

How Did Absentee Voting Affect the 2020 U.S. Election?*

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March 5, 2021

Abstract

The 2020 U.S. election saw high turnout, a huge increase in absentee voting, and brought unified Democratic control at the federal level—yet, contrary to conventional wisdom, these facts do not imply that vote-by-mail increased turnout or had partisan effects. Using nationwide data, we find that states newly implementing no-excuse absentee voting for 2020 did not see larger increases in turnout than states that did not. Focusing on a natural experiment in Texas, we find that 65-year-olds turned out at nearly the same rate as 64-year-olds, even though 65-year-olds voted absentee at much higher rates than 64-year-olds because they could do so without having to provide an excuse. Being old enough to vote no-excuse absentee did not substantially increase Democratic turnout relative to Republican turnout, as the increase in Democratic absentee voting was offset by decreases in Democratic in-person voting. Together, the results suggest that no-excuse absentee voting mobilized relatively few voters and had at most a muted partisan effect despite the historic pandemic. Voter interest appears to be far more important in driving turnout.

*For helpful advice and suggestions, the authors thank Ethan Bueno de Mesquita, Kate Fisher, Alexander Fouirnaies, Anthony Fowler, Emma Freer, Judy Goldstein, Justin Grimmer, Alisa Hall, Jonathan Rodden, Derek Ryan, Ken Schultz, and Lynn Vavreck as well as participants in the Stanford Political Science Internal Workshop. Some of the computing for this project was performed on the Sherlock cluster. We would like to thank Stanford University and the Stanford Research Computing Center for providing computational resources and support that contributed to these research results. This research was supported in part by funding from the UPS Endowment Fund at Stanford University.

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1 Introduction

Why do people vote in elections, and how do the rules concerning voting affect participation? These are age-old questions in political science and political economy, because broad participation is thought to be a cornerstone of effective democracy (e.g., Verba, Schlozman, and Brady 1995; Lijphart 1997), and because election administration has often been used to suppress participation (e.g., Keyssar 2000). In the United States, the 2020 election, the COVID-19 pandemic, and the violent events of January 6th, 2021 have poured gasoline onto an already raging debate about how the nation should administer its elections and, in particular, about voting by mail. While the two parties disagree vehemently over its value, nearly everyone on both sides seems to agree that it increases turnout and helps Democrats,¹ pointing out that the 2020 election featured an unprecedented expansion of voting by mail in response to the pandemic, had unusually high turnout, and resulted in unified Democratic control at the federal level. This conventional wisdom structures the partisan debate over vote-by-mail, with many Republican state legislatures now considering rolling back vote-by-mail while most Democrats support its expansion.²

But did voting by mail change participation significantly and help Democrats in 2020? Or was turnout high in 2020 due more to high voter interest and engagement during an extraordinary election taking place under unprecedented circumstances?

In this paper, we assemble new data to assess the causal effect of no-excuse absentee voting—the most common form of vote-by-mail—in 2020 and in historical context. We start by analyzing trends in turnout across states that did or did not roll out no-excuse absentee voting for 2020. Then, we use administrative data from the state of Texas, where

¹For example: “When we see vote by mail increase in any state, we simultaneously see a turnout increase.” (Amber McReynolds, chief executive of the National Vote at Home Institute). In “Republicans Pushed to Restrict Voting. Millions of Americans Pushed Back.” Nick Corasaniti and Jim Rutenberg. *The New York Times*. Dec. 5, 2020; “I’m fairly convinced at this point that the Democratic strategy and the Democratic advantage in vote by mail was just crucially and critically important to Biden’s win.” (Tom Bonier, CEO of TargetSmart). In “Democrats took a risk to push mail-in voting. It paid off.” *The Guardian*. Dec. 3, 2020.

