

# ECON 3510: Poverty and Economic Development

## Lecture 9: Turnout

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# Introduction

- ▶ Not everyone votes. There is considerable variation in turnout both across and within types of elections.
- ▶ If turnout varies by political preferences, then it is key in predicting election outcomes, who shows up determines who will win.
- ▶ Turnout can also be important for:
  - Aggregation of preferences;
  - Representativeness of elected officials;
  - Accountability of politicians/parties in power.
- ▶ In this lecture, we step back to ask a bottom-line question: why do people vote (or not)?
  - Economic theory: doesn't explain turnout very well, but gives a framework to organize thinking.
  - Empirical evidence on factors that affect turnout or political participation more broadly.

# Outline

1. Basic Theory of Turnout

2. Empirical Studies

## Basic Calculus of Voting

- ▶ Palfrey and Rosenthal (1985) present a simple framework. Individual  $i$  votes if

$$p_i B_i + D_i \geq C_i$$

where

- $p_i$ : probability of individual  $i$  being the “*pivotal voter*,” whose vote swings election outcome.
    - E.g., two parties receive the same number of votes; individual  $i$ ’s vote would break the tie.
  - $B_i$ : individual  $i$ ’s benefit from their preferred alternative winning, *relative* to the less preferred alternative.
  - $D_i$ : fixed benefit from the act of voting (e.g., a sense of civic duty, expressive benefits, or a habit).
  - $C_i$ : fixed cost of voting (e.g., time spent on going to and from the poll).
    - “Opportunity cost:” You could have used the time on other things.
- ▶ LHS = expected benefit from voting; RHS = cost of voting.

## “Paradox of Voting” (“Downs’s Paradox”)

- ▶ In large elections, there are many voters.  $p_i \approx 0$  for all individuals.
- ▶ For any non-negligible cost of voting  $C_i > D_i$ ,  $p_i B_i + D_i < C_i$ , and people would rationally abstain.
- ▶ However, many people do vote. Explanations often revolve around  $D_i$ : how do people receive a significant utility from voting?
  - That is, rational individuals vote even though the probability of being pivotal is low.

# Outline

1. Basic Theory of Turnout

2. Empirical Studies

## Gerber et al. (2008): Social Pressure and Voter Turnout

- ▶ The paper: Do people vote for compliance with the social norm of civic engagement?
- ▶ Gerber et al. (2008) first present a simple model to fix ideas. A citizen votes if

$$pB + D > C.$$

- ▶  $D$  is written as

$$D = \beta_1 \underbrace{D_I}_{\text{intrinsic benefit}} + \beta_2 \underbrace{D_E}_{\text{extrinsic benefit}}.$$

- ▶  $D_E$  relates to the social image that others form based upon whether one has voted. A simplified formulation:

$$D_E = \frac{\pi_r \alpha}{\beta_2}.$$

- $\pi_r$  is the probability that others can observe whether one has voted—social pressure.
- $\alpha$  is the fixed extrinsic value of voting.

## Completing the Model

- ▶ With these specifications, the condition under which a citizen votes is

$$pB + \beta_1 D_I + \pi_r \alpha > C.$$

- ▶ If  $\alpha > 0$ , then all else equal, when social pressure  $\pi_r$  increases, a citizen is more likely to vote.
- ▶ Gerber et al. (2008) perform a field experiment to test this.



# Experiment

- ▶ Setting: mailings 11 days before 2006 Michigan Primary.
- ▶ Sample: 180,002 households.
  - A household: everyone at the same address with the same last name.
- ▶ To produce the sample, they exclude
  - Everyone without a valid 9-digit zip code;
  - Everyone who lived on streets with fewer than 4 addresses (or 10 voters);
  - Blocks where  $\geq 10\%$  addresses included apartment numbers;
    - Focus on single-family homes.
  - Everyone who had a  $\geq 60\%$  probability of voting by absentee ballot;
    - These people might have made voting decisions before the treatments began.
  - Everyone who had a  $\geq 60\%$  probability of voting in the Democratic Primary;
    - Only the Republican nomination for Senate is contested, thus focus on Republican voters.
  - Everyone on a route with less than 25 households.
    - To meet USPS's bulk mailing requirement.
  - People who abstained in general elections.

