

# The Effect of Moving Precincts on Voting

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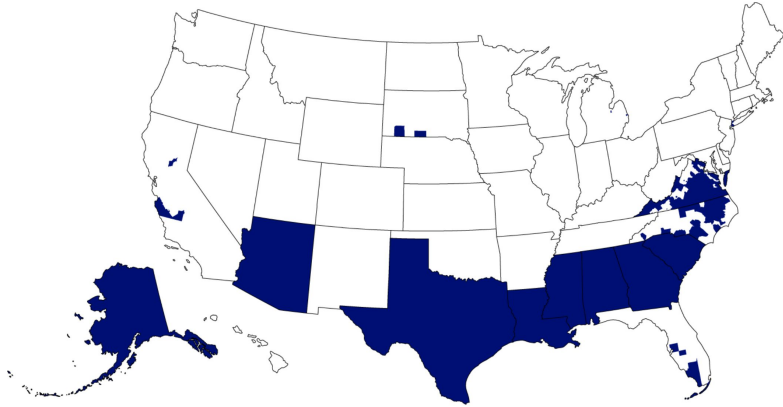
BALLOT

# Agenda

1. Background and research questions
2. Prior work
3. Available data
4. Methodology
5. Results & Implications

# Background and research questions

# Background



**Voting Rights Act (1965)** - areas with a history of imposing race-based burdens to voting were **subject to federal oversight** when changing election rules

**Shelby v. Holder (2013)** - local officials can now **legally close polls or change voting laws** without federal supervision

**Impact:** There have been a number of poll closures and reprecincting since

A person is seen from the side, wearing a dark vest over a light-colored shirt, leaning over a white ballot box. The background is a blue-tinted image of a polling station. Several American flags are visible on poles. A large sign with the word "VOTE" in bold, capital letters is partially visible in the lower right. The overall scene is dimly lit, with the blue tint dominating the color palette.

Does changing polling places affect  
voter turnout?

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**VOTE**



Overall, we estimate that a change  
in polling place location between  
general elections decreases voter  
turnout by **~ 0.8%**

Prior work

# Most studies show a negative effect on turnout

Brady, et al.

Yoder

**TABLE 4. Outcome Estimates: Unadjusted and Matched**

	Unadjusted Results	Matching Results	Naive <i>t</i> Statistic
Polling place voting	-3.11%	-3.03%	-83.12
Absentee voting	1.56%	1.18%	49.13
Not voting	1.55%	1.85%	52.08
Number of people	2,781,762	2,781,762	

	(1)	(2)	(3)
PP Change	-0.011 (0.002)	-0.019 (0.009)	-0.008 (0.007)
N	13,315,719	2,383,803	1,595,522
# Voters	3,869,787	1,257,927	1,100,761

“Overall, turnout **decreased by a substantial 1.85** percentage points”.

“I find that changing a voter’s polling place location causes a **1 to 2 percentage point decline** in general election turnout likelihood.”



# What is behind this negative effect?

“The majority of the turnout decline can be attributed to the **search costs associated with finding one’s new polling place location** rather than the distance costs of traveling to the polling place on Election Day.”

- Jesse Yoder

Available data

# North Carolina: A former “preclearance” state

Election data publicly available since 2005, at [www.ncsbe.gov](http://www.ncsbe.gov)

The data is linked to an anonymous NCID, but is otherwise fairly comprehensive



# Data sources

## Voter information

- Snapshots taken every few months for each registered voter
- Includes age, race, home address and voter status

2012 snapshot: **11,352,660** voters

2016 snapshot: **7,449,896** voters

## Voter history

- Row record for each vote cast across all elections
- Includes NCID of voter, voting method and voting location

