All-Mail Voting in Colorado Increases Turnout and Reduces Turnout Inequality*

Adam Bonica
Jacob M. Grumbach
Charlotte Hill
Hakeem Jefferson

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Abstract

The COVID-19 crisis has sparked interest in all-mail voting as a potential policy solution for avoiding in-person elections. However, past research into the effect of all-mail voting on voter turnout has found mixed results. We exploit the implementation of all-mail voting in Colorado, where statewide policy implementation was effective but turnout has been understudied, to estimate the effect of all-mail voting on turnout for all registered voters, along with age, racial, education, income, and occupational subgroups. Using large voter file data and a difference-in-differences design within individuals, we find an overall turnout effect of approximately 9.4 percentage points. Turnout effects are significantly larger among lower-propensity voting groups, such as young people, blue-collar workers, voters with less educational attainment, and voters of color. The results suggest that researchers and policymakers should look to Colorado's all-mail voting approach as an effective model for boosting aggregate turnout and reducing disparities across subgroups.

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*The authors are listed in alphabetical order.

Stanford University. Email: bonica@stanford.edu
University of Washington. Email: grumbach@washington.edu
University of California, Berkeley. Email: charlottehill@berkeley.edu
Stanford University. Email: hakeem@stanford.edu

"We felt that our voters had voted with their feet. They had said 'we want vote by mail.'"
-Wasco County election officer Karen LeBreton Brown (quoted in Gronke 2005)

The COVID-19 public health crisis threatens traditional election administration (NCSL 2020). Advocates and election officials have turned to all-mail voting systems, in which every registered voter is mailed a ballot to complete at home, as a potential policy solution. Of the more than a dozen states that have opted to postpone their primary, special, and local elections in the wake of the coronavirus pandemic, most are using the extra time to ramp up mail-voting processes (Corasaniti and Saul 2020; Vote.org 2020).

In this paper, we investigate the turnout effects of Colorado's switch to all-mail voting. Despite the substantial literature on mail voting, there has been, to the best of our knowledge, no systematic analysis of all-mail voting in Colorado. This is a critical gap. Colorado currently boasts one of the highest voter turnout rates in the nation (Murray 2018), and many policy experts consider Colorado's all-mail voting policy to be a gold standard for states considering adopting similar reforms (e.g., Chapman et al. 2019; Kondracke 2020). In the wake of the coronavirus pandemic, a third of states have reportedly contacted Colorado Secretary of State Jena Griswold for support building or expanding their own mail voting systems in advance of the general election (Carman 2020).

Using a large voter file, we use a difference-in-differences design to estimate within-subject effects of all-mail voting in Colorado. The effects we estimate are substantial. All-mail voting in Colorado increased voter turnout by 9.4 percentage points overall. Effects are disproportionately large among young people, as high as 15 percentage points for individuals 30 years old and younger. Similarly impressive effects are observed among blue-collar workers, voters with less educational attainment, voters with less wealth, and voters of color. And

contrary to concerns expressed by some political elites, we find little evidence that Democrats and Republicans experience markedly different boosts in turnout after the implementation of Colorado's all-mail voting system.

The findings underscore the positive turnout effects of all-mail voting. Perhaps more importantly, our analysis highlights Colorado as a policy example to be emulated by other states as they consider adopting or expanding mail voting for the November 2020 election.

What Do We Know About All-Mail Voting?

Voting by mail has a long and successful history in the United States that stretches back to soldiers' absentee voting in the 18th century (Dubin and Kaslow 1996). Its use has expanded greatly in recent decades, with ballots cast by mail constituting approximately one-fourth of all votes cast in the 2016 presidential election (Roberts 2018). In the modern era, mail-in ballots, whether absentee ballots or ballots in all-mail voting states, have shown near-zero evidence of vulnerability to fraud (in absolute terms or relative to traditional ballots), and the very few documented cases of attempted fraud have quickly been detected (Minnite 2010). The risk of human and technological error is also no more prevalent than with traditional ballots. Despite recent public criticisms from Republican officials, support for all-mail voting transcends partisanship among the American public. A Reuters/Ipsos poll in April 2020 found that 79% of Democrats and 65% of Republicans support providing all voters with a mail-in ballot in the 2020 general election (Kahn 2020).

What can we learn from states with existing all-mail voting regimes about the policy's effect on turnout? Proponents claim that all-mail voting should lead to higher turnout by saving

voters time,[1] making voting more convenient for those without easy access to transportation, and mitigating the effects of Election-Day obstacles like bad weather (e.g., NVAHI 2019). However, past research on the effects of all-mail voting has found mixed results. Much of this research was conducted in the first decade of the 2000s, during which time Oregon was the sole state with an all-mail voting system. Several studies of Oregon's mail-voting regime find a positive effect on overall turnout (Southwell and Burchett 2000; Southwell 2009, 2010; Gronke et al. 2007; Richey 2008). Some earlier studies find, however, that all-mail voting appears to primarily turn out those already predisposed to vote, rather than mobilizing unlikely voters into the electorate (Karp and Banducci 2000; Berinsky et al. 2001). Several additional studies investigate all-mail voting's turnout effect by exploiting a California state law that allows election administrators in small precincts to mandate that all voting be conducted via mail. The results of this research are less sanguine: multiple studies conclude that all-mail voting may *depress* turnout in general elections (Berman and Yates 2011; Kousser and Mullin 2007; Elul, Freeder, and Grumbach 2017).

