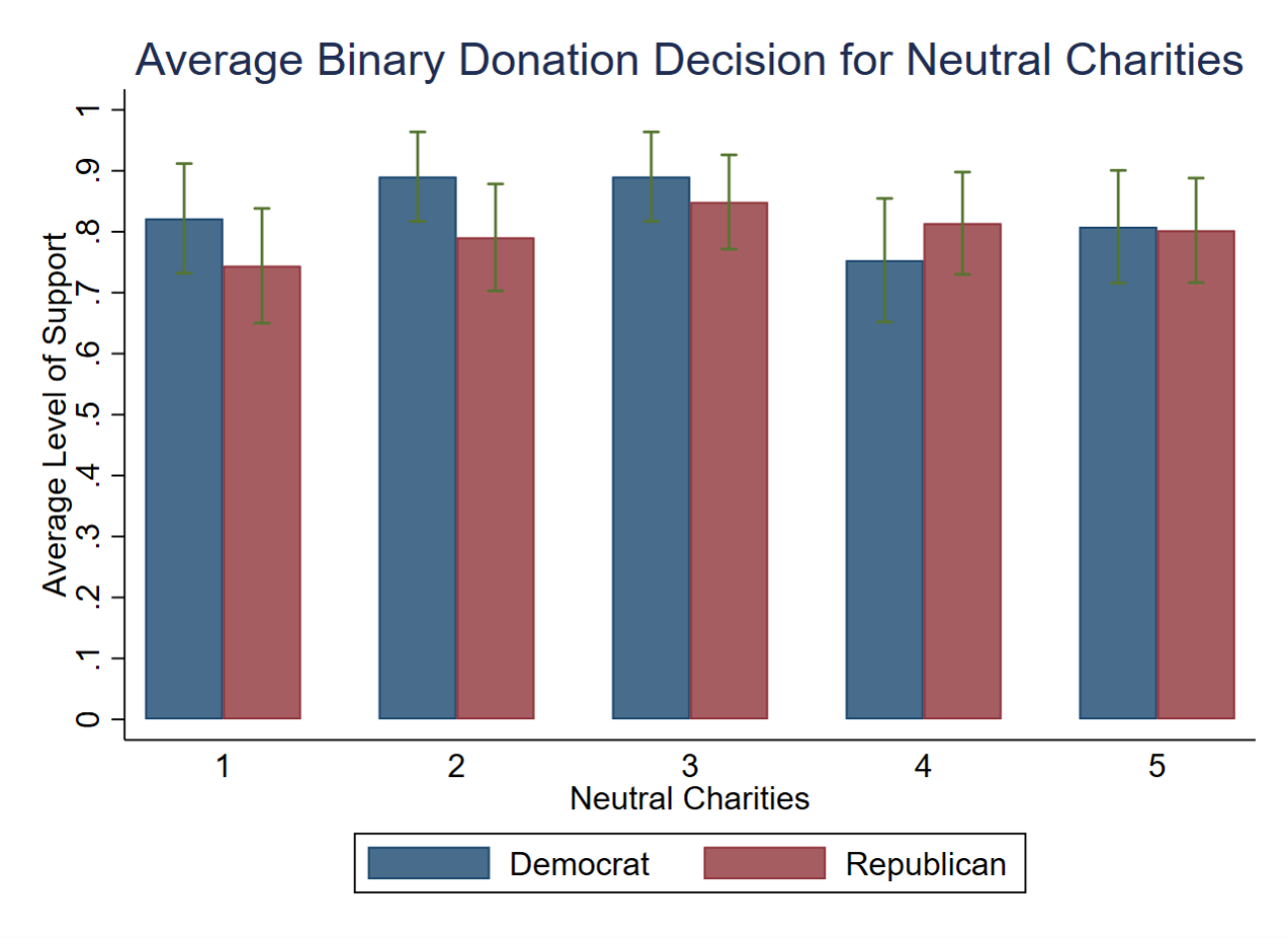
Pilot Results

Balance Table of Pilot

	RCV			Plurality			
	n	mean	sd	n	mean	sd	Diff
Female	369	0.62	0.03	367	0.63	0.03	-0.01
Race:Asian	369	0.13	0.02	367	0.14	0.02	-0.02
Race:Black	369	0.02	0.01	367	0.02	0.01	0.01
Race:Hispanic	369	0.21	0.02	367	0.24	0.02	-0.03
Race:Native American	369	0.01	0.00	367	0.00	0.00	0.00
Race:Other	369	0.03	0.01	367	0.01	0.01	0.02
Race:White	369	0.60	0.03	367	0.57	0.03	0.03
Conservative	369	0.35	0.02	367	0.31	0.02	0.04
