

Revisiting the differential mobilisation hypothesis: An individual participant data meta-analysis

Francisco Tomás-Valiente Jordá¹, Asli Ceren Cinar², Florian Foos³ and Peter John⁴
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¹ETH Zurich
tomasf@student.ethz.ch

²London School of Economics
a.cinar@lse.ac.uk

³London School of Economics
f.foos@lse.ac.uk

⁴King's College London
peter.john@kcl.ac.uk

Introduction

Motivation

"Get out the vote" (GOTV) refers to interventions intended to boost voter participation in elections.

However, GOTV interventions can also affect the *composition* of the electorate.

If GOTV is more effective on low-propensity voters, it helps close turnout gaps. If GOTV is more effective on high-propensity voters, it exacerbates turnout inequalities.

Differential effectiveness by voting propensity should lead to non-neutral changes in electorate composition, affecting racial or ideological turnout gaps as well.

Literature

Earlier research in this debate examined whether individuals who are ex ante more likely to vote were more positively affected by GOTV interventions.

- Proxying ex ante likelihood to vote by using election turnout in the past, scholars often found mixed results (Niven, 2001, 2004; Gerber, Green and Larimer, 2008; Abrajano and Panagopoulos, 2011; Malhotra et al., 2011)
- Lack of statistical power usually makes it impossible to answer these questions about heterogeneous effects in each paper individually.
- Solution is to combine estimates from multiple experiments (Arceneaux and Nickerson, 2009; Enos, Fowler and Vavreck 2014).
- Looking at 11 GOTV papers and measuring voting propensity by mapping numerous socio-demographic and political indicators onto a single dimension, Enos, Fowler and Vavreck (2014) find that GOTV campaigns are more effective on high-propensity voters.

Our Contribution

Building on *Enos, Fowler and Vavreck (2014)*, we expand their analysis in three ways:

- ① Larger sample size
 - More statistical power: increase sample size from 11 to between 27 (main sample) and 55 (extended sample)
 - Not restricted to US before 2008
- ② Expanded contextual analysis and analysis of mechanisms
 - Contextual moderation hypotheses: in what context does GOTV affect turnout inequality?
 - Mechanisms: are GOTVs' effects on turnout inequality because low-propensity voters harder to contact or because low-propensity voters are less affected conditional on contact?
- ③ Methodological contribution
 - Enos, Fowler and Vavreck model effect heterogeneity through a linear interaction model, which imposes stringent parametric assumptions.
 - They do not combine estimates from experiments through explicit meta-analysis model.
 - They count different arms of same experiment as independent experiments.
 - We improve over all three limitations introducing a new meta-analytical model of conditional average treatment effects (CATEs) in voting propensity bins

Pre-registered hypotheses

Main hypotheses:

- GOTV interventions are more effective on citizens with higher propensities to vote
- GOTV interventions are more effective on citizens with higher propensities to vote, even among those contacted

This is because: i) high-propensity voters are easier to contact, ii) emphasizing social norms of turnout will resonate more with high-propensity voters, iii) low-propensity voters face higher costs of voting for GOTV to offset.

Contextual hypotheses:

GOTV interventions increase the participation gap more

- In interventions with larger average effects (ITT)
- In the US than in other world regions
- The earlier they were conducted
- In low-salience elections

Methodology

Data collection

We compiled a large database of around 400 GOTV experiments:

- Randomised controlled trials conducted in the field
- Turnout as an outcome variable
- Interventions with the goal of increasing turnout or containing appeals to turnout

We collected datasets from archives for 91 GOTV papers, among which 66 fulfill criteria and contain individual-level data (41 in US, 15 outside US).

We are now contacting authors by email to get additional datasets.

Like Enos, Fowler and Vavreck (2014), we subset analysis to papers with significant ITTs: only expect differential effects by voting propensity for interventions that work on average.

More information on our data collection strategy can be found in our [pre-registration plan in OSF](#).

Statistical methods

- 1 Separately for each experiment, use logistic regression to predict turnout in control group on the basis of socio-demographic covariates and past voting

$$\textit{turnout} = \alpha + \beta\mathbf{X}, \quad \textit{if } D = 0$$

- 2 Predict probability of voting for treated and control observations: these are voting propensities. Classify observations into 5 voting propensity bins.
- 3 Estimate ITTs in each bin. To deal with multiple-arm experiments, estimate the conditional ITTs of all arms simultaneously, separately for each experiment-bin:

$$\textit{turnout} = \alpha + \sum_{j=1}^J \delta_j D_j, \quad \textit{if } \textit{bin} = m$$