In recent years, all-mail voting has expanded to several more states (see Table 1). In 2011, Washington became the second state to mandate that all elections be conducted by mail. Colorado adopted all-mail voting in 2013, followed by Hawaii in 2019. The Utah legislature passed a law in 2012 permitting jurisdictions to opt into all-mail elections; in 2019, every jurisdiction in the state had adopted the policy. While California does not currently have statewide mail voting, a 2016 law permitted counties to opt into conducting elections by mail. Five did so ahead of the 2018 primary and general elections, and at least ten will conduct their elections by mail in the 2020 election (NCSL 2020).

[1] Wait times at traditional polling places are substantial. In 2012, over 3.5 million Americans waited over one hour in line to vote. Average wait times are longer in precincts with higher concentrations of racial minorities (Pettigrew 2017).

Table 1: States with All-Mail Elections

State	Year Enacted	Year Implemented
Colorado	2013	2014
Hawaii	2019	2020
Oregon	1998	2000
Utah	2012 (permitted counties to conduct elections by mail)	2019 (first year all counties conducted elections by mail)
Washington	2011	2012

Source: National Conference of State Legislatures

This expansion of all-mail voting offers researchers new opportunities to study the effects of mail voting on turnout. Exploiting variation in the timing of policy adoption across Washington counties, Gerber, Huber, and Hill (2013) estimate that all-mail voting increased turnout by between two and four percentage points, and that gains were higher for infrequent voters. Similarly, an analysis of all-mail voting in Utah finds that the policy boosted turnout by five to seven percentage points, with young people and other low-propensity voters showing the largest turnout gains (Showalter et al. 2018). A separate analysis finds that the five California counties that adopted all-mail voting in 2018 saw steeper turnout growth than the rest of the state, controlling for historical turnout trends and electoral competition. Voting rates for young, Latinx, and Asian American voters also rose more sharply in all-mail voting counties than in other counties (McGhee et al. 2019).

Colorado's All-Mail Voting Policy

Colorado's all-mail voting policy centers around proactively mailing ballots to all registered voters, rather than requiring voters to request an absentee ballot before the election.

Voters may choose to mail back their completed ballot, drop it in one of many secure collection boxes, or bring it to a vote center, where professional staff serve those who prefer to vote in person.[2] In each of these cases, the ballot must be turned in or received by the county clerk by 7:00 p.m. on Election Day (as opposed to merely being postmarked by Election Day). Vote centers are open during an early voting period as well as Election Day. Colorado also proactively updates voter addresses using the U.S. Postal Service's National Change of Address database and, as of 2017, provides for automatic voter registration throughout the state. Importantly, the all-mail voting policy was implemented statewide in a single election, rather than staggered by county (as in Washington) or confined to certain small and rural precincts (as in California until 2016).

Data and Estimation Strategy

Our main analyses use data from the national L2 Voter File. The data contain the complete voting records of registered voters in the five election cycles from 2010 through 2018. These data also include a range of individual-level covariates.[3] We construct a panel of all individuals who had registered in their respective states *before* the 2010 elections, allowing us to

[2] A difference between the all-mail voting approach of Oregon, the focus of most past research, and that of Colorado involves registration deadlines. In Oregon, individuals must register to vote no later than 21 days before Election Day to receive a mail-in ballot and participate in the election. By contrast, Colorado allows individuals to register through Election Day itself. Any voter who registers at least eight days before the election receives a ballot by mail, while those who register later can cast their ballot in-person at a vote center. As past research has found that same-day registration disproportionately boosts youth participation (Grumbach and Hill 2018), this strengthens our expectation that Colorado's all-mail voting system reduces turnout disparities by facilitating greater participation among low-propensity voters, including young people.

[3] Some of these covariates, such as age, are derived from entries on voter registration forms. Others are based on predictions from commercial databases, which draw upon aggregate demographic data (e.g., median income in a Census block) and proprietary individual level data (e.g., based on smartphone activity). The use of our chosen covariates from the L2 Voter File, including age, race/ethnicity, education, income, and occupation, is well supported by existing research (e.g., Imai and Khanna 2016; Enamorado and Imai 2019).

track their voting records for multiple election cycles before and after implementation of all-mail voting.

Our principal estimation strategy is an individual-level panel analysis with individual and year fixed effects (an individual-level difference-in-differences design). This within-individual analysis allows us to measure changes in turnout over time for each individual, eliminating all time-invariant differences *across* individuals that may influence their propensity to vote. The large size of the voter file data allows us to estimate precise treatment effects despite the inclusion of individual fixed effects and standard errors clustered by individual.

We compare the change in turnout among individual Colorado residents following the implementation of all-mail voting to the change in turnout among residents of 'control' states without all-mail voting regimes. Our main analyses use the nearby states of Arizona, Nevada, and New Mexico as control states. We additionally adjust for the presence of U.S. Senate contests at the state-cycle level. Controlling for gubernatorial contests is unnecessary as all four states have identical election schedules, electing governors in midterm election cycles.

We also estimate the subgroup effects of all-mail voting. In particular, we are interested in potentially heterogeneous effects by age, race-ethnicity, income, wealth, education, and partisanship. Again, the large size of the voter file data makes it possible to precisely estimate the effect of all-mail voting effects for each of these subgroups, when we stratify regressions by demographic characteristics such as birth-year cohort.

Results

Table 2 displays the overall effects of all-mail voting in Colorado. Our individual-level difference-in-differences results suggest that all-mail voting causes an overall turnout increase of 9.4 percentage points among registered voters. This is a large effect. To the best of our knowledge, rarely, if ever, do we observe within-individual (or even within-state) turnout effects of this magnitude from changes in election law.