Independent	369	0.18	0.02	367	0.20	0.02	-0.01
Liberal	369	0.25	0.02	367	0.32	0.02	-0.07**
Other	369	0.21	0.03	367	0.03	0.44	0.04

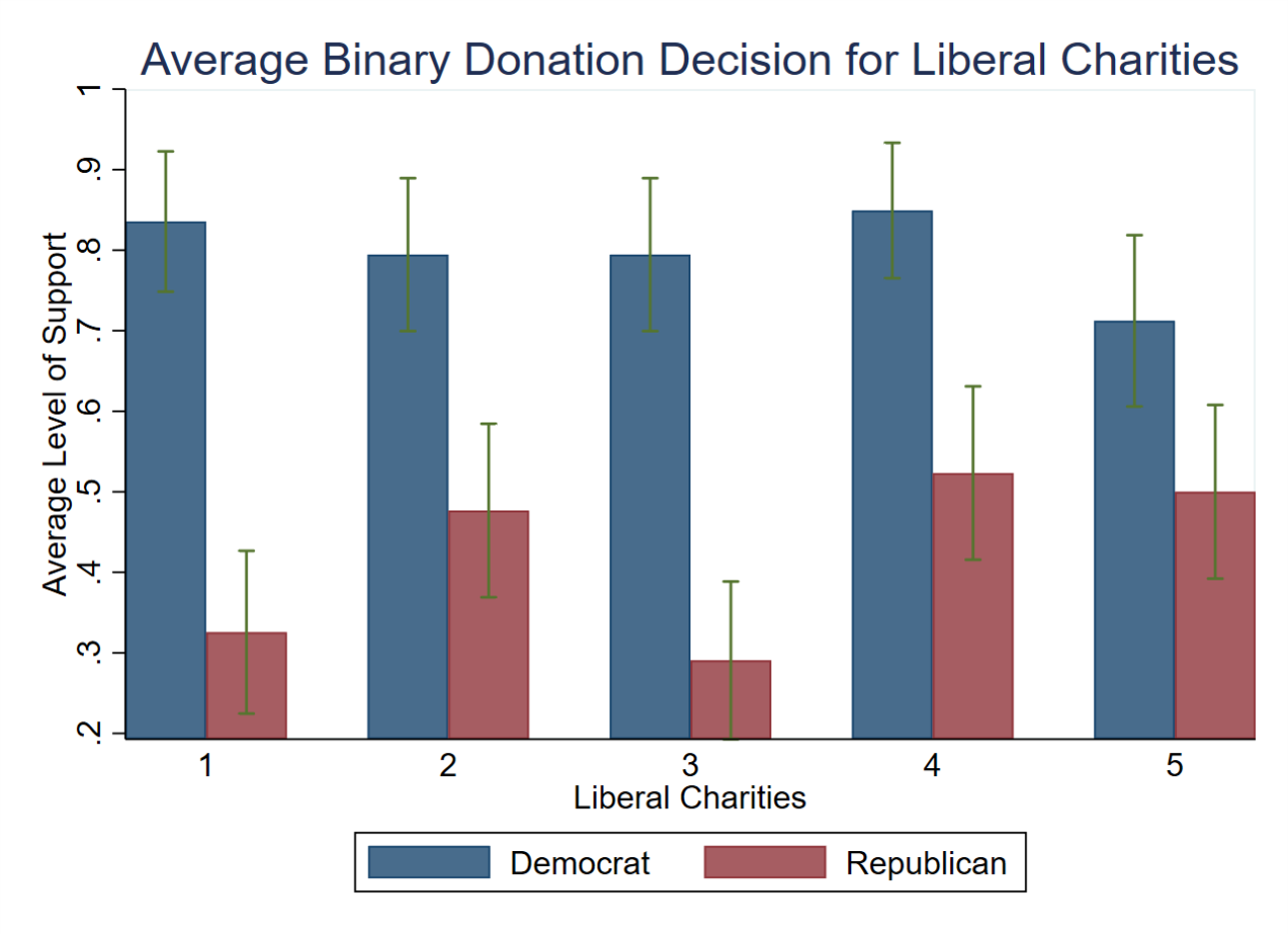
Table shows averages across the first two rounds of voting. The Diff column is the coefficient of a simple regression of treatment status on the variable. Stars indicate whether this difference is significant.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Affiliation and Charity Attitudes Survey 2