- 4 Estimate meta-analysis model. We use $\textit{var}(\delta_{jkm})$ to fill diagonal of variance-covariance matrix and $\textit{cov}(\delta_{jkm}, \delta_{j'km})$ to fill off-diagonal terms. We allow correlation in observed effects because different arms are compared to single control in some experiments. Correlation in true effect sizes allowed by random effects for experiment k , for bin m within each experiment k , and arm j within each experiment m .

$$\hat{\delta}_{jkm} = \mu_k + u_m + v_{km} + w_{jm} + \epsilon_{jkm}$$

$$u_m \sim N(0, \sigma_u^2), v_{km} \sim N(0, \sigma_v^2), w_{jm} \sim N(0, \sigma_w^2), \epsilon_{jkm} \sim N(0, V)$$

Preliminary results

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GOTV is most effective on intermediate voting propensities. Not effective on highest bin, where citizens would vote even if not treated.

We reject null that conditional ITT is the same across all bins (even without last bin).

Positive significant difference in conditional ITTs between the lowest bins and the intermediate bins (0.2-0.8).

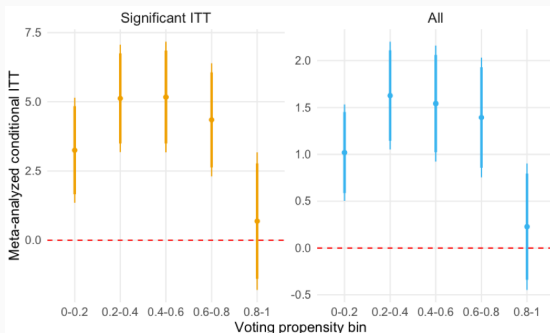


Figure 1: Main results: conditional ITT across bins

Preliminary results: Mechanisms

ITT is a function of LATE and contact rate. Looking at these, we can see if GOTV's differential effect owes to differential contact or to differential effect conditional on compliers, or both.

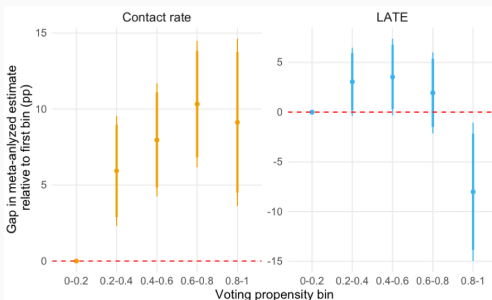


Figure 2: Contact rates and LATEs across bins

Contact rate increases with bin. Some evidence that LATE is largest for intermediate voting propensities, but not conclusive.

Preliminary results: Contextual moderation across space

Higher voting propensity bins are more strongly associated with larger conditional ITTs in the US than in non-US contexts.

Enos, Fowler and Vavreck's (2014) findings might be specific to US context.

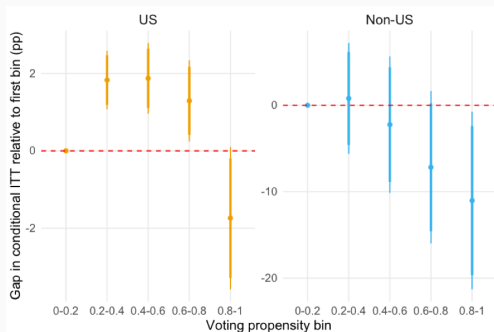


Figure 3: Conditional ITT across bins in US and non-US contexts

Preliminary results: Additional contextual moderation

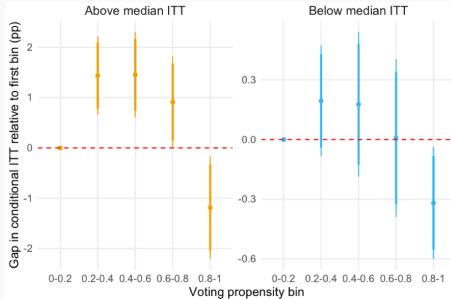


Figure 4: Conditional ITT across bins in experiments with above- and below-median ITTs

- GOTV interventions with larger ITTs have stronger differential effects by voting propensity
- GOTV interventions' differential effects have not changed over time.
- No evidence that GOTV's differential effects by voting propensity depends on electoral salience, against Arceneaux and Nickerson (2009).

Conclusion

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- We introduce a new meta-analytical model to better test how GOTV effectiveness varies with individuals' voting propensity.
- On a larger sample and with refined statistical methods, we partly replicate Enos, Fowler and Vavreck's results.
- GOTV campaigns are most effective on intermediate voting propensities: GOTV is more effective in ranges of voting propensity between 0.2-0.8 than in the lowest voting propensity bin.
- We fail to find evidence that GOTV exacerbate participation gaps beyond the US.

Thank you for listening!