Table 2: Estimated Effect of All-Mail Voting

term	estimate
All-Mail Voting	0.0941
	(0.0003)
Senate Contest	0.0186
	(0.0001)
Individual Fixed Effects	Yes
Cycle Fixed Effects	Yes
Cluster	Individual
R^2	0.486
R^2-Within	0.008
N. of cases	28,452,525

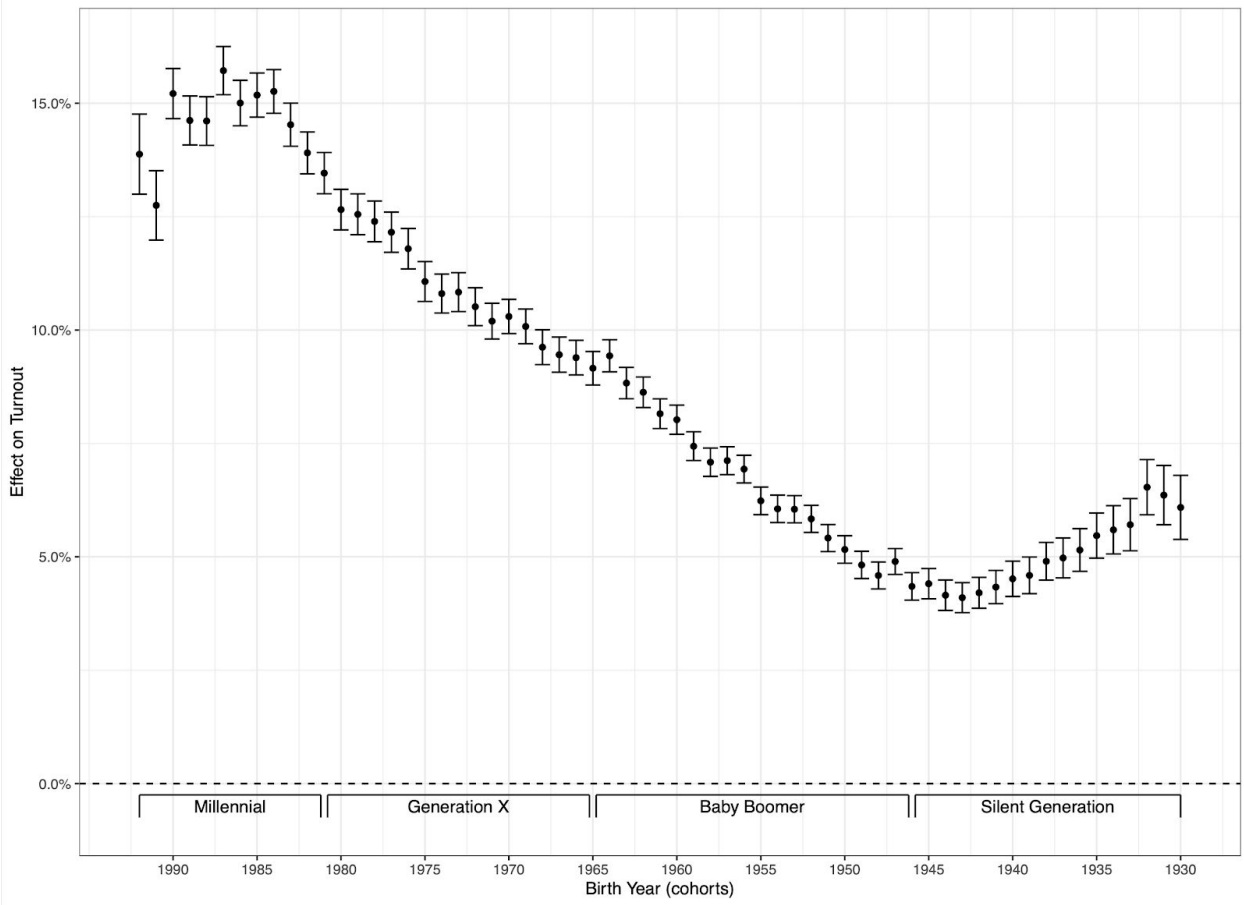
OLS estimation with individual and cycle fixed effects, standard errors clustered on individual.

Turnout by Age Groups

Next, our attention turns to the differential effects of Colorado's all-mail voting policy on turnout by various subgroups. We look first at changes in turnout by age group, relative to the

initial baseline. This is an especially important analysis because age is a key predictor of turnout in US elections, with younger voters almost always turning out at much lower rates than older voters (Holbein and Hillygus 2020). For this analysis, we estimate the main model from Table 2 separately for each birth year cohort. This directly compares individuals born in the same year across states. Figure 1 plots the estimated effect on turnout of Colorado's implementation of AMV for each cohort. The effects are very precisely estimated, as shown by the error bars.

Figure 1: Estimated Effect on Turnout by Birth-Year Cohorts



Note: Estimates and 95% confidence intervals are from a stratified regression by age cohort (birth year). Models include individual and cycle fixed effects. Standard errors are clustered on individual.

All age groups see significantly increased turnout after the introduction of all-mail voting. The effects are largest for the youngest cohorts included in the panel, trend smoothly down for those born between 1980 and 1945, and rebound slightly among the oldest cohorts. The estimated 16.6 percentage point increase for the youngest cohorts (those born after 1980) translates into a relative increase of 42 percent over turnout levels observed in 2010. These results comport with claims made by vote-at-home reform advocates that mailing ballots should benefit voters who face time constraints caused by scheduling conflicts with work and school. According to the CPS, non-voters under the age of 40 are disproportionately likely to cite time constraints as a reason for not voting, with 38 percent of younger non-voters citing time constraints, compared with just 7 percent of those 65 and older.[4]