1: Friends of Animals 2: Aggieland Humane Society 3: Brazos Valley Foodbank 4: Parkinson's Foundation 5: American Heart Association

Affiliation and Charity Attitudes Survey 2



1: Planned Parenthood 2: National Women's Law Center 3: Trevor Project 4: Cool Earth 5: Green America

Pilot Results

Sample	*New Voters*			
Dep. Var:	*1{Return}*		*1{Donation}*	
	(1)	(2)	(3)	(4)
RCV	.044	0.032	0.015	0.018
	(0.042)	(0.041)	(0.0466)	(0.0466)
× Round 2	0.061**	0.102**	0.002	0.000
	(0.045)	(0.044)	(0.0518)	(0.0516)
× Round 3	0.081*	0.080*	0.001	0.006
	(0.046)	(0.046)	(0.0597)	(0.0598)
× Round 4	0.114**	0.126**	-0.051	-0.054
	(0.057)	(0.059)	(0.0774)	(0.0771)
Placebo	-0.011	-0.017	-0.021	-0.017
	(0.041)	(0.040)	(0.0464)	(0.0464)
× Round 2	0.025	0.027	-0.024	-0.026
	(0.042)	(0.041)	(0.0513)	(0.0513)
× Round 3	0.025	0.026	0.006	0.003
	(0.045)	(0.045)	(0.0593)	(0.0593)
× Round 4	-0.029	-0.032	-0.028	-0.029
	(0.053)	(0.053)	(0.0762)	(0.0759)
Round 2	-0.096**	-0.126**	-0.053*	-0.053*
	(0.032)	(0.074)	(0.0288)	(0.0287)
Round 3	-0.113**	-0.182***	-0.002	-0.001
	(0.033)	(0.080)	(0.0311)	(0.0312)
Round 4	-0.138***	-0.188***	-0.002	0.001
	(0.042)	(0.044)	(0.0372)	(0.0373)
Controls	No	Yes	No	Yes
Observations	1838	1838	1838	1838
Pseudo R-squared	0.00	0.01	0.00	0.01

Model (4) shows the mean regression results using simulations of fake treatments.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Allocation Decision