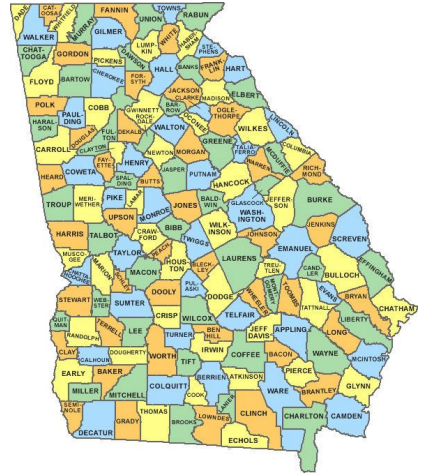
Matching NCID across 2012 and 2016: **4,767,975** records

# Challenge with another “preclearance” state: Georgia



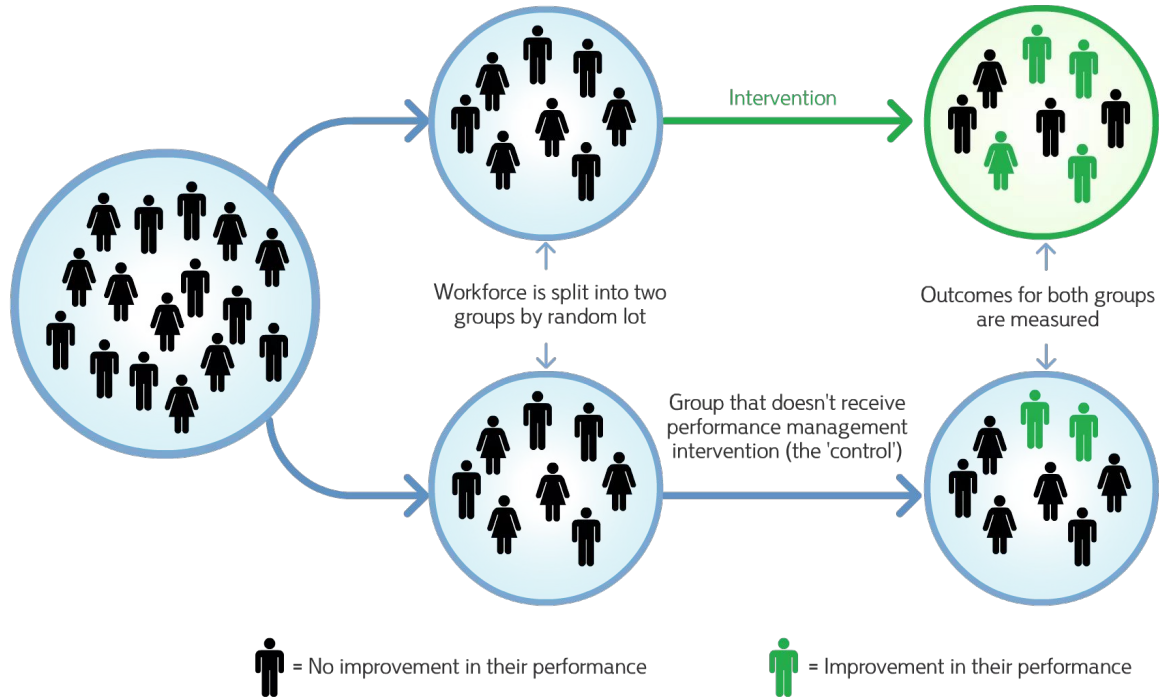
*“You’ll have to  
get that from  
each county”*