²See for example <https://nymag.com/intelligencer/2021/02/republicans-launch-attacks-on-voting-by-mail.html>.

we can leverage a “natural experiment” based on an age cutoff for no-excuse absentee voting eligibility (first analyzed prior to the pandemic in Meredith and Endter 2015). Using these datasets, we establish five basic facts that cast doubt on the conventional wisdom about vote-by-mail in 2020:

- Nationwide, states that did not offer no-excuse absentee voting in 2020 saw turnout increases similar in magnitude to states that offered no-excuse absentee voting for the first time in 2020.
- In Texas, where no-excuse absentee voting is only available to voters 65 and older, turnout increased most dramatically in 2020 for voters aged 20-30, who cannot vote absentee without an excuse. More than 97% of votes cast in this age group were cast in person (either early or on election day).
- 65-year-olds in Texas turned out in 2020 at almost exactly the same rate as 64-year-olds, even though roughly 18% of 65-year-olds voted absentee while only 3% of 64-year-olds voted absentee (due to the need to submit an excuse).
- While being old enough to vote absentee without an excuse in Texas increased rates of absentee voting by 9.5 percentage points, it simultaneously reduced the rate of voting early in-person by 8.8 percentage points, and the rate of voting in-person on election day by 0.7 percentage points.
- The proportion of voting 65-year-olds who were Democrats in Texas in 2020 (as measured by past primary election participation) was only slightly larger (0.2 percentage points) than the proportion among voting 64-year-olds, despite the much larger rate of absentee voting among 65-year-olds, who could do so without an excuse.

These facts are inconsistent with the idea that vote-by-mail massively increased participation and dramatically boosted the Democratic party’s performance, but they are largely consistent with studies prior to the pandemic that generally suggested that that no-excuse absentee voting has had modest or null effects on turnout before COVID-19,³ that it had

³See Table A.2 for a review of the literature. In most studies, the reported relationships between no-excuse absentee policies and overall turnout are null (e.g. Oliver 1996; Gronke, Galanes-Rosenbaum, and Miller 2007; Gronke et al. 2008; Giammo and Brox 2010), or positive but modest (e.g., Karp and Banducci 2001; Francia and Herrnson 2004; Leighley and Nagler 2009; Larocca and Klemanski 2011; Leighley and Nagler 2011)—though see Burden et al. (2014) for an estimated negative relationship. Studies that employ a clear causal design take one of two approaches. First, a few studies estimate the effects of no-excuse absentee on overall turnout using a difference-in-differences design, where the treatment occurs at the state level. These studies generally show null (Fitzgerald 2005; Springer 2012) or even negative (Burden et al. 2014) effects of no-excuse policies on turnout, though difference-in-differences estimates from state-level treatments are generally imprecise (Erikson and Minnite 2009). Second, Meredith and Endter (2015) estimates the effect of no-excuse absentee policies on turnout using an individual-level regression discontinuity design, leveraging

been more successful at mobilizing already-engaged voters than marginal ones in previous elections (Berinsky, Burns, and Traugott 2001; Berinsky 2005; Monore and Sylvester 2011; Michelson et al. 2012), and that even universal vote-by-mail, a more dramatic policy, had relatively modest effects on participation before COVID-19 (e.g., Berinsky, Burns, and Traugott 2001; Gerber, Huber, and Hill 2013; Menger, Stein, and Vonnahme 2015; Thompson et al. 2020).⁴

We add to this literature by offering new data and credible causal designs to evaluate whether no-excuse absentee voting had a major effect in the 2020 election. The pandemic was thought to greatly magnify the perceived costs of in-person voting,⁵ and brought much more salience to vote-by-mail than had ever existed before. In doing so, studying vote-by-mail in 2020 presents a highly unique test case for theories seeking to explain why people vote in elections and how the decision to participate relates to the costs of voting.

Why did no-excuse absentee voting not have a bigger effect on the 2020 election, despite all of the rhetoric around it, and despite its evident popularity as a way to vote? The conventional wisdom that expanding vote-by-mail increased turnout and helped the Democrats is built, implicitly if not explicitly, on a popular theory of political participation that links the decision to vote in an election to the convenience of how one is able to cast a vote (Downs 1957; Riker and Ordeshook 1968; Wolfinger and Rosenstone 1980; Piven and Cloward 1988), suggesting that there are many marginal voters who will turn out if doing so is convenient and will not turnout otherwise. The pandemic, which was thought to dramatically increase

Texas’s 65 year-old age cutoff threshold. Meredith and Endter (2015) finds a null effect of the policy on overall turnout in the 2012 general election, though it did lead to a large increase in the share of voters who used absentee-by-mail voting, similar to previous work (Oliver 1996; Dubin and Kalsow 1996; Karp and Banducci 2001). The paper finds some suggestive evidence for a positive turnout effect when it focuses on counties where take-up of absentee voting was higher among eligible 65-year-olds.