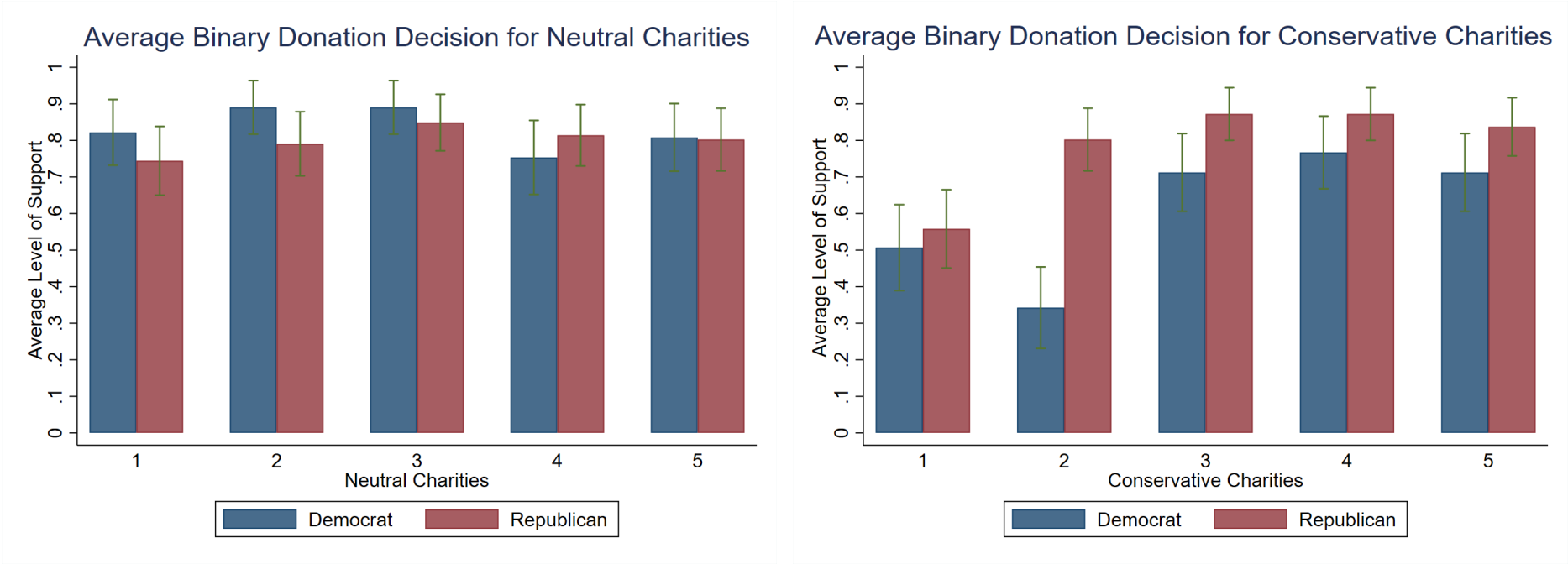
$100 Allocation Decision by Affiliation

	Liberal		Conservative			
	n	mean	n	mean	Diff	p-value
American Heart Association	170	12.50	107	11.64	0.86	0.54
Planned Parenthood	170	25.43	107	2.54	22.89***	0
Make a Wish	170	15.89	107	19.76	-3.87	0.15
Samaritan's Purse	170	3.86	107	24.6	-20.74***	0
Goodwill Industries	170	5.59	107	5.7	-0.11	0.6
NAACP	170	9.23	107	1.5	7.73***	0
Disabled American Veterans	170	8.09	107	17.66	-9.57***	0
Nature Conservancy	170	17.23	107	13	4.23***	0
National Policing Institute	170	2.19	107	3.59	-1.4	0.33

Table shows averages for each political classification. The Diff column is the difference in means for the allocation decision between liberal and conservative participants. Stars indicate whether this difference is significant.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Return