## Treatments

- ▶ They cut the sample into 10,000 blocks.
- ▶ Within each block, they randomly assign households to 4 treatments, and they mailed different messages:
  1. Civic Duty: “DO YOUR CIVIL DUTY—VOTE!”
  2. Hawthorne: “YOU ARE BEING STUDIED!” Households were told that their voting behavior would be examined by researchers using public records.
  3. Self: People were told that their voting records would be shared **within their households**. Household members’ past voting records were attached.
  4. Neighbor: People were told that their voting records would be shared **within their own households and with neighbors**. Household members’ and neighbors’ past voting records were attached.
- ▶ Each treatment was assigned to 2 households within the block. The rest are controls; no mails were sent to them.

## Balance between Treatment and Control Groups

**TABLE 1. Relationship between Treatment Group Assignment and Covariates (Household-Level Data)**

|                | Control | Civic Duty | Hawthorne | Self   | Neighbors |
|----------------|---------|------------|-----------|--------|-----------|
|                | Mean    | Mean       | Mean      | Mean   | Mean      |
| Household size | 1.91    | 1.91       | 1.91      | 1.91   | 1.91      |
| Nov 2002       | .83     | .84        | .84       | .84    | .84       |
| Nov 2000       | .87     | .87        | .87       | .86    | .87       |
| Aug 2004       | .42     | .42        | .42       | .42    | .42       |
| Aug 2002       | .41     | .41        | .41       | .41    | .41       |
| Aug 2000       | .26     | .27        | .26       | .26    | .26       |
| Female         | .50     | .50        | .50       | .50    | .50       |
| Age (in years) | 51.98   | 51.85      | 51.87     | 51.91  | 52.01     |
| N =            | 99,999  | 20,001     | 20,002    | 20,000 | 20,000    |

*Note:* Only registered voters who voted in November 2004 were selected for our sample. Although not included in the table, there were no significant differences between treatment group assignment and covariates measuring race and ethnicity.

**TABLE 2. Effects of Four Mail Treatments on Voter Turnout in the August 2006 Primary Election**

|                   | Experimental Group |            |           |        |           |
|-------------------|--------------------|------------|-----------|--------|-----------|
|                   | Control            | Civic Duty | Hawthorne | Self   | Neighbors |
| Percentage Voting | 29.7%              | 31.5%      | 32.2%     | 34.5%  | 37.8%     |
| N of Individuals  | 191,243            | 38,218     | 38,204    | 38,218 | 38,201    |

## Regression Results

- They estimate

$$\text{Vote}_i = \alpha + \sum_{k=1}^4 \tau_k D_{ik} + \text{Block FE}_i + \text{Past Voting Record}_i + \varepsilon_i.$$

Standard errors are clustered at the household level, the level at which treatments are randomized.

**TABLE 3. OLS Regression Estimates of the Effects of Four Mail Treatments on Voter Turnout in the August 2006 Primary Election**

|   | Model Specifications |              |              |
|---|----------------------|--------------|--------------|
|   | (a)                  | (b)          | (c)          |
| Civic Duty Treatment (Robust cluster standard errors) | .018* (.003)         | .018* (.003) | .018* (.003) |
| Hawthorne Treatment (Robust cluster standard errors)  | .026* (.003)         | .026* (.003) | .025* (.003) |
| Self-Treatment (Robust cluster standard errors)       | .049* (.003)         | .049* (.003) | .048* (.003) |
| Neighbors Treatment (Robust cluster standard errors)  | .081* (.003)         | .082* (.003) | .081* (.003) |
| N of individuals                                      | 344,084              | 344,084      | 344,084      |
| Covariates**  | No                   | No           | Yes          |
| Block-level fixed effects                             | No                   | Yes          | Yes          |

*Note:* Blocks refer to clusters of neighboring voters within which random assignment occurred. Robust cluster standard errors account for the clustering of individuals within household, which was the unit of random assignment.

\*  $p < .001$ .

\*\* Covariates are dummy variables for voting in general elections in November 2002 and 2000, primary elections in August 2004, 2002, and 2000.

## More in the Turnout Literature

- ▶ Palfrey and Rosenthal (1985): individual votes if  $p_i B_i + D_i > C_i$ .
- ▶ The literature also uses the simple framework to explain variation in turnout rates (see review by Cantoni et al. (2025)).
- ▶  $p_i$  can be either the probability of being pivotal or a voter's *belief* that their vote matters.
  - ✓ Bursztyn et al. (2024): In Swiss referendums, the release of a closer poll increases turnout.
  - ✗ Gerber et al. (2020): No effects of perceived closeness on turnout in US gubernatorial elections.
- ▶ If voters also have altruistic preferences,  $B_i$  does not necessarily vanish as  $p_i$  approaches 0.
- ▶ Voting procedures can impact  $C_i$  and  $B_i$ : voter registration, early voting laws, distance to polling stations, holding multiple elections, etc.

# References I

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