⁴Universal vote-by-mail does not appear to have large effects on partisan turnout or vote shares (Thompson et al. 2020), either, but it does seem to increase turnout among low-propensity voters (Gerber, Huber, and Hill 2013) and affects voters’ choices in primary elections (Meredith and Malhotra 2011).

⁵The degree to which in-person voting was in fact dangerous, and thus more costly than normal during the pandemic, is unclear. There is research suggesting meaningful amounts of SARS-CoV-2 transmission at the polls (Cotti et al. 2020), but there is also research suggesting little transmission (Leung et al. 2020). In the end, many Americans chose to vote by mail, while many others chose to vote in person.

the costs of voting due to the potential health risks of voting in person, brought a whole new focus to theories related to the costs of voting.

But we argue that, in high-salience elections like 2020, there are probably very few marginal voters who base their decision to participate on the relative costs of one mode of voting over another, so long as the inconvenience and difficulty of in-person voting remains within reasonable bounds. As political scientist Adam Berinsky put it, “the more significant costs of participation are the cognitive costs of becoming involved with and informed about the political world,” rather than the question of what one needs to do in order to vote.⁶ When an election is highly salient, voters are more engaged, and, having paid the cognitive costs to engage, are less sensitive to costs related directly to the act of voting; when an election is less salient, on the other hand, voters are less engaged and there is more space for the costs related to voting to affect the decision to participate.

Consistent with this view, we find evidence that no-excuse absentee voting *does* modestly increase turnout in past midterm elections, by roughly 1 to 2 percentage points. In past presidential elections, the effect is closer to zero, indicating that convenience voting affects participation more when voter interest is low at baseline. Also consistent with this view, we find that the effect in 2020 is no larger for low-propensity voters, who are likely to be more sensitive to the costs of voting, than for high-propensity voters. Low-propensity voters who engaged with the election appear to have been committed to voting in 2020, whether or not they could vote absentee.

The results of our paper are important for understanding why people vote and can help to inform future reforms intended to encourage participation in elections. They are not intended to address key normative concerns critical to the vote-by-mail debate. Whether expanding vote-by-mail is a good policy or not depends on evaluating its value to voters and to democracy. Does it facilitate safe ways to vote during the pandemic? Do voters want their states to expand voting by mail? Can it be done in a secure fashion that engenders faith

⁶ “Making Voting Easier Doesn’t Increase Turnout.” Adam Berinsky. *Stanford Social Innovation Review*. Feb. 8, 2016.

in the electoral process? These are some of the key questions that a principled approach to evaluating vote-by-mail from a policy perspective would need to ask that are beyond the scope of our study. The fact that vote-by-mail does not appear to advantage one party over the other substantially is not a reason to implement or not implement the policy—it might be a good policy to implement even if it did help one party or the other, or it might be a bad policy to implement even if it’s neutral from a partisan perspective. Likewise, the fact that it does not increase turnout, with the implication that rolling it back probably would not decrease turnout noticeably, does not imply that the public should not remain vigilant about potential voter suppression efforts related to election administration.

The remainder of the paper is structured as follows. We begin in section 2 by offering a nationwide analysis of vote-by-mail reforms and turnout in 2020, showing that turnout did not increase more in states that implemented vote-by-mail in response to the pandemic than in states that chose not to use vote-by-mail at all. In section 3, we zoom in on the state of Texas to get more rigorous causal evidence on the effect of vote-by-mail, both in the 2020 election and in past election cycles, using the age cutoff for leverage. In section 4, we examine heterogeneity in the effect of vote-by-mail, examining effects for low-propensity voters and for contexts where in-person voting is less convenient, with an eye towards theories of participation and the costs of voting. Finally, we conclude by considering the implications of our results for theories of voting and for the future of election administration policy debates in the United States.

2 Vote-by-Mail and Turnout in 2020:

Nationwide Analysis

In 2020, a number of states rolled out opportunities to vote by mail, particularly to vote absentee without an excuse, for the first time. In this section, we assemble data to evaluate whether the extension of no-excuse absentee voting had obvious effects on turnout in 2020.

2.1 Nationwide Data

To evaluate whether there is any evidence that states that implemented vote-by-mail in 2020 saw higher turnout than other states, we assembled data on turnout and on election administration policies for all fifty states.