Turnout by Income and Wealth

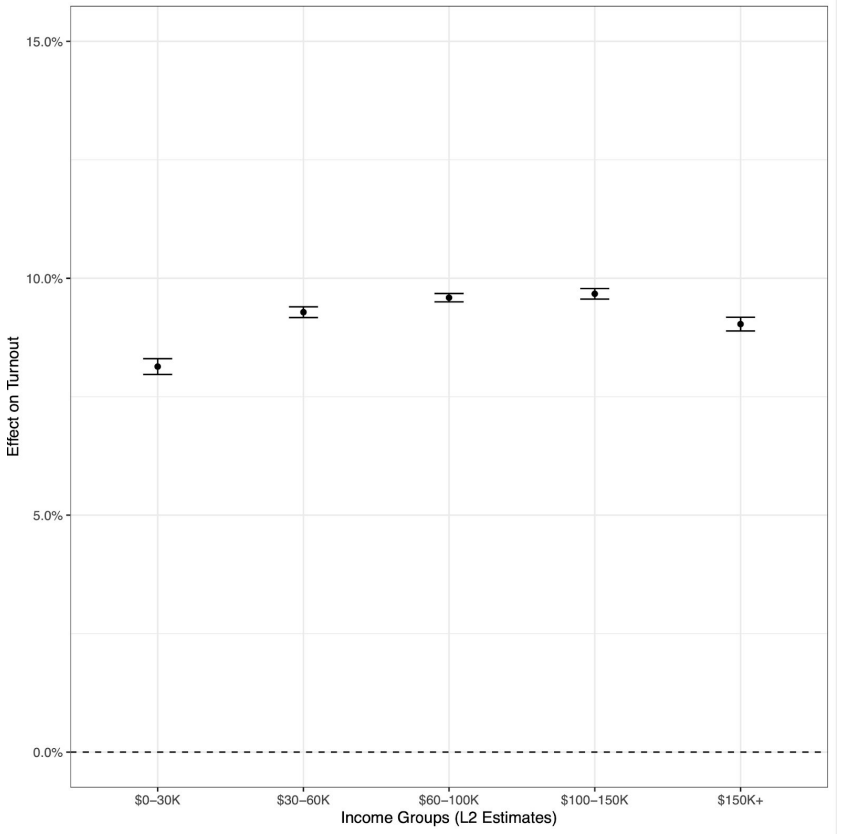
We next analyze turnout differences between income and wealth groups relative to the baseline. While turnout increases substantially for all income groups, low-income registered voters experience the smallest turnout boost of approximately 8.1 percentage points. Of note, there is not much observed difference in the turnout increase among those who make more than $30,000 but less than $150,000 per year. The boost in turnout among these earners is slightly larger than that experienced by individuals toward the top of the income distribution.

More striking differences emerge, however, when we examine differences in turnout boosts for Coloradans at either end of the wealth distribution. Here, we observe a turnout boost of nearly 10 percentage points for individuals who have the least amount of wealth. The turnout

[4] The CPS includes an item asking non-voters their reason for not voting, which we used to calculate the proportions by age of respondents indicating scheduling conflicts with work or school or long wait times at the polls as reasons.

boost remains large, but declines steadily as one moves across the distribution, with the wealthiest Coloradans benefitting the least from the implementation of all-mail voting. We note, however, that even among this well-resourced class of voters, turnout increases by more than 5 percentage points post-implementation. In line with a resource model of citizen participation, wealthier individuals typically turn out at higher rates than their less wealthy counterparts (Nadeau, Lewis-Beck, Foucault 2019). The turnout boost observed among the least wealthy suggests that all-mail voting has the potential to help close this persistent gap.