Republican Preferences for Charities



Average Binary Donation Decision for Neutral and Conservative Charities

Return

Rank Decision

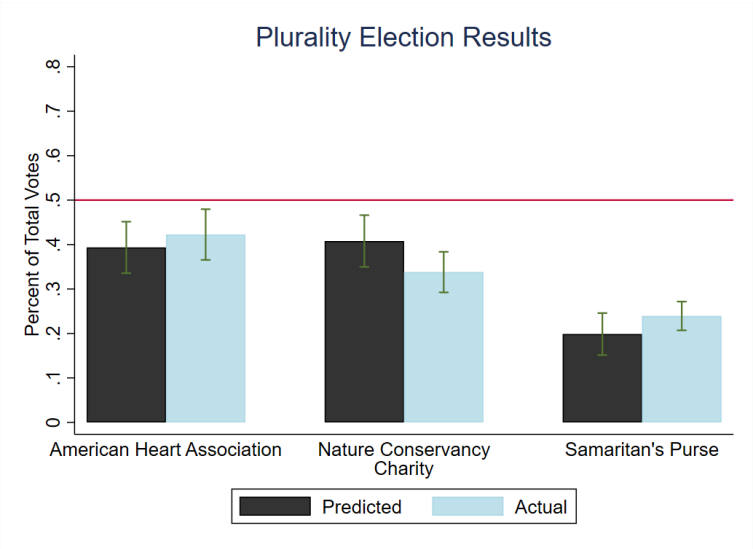
Rank Decision by Affiliation

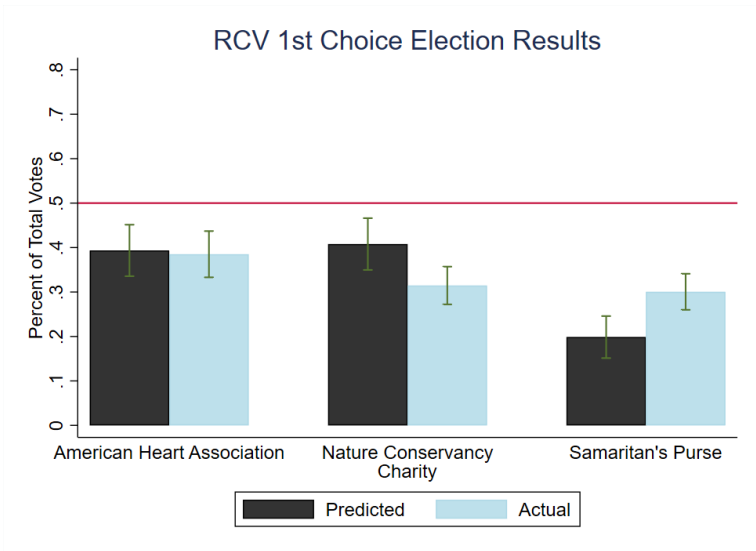
	Liberal		Conservative			
	n	mean	n	mean	Diff	p-value
American Heart Association	170	3.90	107	3.65	0.25	0.19
Planned Parenthood	170	3.46	107	7.47	-4.01***	0
Make a Wish	170	3.54	107	3.19	0.35	0.11
Samaritan's Purse	170	6.90	107	3.90	3.00***	0
Goodwill Industries	170	6.12	107	5.04	1.08***	0
NAACP	170	4.46	107	6.92	-2.46***	0
Disabled American Veterans	170	5.26	107	3.39	1.87***	0
Nature Conservancy	170	3.85	107	5.01	-1.16***	0
National Policing Institute	170	7.52	107	6.42	1.10***	0