The dataset consists of indicators for three major election administration policies—no-excuse absentee voting, early voting, and universal vote-by-mail elections—and a count of ballots cast in presidential elections in all 50 states between 1980 and 2020. Election administration policies through 2008 were collected from Pew’s “Early and Absentee Voting Dataset.”⁷ The Pew data records states’ election policies as written in relevant statutes and administrative codes. For elections after 2008, we coded indicators of election administration policies based on the reports of leading news and voter-information organizations.⁸

In order to accommodate varying terminology, early voting is broadly defined, including early voting, in-person absentee voting, and advance voting variants. No-excuse absentee includes states where individuals were allowed to cite COVID-19 generally as a valid excuse in 2020. States that allowed no-excuse absentee voting only under limited circumstances, like only for voters over the age of 65 (as in Indiana, for example) or only for voters with a specific issue related to COVID-19 (like Louisiana), are counted as requiring an excuse. Election turnout data is from McDonald (2021) and was downloaded from The United States Elections Project website.⁹ All data was merged at the state-year level.

2.2 No Evidence of Large Absentee Turnout Effect in 2020

As Figure 1 shows, there is no evidence that turnout rose dramatically more in states that switched on no-excuse absentee voting for 2020 than in states that did not use no-excuse

⁷<https://www.pewtrusts.org/en/research-and-analysis/reports/0001/01/01/nonprecinct-place-voting>

⁸ <https://apps.npr.org/early-voting-2012/>;

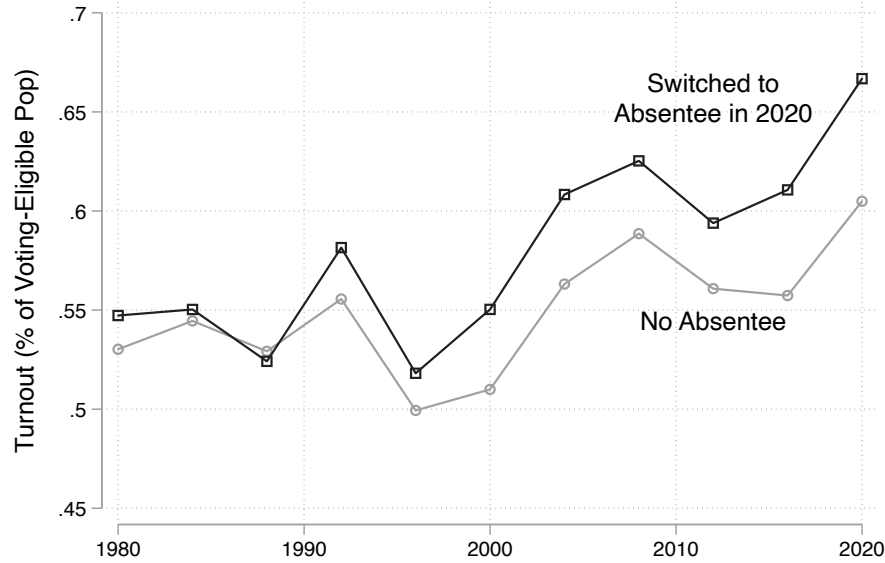
<https://www.npr.org/2020/09/14/909338758/map-mail-in-voting-rules-by-state>;

<https://www.pewtrusts.org/en/research-and-analysis/reports/0001/01/01/nonprecinct-place-voting>;

<https://www.vote.org/early-voting-calendar/>

⁹<http://www.electproject.org/>

Figure 1 – Comparing Rates of Turnout for States With Different Vote-by-Mail Policies in 2020. States that implemented no-excuse absentee voting in 2020 for the first time do not exhibit noticeably bigger increases in turnout in 2020 than states that did not implement it.



