

A Substitution Effect, a Turnout Effect, or Both? Changes in Distance to the Early Voting Site and Voter Turnout

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Location, Location, Location

COVID-19 is closing polling places as western NC gets ready for an election

BY JORDAN WILKIE, CAROLINA PUBLIC PRESS
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BARRIERS TO THE BALLOT BOX

How one rural county struggles to find polling places

In a North Carolina county, polling places have shuttered, and voter turnout has decreased.

WCEP News

The US Eliminated Nearly 21,000 Election Day Polling Locations for 2020

Exclusive WCEP News analysis shows a 20% cut in election locations nationwide, and North-South divide in California, Maryland, Kentucky, New Jersey, Nevada and North Dakota.

National Data Release Sheds Light On Past Polling Place Changes

STATELINE ARTICLE | September 29, 2020 | By: Matt Vasilogambros, Carrie Levine & Pratheek Rebala | Read time: 5 min

Research Questions:

What happens when early voting sites change?

Will change be enough to tilt some habitual early voters:

- away from voting? (a turnout effect)
- to alter their method of voting? (a substitution effect)

Is the effect magnified:

- when the distance increases?
- when the voter is from a racial minority?

The Case, Data, and Methods:

- **The Case:** 2018 Uniform and Expanded Early Voting Act
 - Reduced # of early voting locations in 70 out of 100 NC counties
- **The Data:** NC State Board of Elections Registered Voter File & Voter History
- Calculation of changes in driving distances for 2016 early voters pre- and post-changes.
- **The Methods:** Models estimating the *effect of early voting location changes* on turnout & choice of voting method.
- Models estimating the *effect of distance* to polling place changes on turnout & choice of voting method.

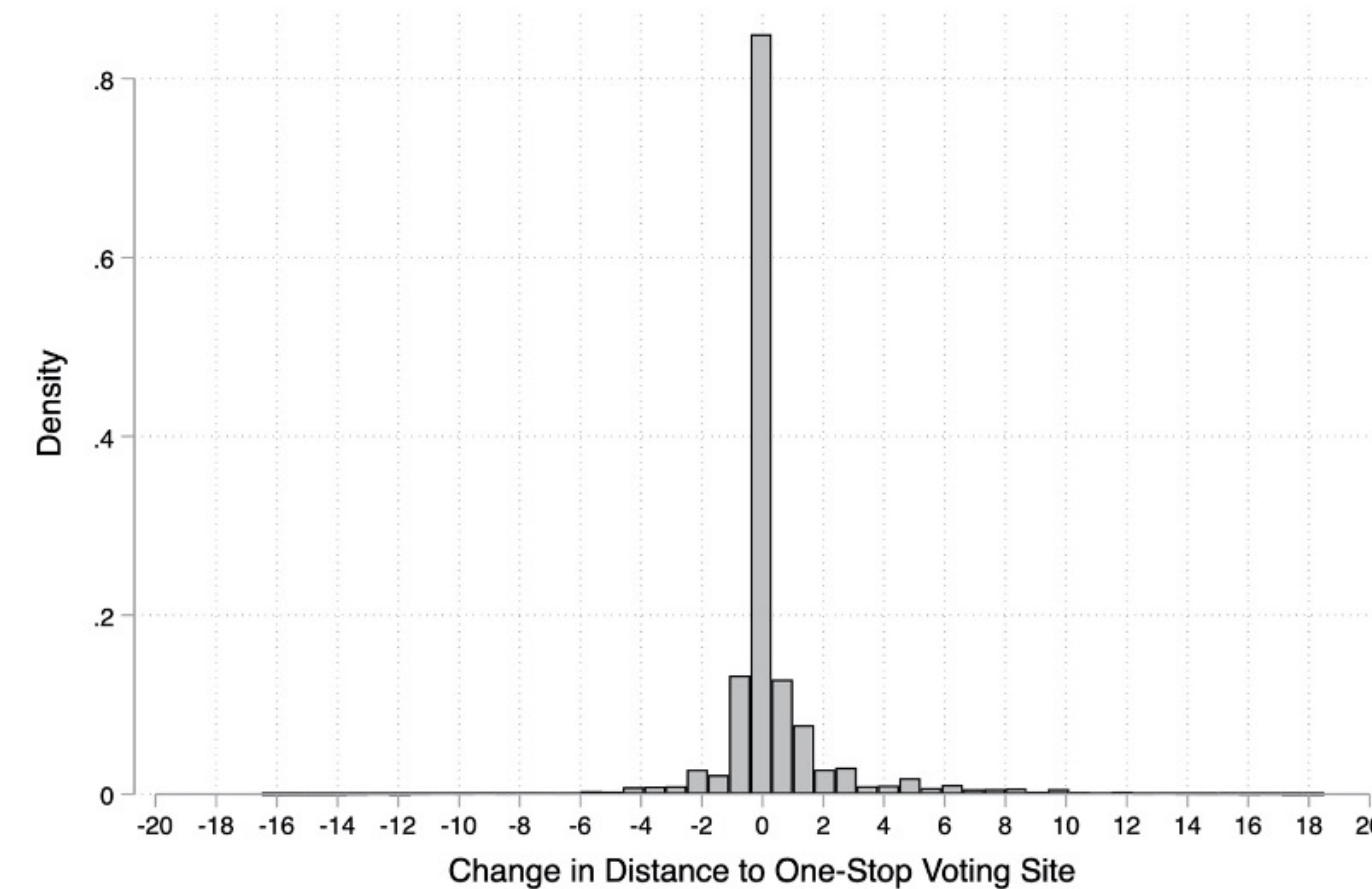
3 Related but Distinct Dependent Variables:

- First: measure the effect of early voting locations on **turnout**
 - Cases with a value of zero used early voting in 2016 and 2018
 - Cases with a value of one voted early in 2016 and did not vote at all in 2018
- Second: measure effect of polling place movement on the **substitution** effect
 - 0 = voters who voted early in 2016 and 2018
 - 1 = voters who voted early in 2016, and voted in 2018 but used another vote method
- Third: **scale** of voting methods/habits
 - 0 = people who voted early in 2016 and didn't vote in 2018
 - 1 = people who voted early in 2016 and voted in 2018 but cast their vote either on election day or by mail
 - 2 = voters who voted early in both 2016 and 2018

Table 1. Hypothesized Relationships

	Turnout	Substitution	Scale
Change in Location	+	+	-
Difference in Distance	+	+	-

Figure 1. Histogram of Change in Distance in One-Stop Voting Location in NC from 2014-2018



Source: Authors' data calculated from administrative data maintained at the NC State Board of Elections.

Table 2: Changes in Early Voting Polling Places Reduce Turnout and Alters the Method of Voting

	Vote	Vote Method	Scale
Polling Place Change	.071 (.003)	.143*** (.003)	-.143 (.003)
Female	.105 (.003)	.081*** (.003)	-.081 (.003)
Birth Year	.037 (.001)	.024*** (.001)	-.024 (.001)
White	-.223 (.004)	-.007*** (.004)	.007 (.004)
Party ID (base term= Unaffiliated + Libertarian)			
Democrat	-.286 (.004)	-.107*** (.004)	.107 (.004)
Republican	.013 (.004)	.167*** (.004)	-.166 (.004)
N	1,925,580	1,956,937	1,956,937
Chi2	167243.15	66571.53***	66571.53
Pseudo R2	.07	.03	.03

Notes: Entries in the first two models are logistic regression coefficients. Entries in third model are ordinal logistic regression coefficients. Numbers in parentheses are robust standard errors clustered on the county. Data are from the NC State Board of Elections. Calculations are by the authors. All relationships statistically significant at p<.001

Table 3: Increasing Distance to the Early Voting Polling Place Reduces Turnout and Alters the Method of Voting

	Vote	Vote Method	Scale
Change in Distance	.044*** (.001)	.085*** (.001)	-.085*** (.001)
Female	.105*** (.003)	.082*** (.003)	-.082*** (.003)
Birth Year	.037*** (.001)	.024*** (.001)	-.024*** (.001)
White	-.229*** (.004)	-.021*** (.004)	.021*** (.004)
Party ID (base term= Unaffiliated + Libertarian)			
Democrat	-.287*** (.004)	-.109*** (.004)	1.09*** (.004)
Republican	.010*** (.004)	.159*** (.004)	-.159*** (.004)
N	1,880,630	1,911,940	1,911,940
Chi2	162876.76***	77588***	77588.23***
Pseudo R2	.07	.03	.03

Notes: Entries in the first two models are logistic regression coefficients. Entries in third model are ordinal logistic regression coefficients. Numbers in parentheses are robust standard errors clustered on the county. Data are from the NC State Board of Elections. Calculations are by the authors. All relationships statistically significant at p<.0

Findings:

Habitual early voters who have their early voting locations changed are about 2 percentage points less likely to vote & about 3 percentage more likely to change their method of voting than those whose early voting sites remained.

The effects are attenuated if the distance to the polling site are reduced.

The effects are compounded among voters of color who cast ballots early.

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