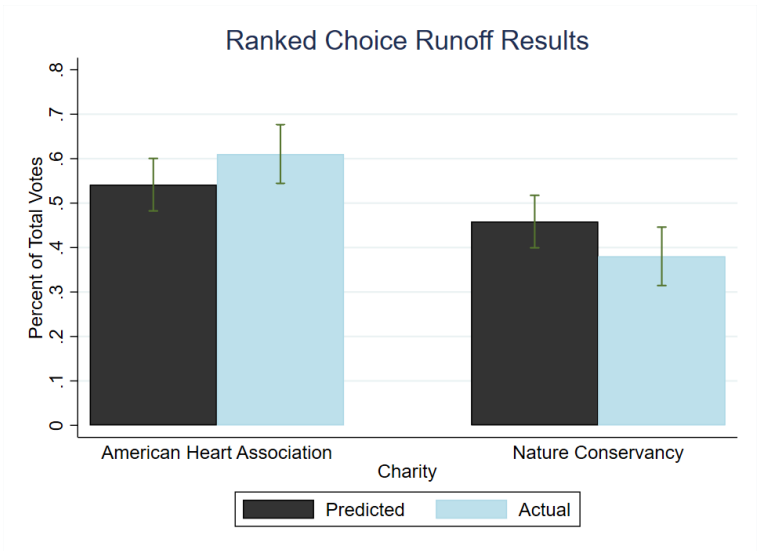
Table shows averages for each political classification. The Diff column is the difference in means for the rank decision between liberal and conservative participants. Stars indicate whether this difference is significant.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Return