States implementing no-excuse absentee voting in 2020 are: AL, AR, CT, DE, KY, MA, MI, MO, NH, NY, PA, SC, VA, WV. States without no-excuse absentee voting are: IN, LA, MS, TX.

absentee voting. Instead, turnout is up dramatically for both groups of states. Compared to the 2016 presidential election, turnout was up roughly 4.8 percentage points in states that did not implement no-excuse absentee voting for 2020, and up roughly 5.6 percentage points in states that did. This 0.8 percentage point difference in the increase from 2016 for the two groups of states does not necessarily indicate a modest but positive effect of no-excuse absentee voting, either. It could well be statistical noise; in fact, between 2012 and 2016, turnout increased by 1.7 percentage points in states that would go on to implement no-excuse absentee voting in 2020 (but which had not yet implemented it in 2016), and by -0.003 percentage points in states that would go on to not implement it in 2020 (or in 2016). This roughly 1.7 percentage-point gap is more than twice as large as the gap in 2020, yet cannot reflect an effect of absentee voting. Hence, it gives a sense of the amount of random variation that can give rise to different election-to-election changes in turnout.

These estimates are noisy and the empirical design is not strong—the timing of vote-by-mail implementation is not random, and parallel trends is unlikely to be met—but they do not suggest major effects of vote-by-mail on turnout in 2020, and they seem inconsistent with hyperbolic claims made about the role of vote-by-mail in the 2020 election.

Properly estimating the effect of no-excuse absentee policies on turnout is difficult because the states that implement no-excuse absentee differ systematically from those that do not implement these policies.¹⁰ Idiosyncratic differences in 2020, or persistent trends over time that differ in states that changed their policies for 2020, make it difficult to derive any strong conclusions from a nationwide analysis. While suggestive, we need stronger a stronger empirical strategy to isolate the causal effect of no-excuse absentee voting.

3 The Causal Effect of Vote-by-Mail in 2020: Quasi-Experimental Evidence from Texas

To obtain stronger causal evidence, we focus on the state of Texas, where we can leverage an age cutoff that the state employs in its vote-by-mail program, following Meredith and Endter (2015).

3.1 Overview of Texas Age Cutoff Policy

In Texas, voters under the age of 65 on Election Day must provide a valid excuse in order to vote absentee, while voters age 65 or older on Election Day may apply for an absentee ballot without providing an excuse.¹¹ We focus on Texas because it is the only state that both

¹⁰Biggers and Hanmer (2015) does not find evidence that the partisan makeup of the state legislature or governorship influences the likelihood of enacting no-excuse absentee policies. But states with larger populations of older voters, states that are larger in geographic size, and states in the West are more likely to adopt no-excuse absentee policies, raising questions about the validity of making cross-state comparisons to estimate the effects of no-excuse absentee policies.

¹¹Common excuses for requesting an absentee ballot include a disability, or not planning to be present in one’s county on Election Day. See Figure A.1 in the Appendix for a copy of the absentee ballot request form in Texas, along with its list of valid excuses.

maintained the 65-year cutoff for voting absentee without an excuse for the general election and reports voter date of birth publicly in the voter file.

Throughout the 2020 primary election season, many states relaxed restrictions on no-excuse absentee voting to allow all registered voters to request a mail ballot without being required to provide an excuse. On May 19th, 2020, A U.S. District Court issued a ruling allowing all Texas voters to request a mail-in ballot without an excuse, not just those age 65 or older.¹² Texas Attorney General Ken Paxton immediately appealed the decision; the next day the U.S. 5th Circuit Court of Appeals put the District Court’s ruling on hold,¹³ and it overturned the District Court’s decision soon thereafter.¹⁴ The U.S. Supreme Court declined to reinstate the District Court’s original ruling, meaning that Texas voters under the age of 65 would indeed have to provide an excuse in order to vote by mail in the November 2020 general election.¹⁵

3.2 Administrative Data on Voting in Texas

We construct a new dataset on Texas elections before and during COVID-19 from a few main sources. First, we acquired the Texas voter file from the Texas Department of Elections. Each row in the file is a voter, and it includes their state-issued voter ID number, name, date of birth, county, and turnout in the 2020 general election. Texas also records vote mode, meaning we can observe whether each person voted absentee-by-mail, early in-person, or at their polling place on Election Day.

One limitation of the 2020 voter file is that it only includes the turnout histories of voters who remain on the voter rolls by 2020, meaning we do not observe the full set of votes cast in elections prior to 2020. To do so, we acquired “snapshots” of the Texas vote histories for

¹²https://static.texastribune.org/media/files/4001c04084c9ef0b96c175ae392c3795/vote-by-mail-injunction.pdf?_ga=2.12571636.1936596417.1595220428-245475441.1593203950

¹³See <http://cdn.cnn.com/cnn/2020/images/05/20/texas.appeals.ruling.pdf>.