Figure 2: Estimated Effect on Turnout by Income

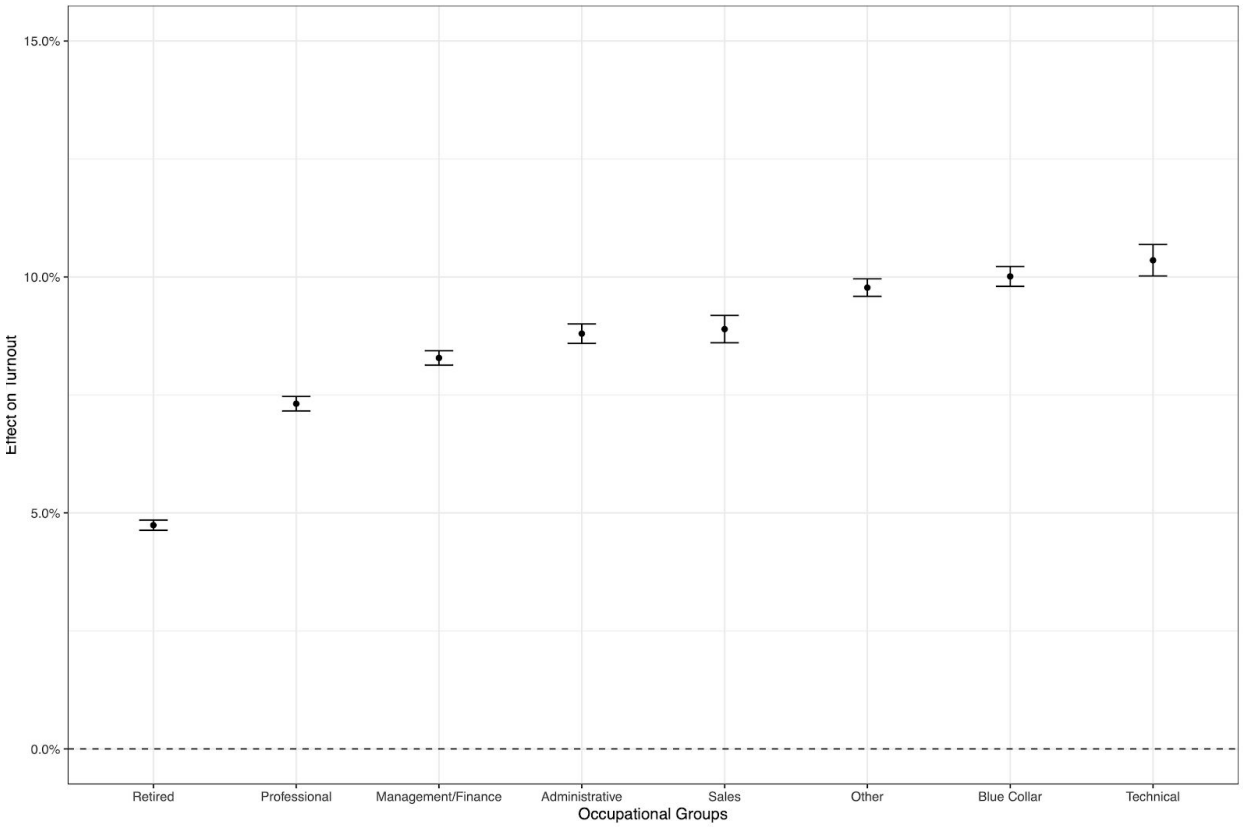


Note: Estimates and 95% confidence intervals are from a stratified regression by income group. Models include individual and cycle fixed effects. Standard errors are clustered on individual.

Turnout by Occupational Categories

Looking at effects among different occupational groups, we observe turnout boosts among individuals in each category. Notably, among blue-collar workers, there is a 10 percentage-point increase in turnout relative to baseline, larger than the turnout increases for the professional and management classes. These findings are compatible with the argument that those less able to take time off from work may benefit most from an all-mail voting system.

Figure 3: Estimated Effect on Turnout by Occupational Groups

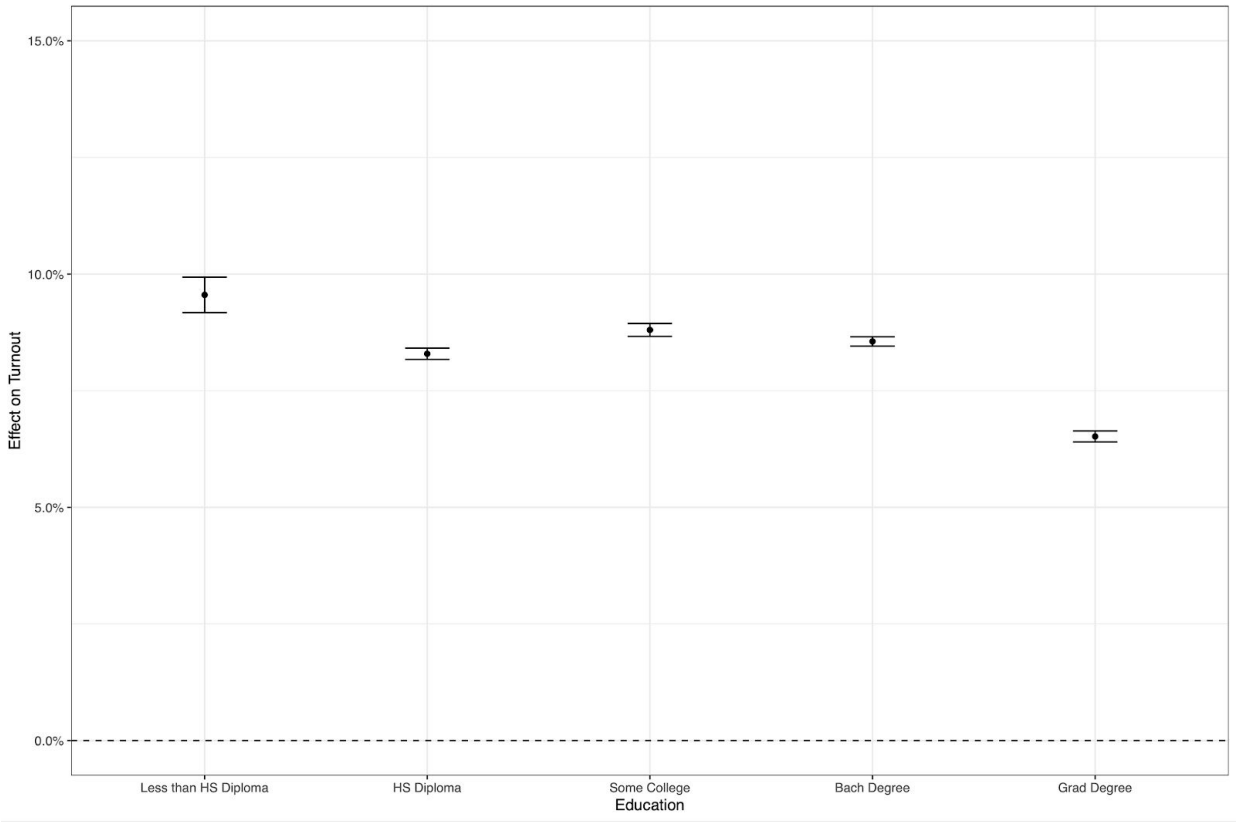


Note: Estimates and 95% confidence intervals are from a stratified regression by occupational group. Models include individual and cycle fixed effects. Standard errors are clustered on individual.

Turnout by Educational Attainment

While individuals across levels of educational attainment see a turnout boost from all-mail voting, the largest increase is observed among the least-educated individuals. Among those without a high school diploma, turnout increased by 9.6 percentage points. At the other end of the education distribution, those with a graduate degree experience a 6.5 percentage-point increase in turnout—large, but noticeably lower than the increase observed for every other education category.