*“The Secretary of  
State’s office should  
have that data”*

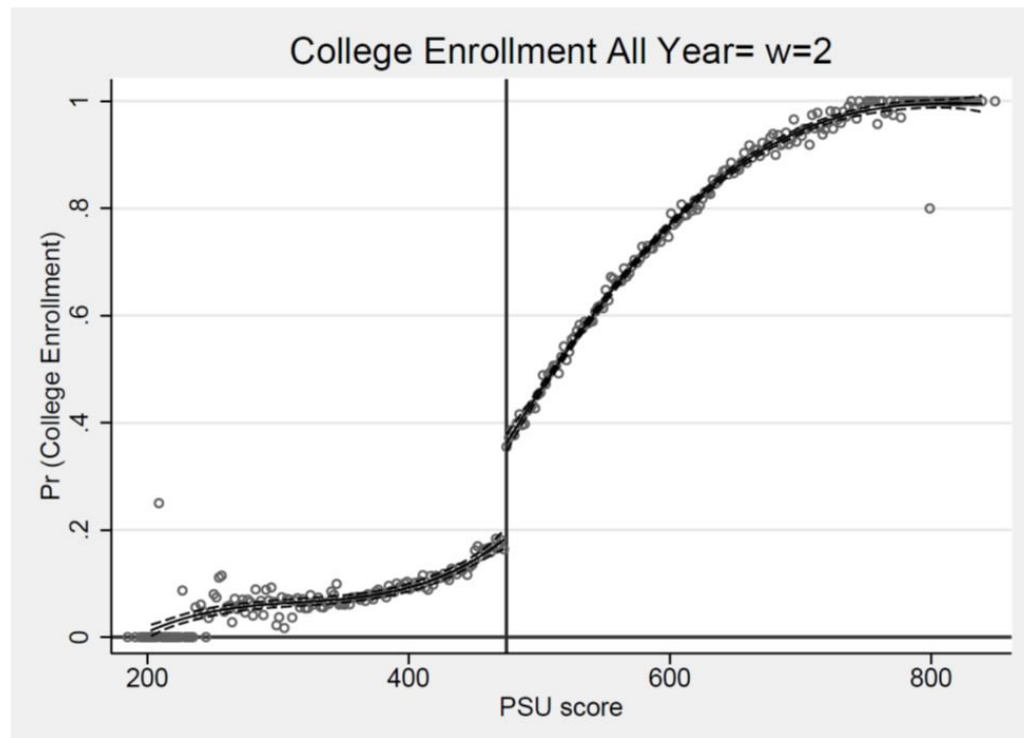


Methodology

# Causal Experiments: Randomized Control Trial



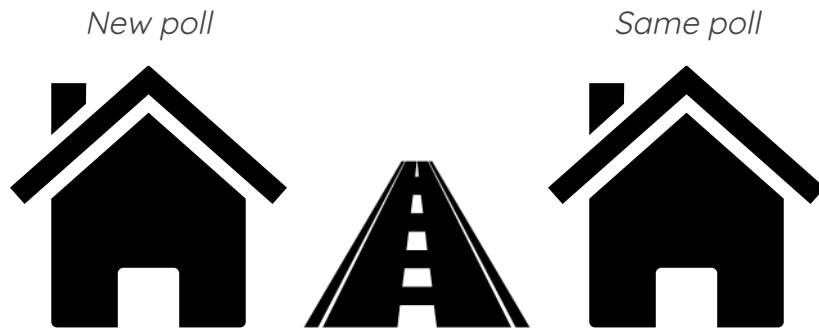
# Causal Experiments: Regression Discontinuity