¹⁴<https://law.justia.com/cases/federal/appellate-courts/ca5/20-50407/20-50407-2020-06-04.html>

¹⁵https://www.washingtonpost.com/politics/courts_law/supreme-court-wont-make-texas-allow-everyone-to-vote-by-absentee-ballot/2020/06/26/b835515c-b7e8-11ea-aca5-ebb63d27e1ff_story.html

every primary, runoff, and general election from 2012-2018 from Ryan Data & Research,¹⁶ a company that has maintained the list of Texas registrants over time, compiled from voter file data from the Texas Department of Elections. With these snapshots, we avoid conditioning on remaining registered post-treatment, sidestepping a common source of bias in voter file studies (e.g., Nyhan, Skovron, and Titiunik 2017).

Texas does not have a traditional party registration system, so we define a voter’s party affiliation based on each voter’s most recent participation in a partisan primary or primary runoff election.¹⁷

The voter file in any given year is limited to the citizens registered at the time of the election. If access to no-excuse absentee voting makes a citizen more likely to register and more likely to vote, conditioning on registration will understate the effect of a no-excuse absentee policy on voter turnout. We address this by estimating the voting population by age and county on election day and estimating the non-voting population as the remainder after subtracting the number of voters from the population totals. We then add a row to our dataset for each non-voter county resident by age.

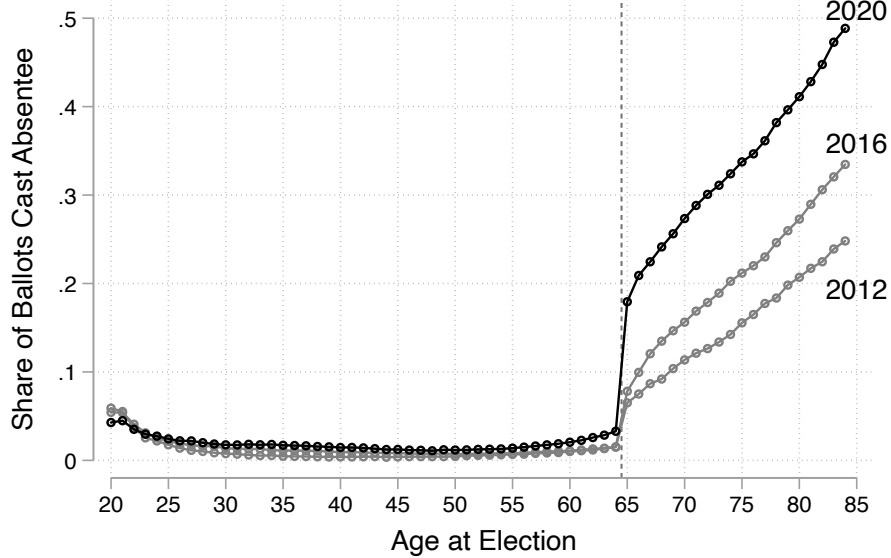
To do this, we compute the number of county residents by age on election day starting with county-age level census population estimates.¹⁸ These estimates reflect respondent age in July of the estimate year. All of the elections we study are held four months later in early November, so we use national year and month of birth population estimates to adjust the number of residents to account for the additional four months of aging. Also, the Census last produced estimates in 2018, so we assume that all residents aged two years between 2018 and 2020, ignoring mortality for this last year. Lastly, because this data is top-coded at age 85, we restrict our analyses to voters under the age of 85.

¹⁶<https://www.ryandata.com/>

¹⁷See <https://www.sos.state.tx.us/elections/laws/advisory2018-15.shtml> for a description of how party affiliation works in Texas.

¹⁸See <https://seer.cancer.gov/popdata/download.html>

Figure 2 – Voting Absentee Across Age and Elections in Texas. In Texas, only voters aged 65 or older can vote absentee without providing an excuse. This creates a large and discontinuous increase in voting absentee for 65-year-olds, which grew dramatically in 2020 during the pandemic.