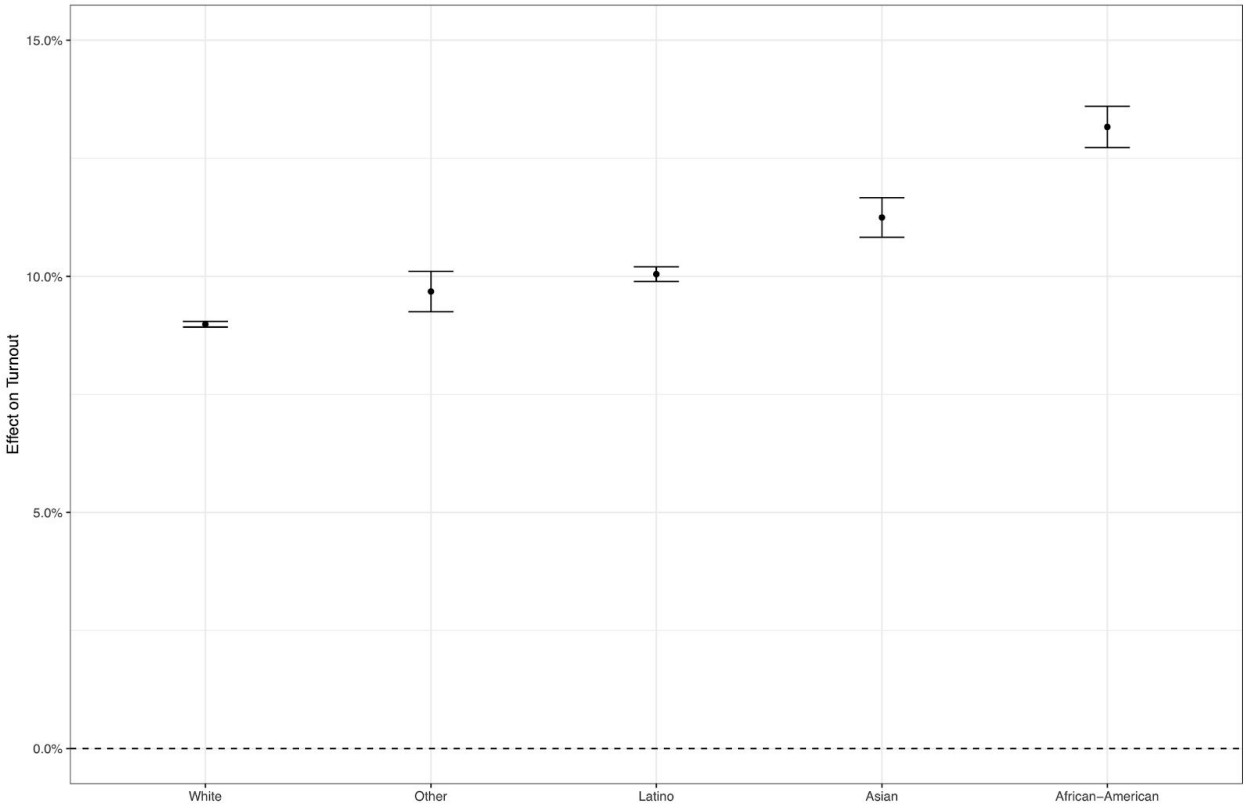
Figure 4: Estimated Effect on Turnout by Educational Attainment



Note: Estimates and 95% confidence intervals are from a stratified regression by level of educational attainment. Models include individual and cycle fixed effects. Standard errors are clustered on individual.

Turnout by Race

Figure 5: Estimated Effect on Turnout by Race



Note: Estimates and 95% confidence intervals are from a stratified regression by race and ethnicity. Models include individual and cycle fixed effects. Standard errors are clustered on individual.

All racial and ethnic groups see a turnout boost under Colorado's all-mail voting system. We observe the most substantial turnout effect for African-American voters, who experience a turnout boost of 13.2 percentage points. Similarly striking effects are observed among Latinx individuals and Asian Americans, whose turnout rates increase by 10 percentage points and 11.2 percentage points, respectively.

Turnout by Party

Consistent with other research that examines the partisan effects of all-mail voting (e.g., Thompson et al. 2020), we find little evidence that all-mail voting disproportionately benefits Republican or Demoractic Party identifiers. The turnout effect for Coloradans who are categorized as likely Republicans or likely Democrats is almost identical. Turnout increases among both groups by approximately 8 percentage points. Independents, who engage in politics less frequently than their partisan counterparts, however, experience the most significant turnout boost of nearly 12 percentage points. These findings suggest that making it easier to vote increases electoral participation among those who may otherwise remain unengaged.

Conclusion

This paper finds that Colorado's all-mail voting policy increased turnout both overall and across all major demographic groups. Colorado's experience demonstrates that all-mail voting is not only safer than in-person voting but also better for democratic representation, with all age, income, race, occupational, and education groups benefiting from its introduction. We believe Colorado should serve as a model for states adopting or expanding mail voting in response to the COVID-19 crisis.

States should not stop there, however. The COVID-19 crisis highlights what advocates of electoral reform have long known: in much of the country, the status quo of voting policy is incompatible with principles of democracy that hold as sacrosanct citizen involvement in the electoral process. Out of a concern for public health, states *must* adopt all-mail voting in advance

of the November 2020 election. Out of a concern for core principles of democracy, states should hold onto all-mail voting long after this particular crisis ends.

Regarding our results, we recommend exercising caution when generalizing from the subgroup findings. Although there is sufficient data to estimate precise subgroup effects of all-mail voting in Colorado, treatment effects may vary for certain subgroups in other states, if those subgroups are systematically different from their Colorado counterparts (for example, while 4.6% of Colorado residents are black or African American according to the U.S. Census, median black income is relatively high in Colorado compared to other states). The effects of all-mail voting on subgroups may vary geographically.