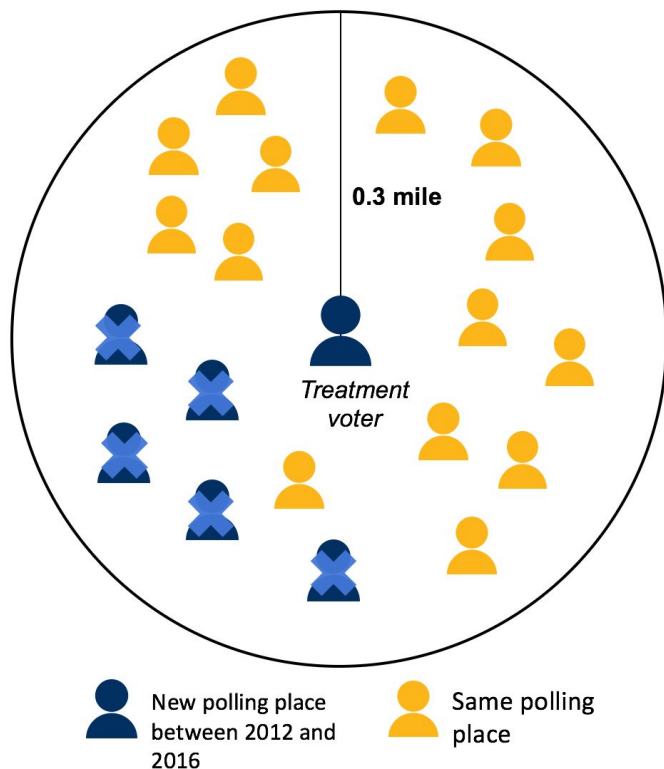


# Our design leverages geographic proximity

- **Illustrative example:** two neighbors across the street where reprecincting occurred
- **Fundamental assumption:** Individuals are similar to neighbors across observable and unobservable attributes that could affect voter turnout



# Defining Control vs. Treatment Groups



*Mini-experiments within neighborhoods:*

**Treatment:** A voter who was *assigned to a new polling place* as compared to the 2012 general election

**Control:** All voters *within 0.3 miles of a treatment* member who were *not assigned to a new polling place* as compared to the 2012 general election

# Core Analysis

Treatment



Turnout  
rate

vs

Variable Sized Control



Average turnout  
rate

Given our experiment design, our data includes only individuals who were registered in 2012 and **did not move home address between 2012 and 2016**

# Model

$$Pr(Vote_i) = \beta_0 + \beta_1 Poll\_Further_i + \beta_2 Poll\_Closer_i + \gamma Block + \epsilon$$

<b><i>Pr(Vote)</i></b>	Probability of any method of voting in 2016 (our variable of interest)
<b><i>Poll_Further</i></b>	Binary variable to identify if the voter's polling assignment was moved further than in 2012
<b><i>Poll_Closer</i></b>	Binary variable to identify if the voter's polling assignment was moved closer than in 2012
<b><i>Block</i></b>	Fixed effect for each "block" or cluster each treatment voter with their unique control group
<b><i>ε</i></b>	Random noise/error component

# Results & Implications

# Descriptives for final dataset

Statistic	Farther Poll	Closer Poll	Changed Poll	Same Poll
<i>Number of Eligible Voters</i>	88,936	57,673	146,609	2,855,425
<i>Voter Turnout</i>	85.0%	84.9%	85.0%	85.6%
<i>Voted as Registered Democrat</i>	34.5%	32.3%	33.7%	35.6%
<i>Voted as Registered Republican</i>	32.5%	34.0%	33.1%	30.3%
<i>Mean Age</i>	58.1	58.2	58.2	57.8
<i>Female</i>	54.3%	54.1%	54.2%	54.1%
<i>White</i>	74.3%	76.9%	75.3%	73.9%
<i>Non-White</i>	25.7%	23.1%	24.7%	26.1%

## Do polling place changes have a causal impact on voter turnout?

- A change in polling place location **decreases voter turnout propensity by just under 0.8%** which is directionally consistent with previous studies
- The effect is consistent across voters whose polling places moved closer and those that moved farther away

## How far is too far?

- For reassignments **at least one mile closer** - **no detectable treatment** effect
- For reassignments **at least one mile farther** - a **1.6% decrease** in turnout observed



# Implications

- Our findings are consistent with prior work in this field
- It is important to recognize **travel and search efforts as a cost** to individual voters

**“From a policy perspective, the hope is that a voting location assignment could be less arbitrary and more determined in order to avoid undue biases in the future”**

**S. Christian Wheeler<sup>1</sup>**

# Ties to Electoral Ergonomics

The optimisation of all relevant electoral procedures and mechanisms to provide the best possible electoral experience for voters

- Changing where voters go to vote may:
  - Introduce **additional search costs** and inconvenience to the individual
  - Affect **travel time** to the polls
  - **Influence decisions** regarding whether and how they vote

# Questions?

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*Thank You*