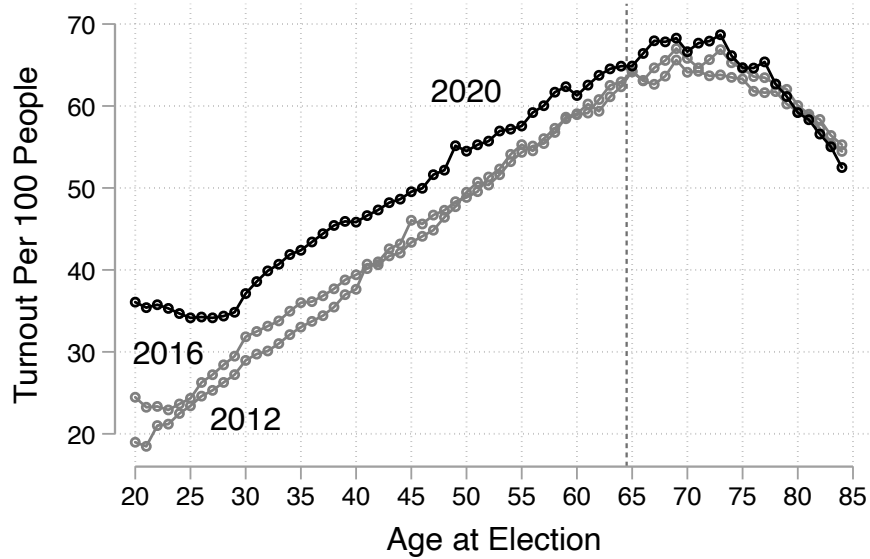
3.3 Graphical Evidence of Jump in Absentee Voting

First, we show graphical evidence that voters with access to no-excuse absentee voting used that vote mode at a noticeably higher rate during the pandemic in 2020 than in previous elections. Figure 2 shows the share of ballots cast that were absentee across age, separately for the past three presidential elections. As we see, 65-year-olds did take advantage of being eligible to vote absentee in pre-COVID-19 elections, as previously documented in Meredith and Endter (2015).

In 2020, many more 65-year-olds took advantage of the ability to vote absentee: about 17% of ballots cast by 65-year-olds in the 2020 general election were absentee votes. This pattern shows that voters appreciate the opportunity to vote absentee, especially during the pandemic. It also strongly suggests that many 64-year-olds would like to vote absentee but are not able to.

The plot shows a slight uptick in voting by mail for people slightly younger than 65 in the 2020 elections; this indicates a small number of people who became more incentivized

Figure 3 – Turnout Across Age and Elections in Texas. There is no clear jump in turnout for 65-year-olds in 2020, despite the fact that they are eligible to vote no-excuse absentee and 64-year-olds are not. Furthermore, turnout in 2020 in Texas is up most for younger voters, who cannot vote absentee without an excuse in Texas.



to provide an excuse to vote by mail because of the pandemic. However, the number of people who do this is small, indicating that the need to provide an excuse is a high bar in Texas. Similarly, there is a noticeable uptick in people near age 20 voting by mail despite the excuse requirement; this is primarily driven by college students residing outside of their home county for school, which is one of the few excuses that Texas accepts.

3.4 Graphical Evidence Does Not Suggest Major Turnout Effect of Vote-by-Mail in 2020

Being old enough to vote absentee without an excuse noticeably increased voting by mail in Texas in 2020. If the conventional wisdom about the 2020 election is right—that the expansion of vote by mail massively increased turnout and helped the Democrats—then we should see a noticeable increase in turnout for 65-year-olds, because of their ability to vote by mail.

Figure 3 shows that this is not the case. Turnout looks almost identical for 65-year-olds and 64-year-olds in Texas in 2020; there is no evidence at all for a jump, in the figure. While 65-year-olds did avail themselves of their ability to vote by mail, there is no noticeable increase in their turnout compared to 64-year-olds.

Moreover, another conspicuous feature of the graph is that turnout in 2020 is up dramatically for younger voters, especially for voters aged 20-30, and also for voters aged 30-60 or so. The turnout rate of 20-year-olds was up more than 50% relative to 2016, yet rates of voting by mail are paltry in this age group, since an excuse is required to do so.

Put together, these two features of the data—the lack of a jump in turnout for 65-year-olds, and the dramatic increase in turnout for younger voters who do not have access to no-excuse absentee voting in Texas—suggest that expanding vote-by-mail in 2020 may have had quite limited effects on turnout.