Round 2 Election Results







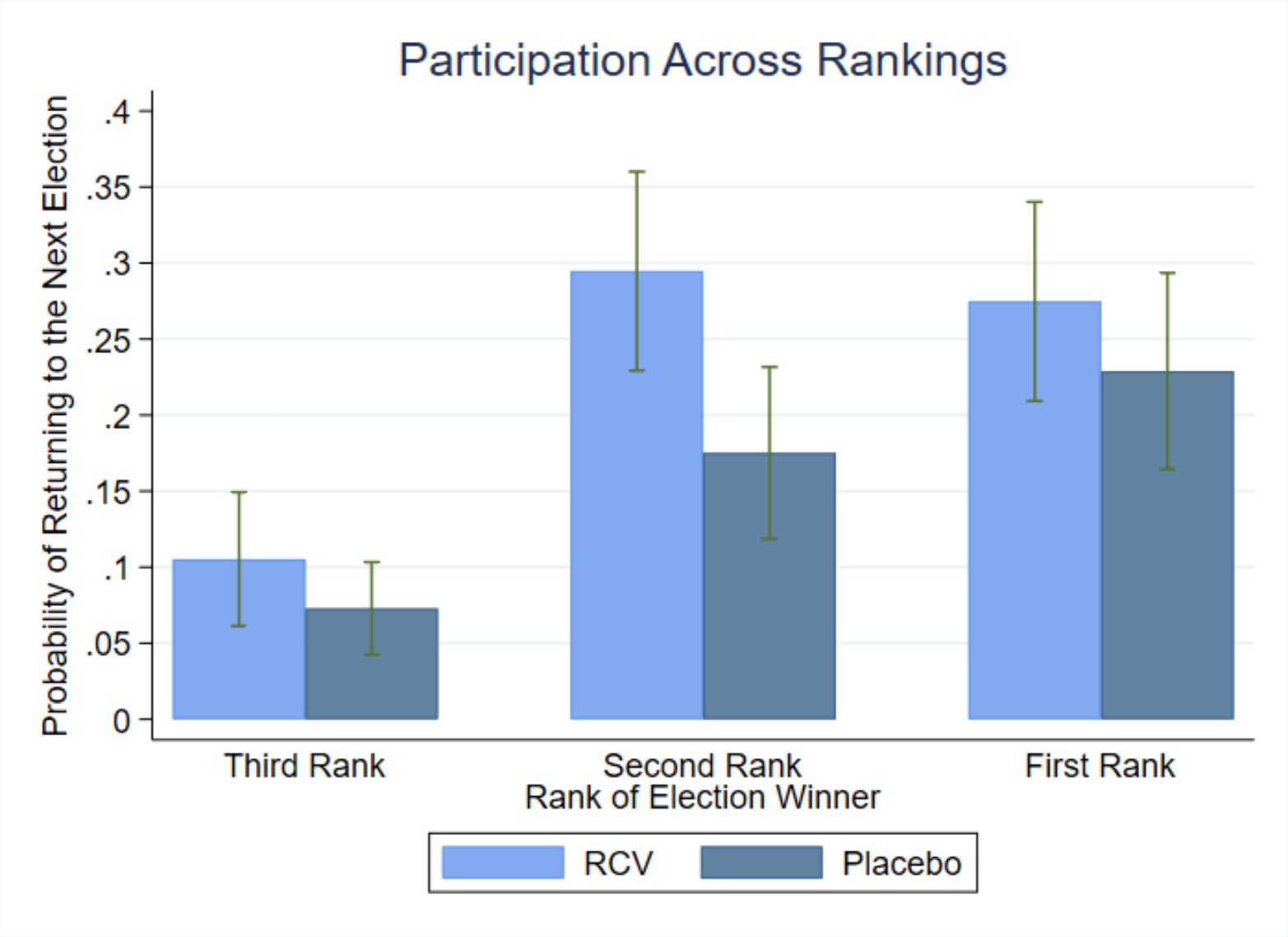
Return

Distribution of Political Preferences

	Full Sample		
	n	mean	sd
Conservative	402	0.33	0.47
Independent/Other	402	0.38	0.49
Liberal	402	0.29	0.45

These are very consistent with the distribution of political preferences in the United States. The most recent Gallup poll shows that among US voters 30% are Republican, 41% are Independent, and 28% are Democrat

Return


Participation Across Rankings
Probability of Returning to the Next Election
.4
.35
.3
.25
.2
.15
.1
.05
0
Third Rank
Second Rank
First Rank
Rank of Election Winner
RCV
Placebo

Return

Presidential election

- 2020 Election: Trump received approximately 74 million votes; Biden received around 81 million.
- 2024 Election: Trump currently has around 72 million votes; Kamala Harris has approximately 68 million votes.
- Implications of Abstention: Unbalanced abstention rates could contribute to an unrepresentative outcome.
  - Polling suggests that in swing states such as Pennsylvania, Arizona, and Georgia, Democratic voters are more likely to support a candidate who pledges to withhold military aid to Israel (Thakker, 2024).

Return

Regression Results

Sample	*New Voters*			
Dep. Var:	*1{Return}*		*1{Donation}*	
	(1)	(2)	(3)	(4)
RCV	.044	0.032	0.015	0.018
	(0.042)	(0.041)	(0.0466)	(0.0466)
× Round 2	0.061**	0.102**	0.002	0.000
	(0.045)	(0.044)	(0.0518)	(0.0516)
× Round 3	0.081*	0.080*	0.001	0.006
	(0.046)	(0.046)	(0.0597)	(0.0598)
× Round 4	0.114**	0.126**	-0.051	-0.054
	(0.057)	(0.059)	(0.0774)	(0.0771)
Placebo	-0.011	-0.017	-0.021	-0.017
	(0.041)	(0.040)	(0.0464)	(0.0464)
× Round 2	0.025	0.027	-0.024	-0.026
	(0.042)	(0.041)	(0.0513)	(0.0513)
× Round 3	0.025	0.026	0.006	0.003
	(0.045)	(0.045)	(0.0593)	(0.0593)
× Round 4	-0.029	-0.032	-0.028	-0.029
	(0.053)	(0.053)	(0.0762)	(0.0759)
Round 2	-0.096**	-0.126**	-0.053*	-0.053*
	(0.032)	(0.074)	(0.0288)	(0.0287)
Round 3	-0.113**	-0.182***	-0.002	-0.001
	(0.033)	(0.080)	(0.0311)	(0.0312)
Round 4	-0.138***	-0.188***	-0.002	0.001
	(0.042)	(0.044)	(0.0372)	(0.0373)
Controls	No	Yes	No	Yes
Observations	1838	1838	1838	1838
Pseudo R-squared	0.00	0.01	0.00	0.01

Delta-method standard errors are reported in parentheses. Table shows results from a probit model with and without controls.
* p $<$ 0.10, ** p $<$ 0.05, *** p $<$ 0.01.

Return