There will be challenges to implementing mail voting at a large scale in this election cycle, as evidenced in Wisconsin's chaotic April 2020 primary election. Successful implementation of mail voting will require political leaders from both major parties to set aside questions of partisan advantage and prioritize public safety. Secretaries of state and local elections administrators must rapidly scale their mail-voting infrastructure in order to serve greatly increased numbers of mail voters, and, as in Colorado, in-person voting options should be maintained (with added safety precautions) so that those who miss the window to receive an absentee ballot by mail can still vote.

This paper points to all-mail voting as a strongly desirable policy for those hoping to protect public health while ensuring high levels of political participation in the 2020 elections. The outstanding question is whether policymakers can marshall the political will and resources to adopt it.

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Appendix

Regression Tables for Subgroup Analyses

Table A1: Estimated Effect of All-Mail Voting By Income

	$0-30K	$30-60K	$60-100K	$100-150K	$150K+
All-Mail Voting	0.0814	0.0929	0.0959	0.0967	0.0903
	(0.0008)	(0.0006)	(0.0005)	(0.0006)	(0.0007)
Senate Contest	0.0173	0.0171	0.0217	0.0238	0.0231
	(0.0004)	(0.0003)	(0.0003)	(0.0003)	(0.0004)
Individual Fixed Effects	Yes	Yes	Yes	Yes	Yes
Cycle Fixed Effects	Yes	Yes	Yes	Yes	Yes
Cluster	Individual	Individual	Individual	Individual	Individual
R^2	0.5129	0.486	0.49	0.4782	0.4408
R^2-Within	0.0066	0.008	0.0055	0.0082	0.0099
N. of cases	2,884,280	6,415,920	9,756,180	5,344,735	2,876,450

Note: OLS estimation with individual and cycle fixed effects, standard errors clustered on individual.

Table A2: Estimated Effect of All-Mail Voting By Occupational Group

	Retired	Professional	Management/ Finance	Administrative	Sales	Other	Blue Collar	Technical
All-Mail Voting	0.0474	0.0731	0.0829	0.088	0.089	0.0977	0.1001	0.1035
	(0.0005)	(0.0008)	(0.0008)	(0.0011)	(0.0015)	(0.0009)	(0.0011)	(0.0017)
Senate Contest	0.0193	0.0306	0.0285	0.034	0.0295	0.0258	0.0244	0.0231
	(0.0003)	(0.0005)	(0.0005)	(0.0006)	(0.0008)	(0.0005)	(0.0006)	(0.001)
Individual FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cycle FEss	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Individual	Individual	Individual	Individual	Individual	Individual	Individual	Individual
R^2	0.4259	0.4135	0.4092	0.429	0.4339	0.438	0.4572	0.4174
R^2-Within	0.0046	0.008	0.0095	0.0096	0.0087	0.0081	0.0084	0.0099
N. of cases	3,994,140	2,634,845	2,578,775	1,704,985	878,350	2,442,000	1,879,675	645,155

Note: OLS estimation with individual and cycle fixed effects, standard errors clustered on individual.

Table A3: Estimated Effect of All-Mail Voting By Education

	Less than HS Diploma	HS Diploma	Some College	Bach Degree	Grad Degree
All-Mail Voting	0.0956	0.0829	0.088	0.0855	0.0653
	(0.0019)	(0.0006)	(0.0007)	(0.0005)	(0.0006)
Senate Contest	0.0216	0.0244	0.0257	0.0233	0.0198
	(0.0010)	(0.0003)	(0.0004)	(0.0003)	(0.0003)
Individual FEs	Yes	Yes	Yes	Yes	Yes
Cycle FEs	Yes	Yes	Yes	Yes	Yes
Cluster	Individual	Individual	Individual	Individual	Individual
R^2	0.4615	0.4615	0.4295	0.4232	0.4118
R^2-Within	0.0059	0.0072	0.0076	0.0087	0.0066
N. of cases	721,935	4,977,455	3,981,685	6,070,800	3,585,540

Note: OLS estimation with individual and cycle fixed effects, standard errors clustered on individual.

Table A4: Estimated Effect of All-Mail Voting By Race

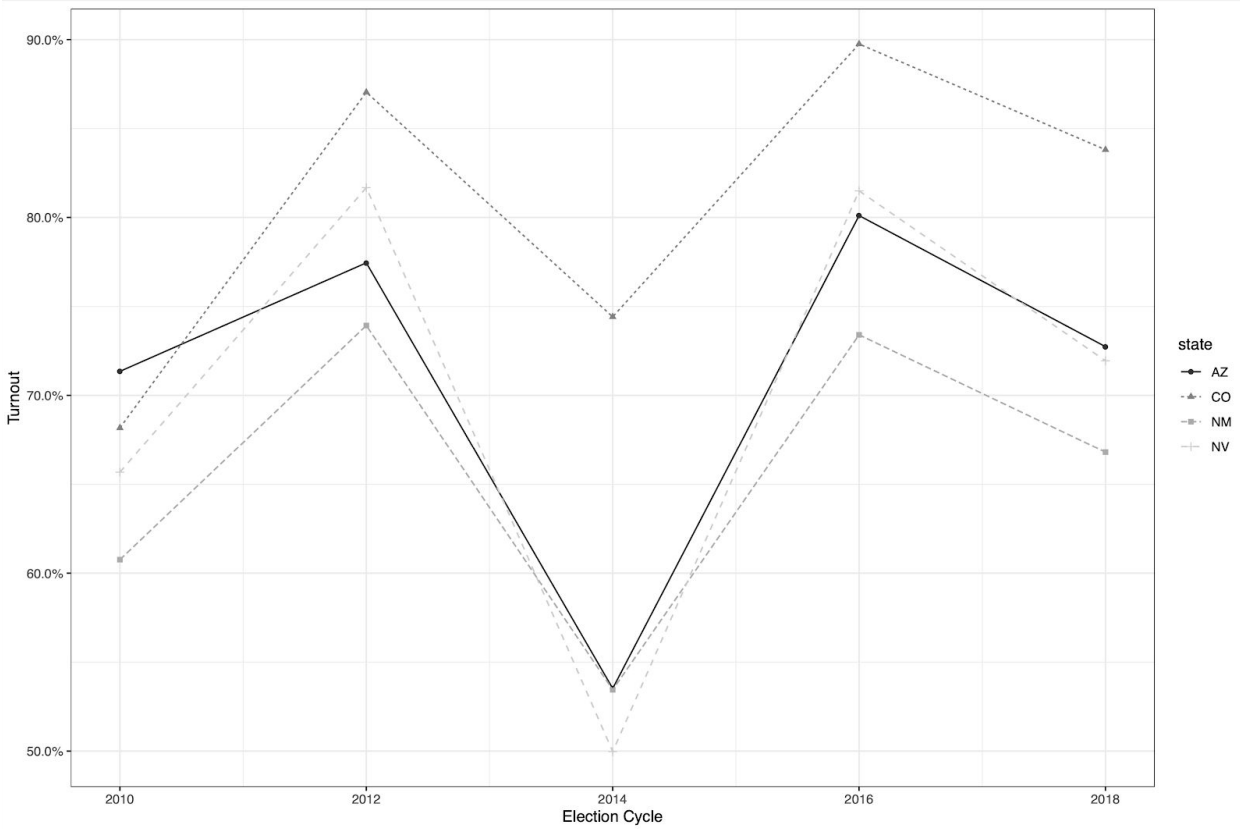
	White	Other	Latino	Asian	African-American
All-Mail Voting	0.0903	0.0931	0.0998	0.1134	0.1319
	(0.0003)	(0.0021)	(0.0008)	(0.0021)	(0.0022)
Senate Contest	0.0174	0.0245	0.0254	0.0242	0.0277
	(0.0002)	(0.0012)	(0.0004)	(0.0012)	(0.0014)
Individual FEs	Yes	Yes	Yes	Yes	Yes
Cycle FEs	Yes	Yes	Yes	Yes	Yes
Cluster	Individual	Individual	Individual	Individual	Individual
R^2	0.4695	0.4878	0.4918	0.4974	0.4778
R^2-Within	0.0079	0.0065	0.0062	0.0099	0.0133
N. of cases	19,466,290	554,535	4,939,410	512,995	475,175

Note: OLS estimation with individual and cycle fixed effects, standard errors clustered on individual.

Turnout Rates For Registered Voters by State and Cycle

As other states experienced a noticeable decline in turnout in 2014 relative to 2010, turnout *increases* in Colorado by 6.3 percentage points. Arizona, New Mexico, and Nevada saw a decrease of 13.8 percentage points in the same period. Colorado also experienced a 9.4 percentage point increase in turnout among young voters (born after 1980). Figure A1 presents average turnout of registered voters by state from 2010 through 2018. Figure A2 presents these turnout rates among individuals born after 1981.

Figure A1: Comparing Turnout in Colorado and Control States



Note: Turnout of registered voters by state, 2010-2018, using data from the L2 Voter File.

Replication with CPS Data

We replicate our study using data from the Census Current Population Survey (CPS) Voter Supplement. The CPS Voter Supplement is a biennial survey of over 60,000 households, which asks respondents for self-reports of voter turnout. Self-reported voter turnout suffers from significant overreporting, but the data provide a helpful robustness check for our main analyses. We also note that the CPS samples all Americans, not just registrants (as in a voter file), so the quantity of interest is distinct. Because the CPS data cover a long time period, in Models 1 and 2 we include all states that adopt all-mail voting (Colorado, Oregon, and Washington) as treatment units and all other states as control units. In Models 3 and 4, we more directly replicate our analysis, comparing the effect of Colorado's adoption of AMV to control states that never adopt AMV.

Table A5: Replication with CPS Voter Supplement Data

	All AMV States	All AMV States	Colorado Only	Colorado Only
	(1)	(2)	(3)	(4)
All-Mail Voting	0.0317	0.0310	0.0586	0.0618
	(0.0124)	(0.0143)	(0.0036)	(0.0033)
Demographic Covariates	No	Yes	No	Yes
State Fixed Effects	Yes	Yes	Yes	Yes
Cycle Fixed Effects	Yes	Yes	Yes	Yes
Cluster	State	State	State	State
R^2	0.033	0.170	0.033	0.170
N. of cases	1,294,902	996,282	889,553	808,942

Note: Demographic covariates include respondent age, education, gender, income, and race. OLS estimation with state and cycle fixed effects. Standard errors clustered on state.

In this robustness check, we estimate overall turnout effects between 3.1 and 3.2 percentage points in Models 1 and 2. While these estimates are smaller in magnitude than our main results, the effects are still substantial in magnitude and statistically significant. Given that this replication explores the effect of a range of all-mail-voting regimes on a different dependent variable (self-reported turnout) and covers different states and election cycles, this replication strengthens our confidence in the paper's broad conclusion that all-mail voting increases voter turnout. Models 3 and 4, which exclude other AMV states, show effect estimates of 5.9 and 6.2 percentage points. The AMV coefficients in Models 3 and 4 are significantly larger than those in Models 1 and 2 at the $p < 0.05$ level, again consistent with strong assessments of Colorado's policy implementation.

Percentage of Voters Citing Time Constraints as Reason for not Voting, By Age

Figure A2: Percentage of Registered Voters Citing Time Constraints as Main Reason for Not Voting