We now dig deeper to confirm this initial conclusion with formal statistical analyses.

3.5 Using the Age Cutoff to Estimate the Effect of No-Excuse Absentee Voting

To estimate the effect of no-excuse absentee policies on turnout, we would like to carry out an experiment where some voters have access to voting absentee without an excuse, while other similar voters, voting in the same election, do not. To approximate this ideal experiment, we take advantage of an age discontinuity in Texas, where voters 65 years old can vote absentee without an excuse, while voters 64 years old must provide an excuse to vote absentee. Using OLS, we estimate the equation

$$Y_{iact} = \beta((\text{Age} = 65)_{iact} * (\text{Year}=2020)_{iact}) + \gamma_{ac} + \delta_{ct} + \epsilon_{iact}, \quad (1)$$

where Y is the outcome—voted, voted absentee, or voted early in-person, for example—for individual i , in age bin a , living in county c , in an election at time t . Because we

subset to voters age 64 and 65 at the time of each election, there are only two age bins in the regressions below. The γ_{ac} term represents county-by-age group fixed effects, and δ_{ct} represents county-by-election fixed effects.

The coefficient of interest, β , tells us whether the effect of having access to no-excuse absentee increases turnout more in 2020, during the pandemic, than in previous elections. In this difference-in-differences design, β represents this quantity if the parallel trends assumption is satisfied. We zoom in on 64 and 65-year-olds such that parallel trends is more plausible: for our case, it must be that the turnout trends for 64-year-olds provide valid counterfactuals for 65-year-olds, had the 65-year-olds not had access to no-excuse absentee voting. And because of the fixed effects we include in Equation 1, we only compute counterfactual turnout trends for 65-year-olds using 64-year-olds within the same county and election, meaning we can hold unobservable features of local races that affect the turnout constant. In Figure A.3 in the Appendix, we show some suggestive evidence that the parallel trends assumption is likely to be satisfied in our case.

After examining these basic effects, we turn to a number of strategies to deal with the potential issue that basic trends in age and turnout could bias a comparison of 65 and 64-year-olds, since 65-year-olds are still 1 year older than 64-year-olds and might turnout slightly more because of this.

3.6 Regression Estimates of the Effect of Vote-by-Mail in Texas

Table 1 presents our formal estimates of the effects of Texas’s no-excuse absentee policy on overall turnout and vote mode.¹⁹

The first row of the table shows the estimated jump for 65-year-olds compared to 64-year-olds (this quantity does not need to be added to any main effect to get the total effect, as the regression included a full set of interactions of the age 65 indicator and the year).

¹⁹To guard against concerns about possible divergent trends over time, we investigate parallel trends before 2020 in Appendix A.5. We also report a version of the main specification restricted to 2018 and 2020. These results leave our main conclusions unchanged.

Table 1 – Effect of No-Excuse Absentee Voting on Turnout and Vote Mode, Texas General Elections, 2012-2020.

	Overall Turnout Pr(Voted)[0-100%]		Absentee Voting Pr(Absentee)[0-100%]		Early In-Person Pr(Early)[0-100%]		Election Day In-Person Pr(Elec. Day)[0-100%]	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
No-Excuse (Age=65) × 2020	0.02 (0.12)	-0.00 (0.12)	9.50 (0.06)	9.50 (0.06)	-8.81 (0.13)	-8.81 (0.13)	-0.67 (0.06)	-0.70 (0.06)
No-Excuse (Age=65) × 2018	2.31 (0.13)	2.35 (0.13)	4.42 (0.04)	4.42 (0.04)	-1.60 (0.13)	-1.56 (0.13)	-0.51 (0.09)	-0.51 (0.09)
No-Excuse (Age=65) × 2016	1.21 (0.13)	1.24 (0.13)	4.05 (0.05)	4.06 (0.05)	-2.20 (0.14)	-2.13 (0.14)	-0.65 (0.09)	-0.69 (0.09)
No-Excuse (Age=65) × 2014	2.86 (0.14)	2.83 (0.14)	3.91 (0.04)	3.92 (0.04)	-0.54 (0.13)	-0.53 (0.12)	-0.51 (0.11)	-0.56 (0.10)
No-Excuse (Age=65) × 2012	1.92 (0.14)	1.80 (0.14)	3.25 (0.04)	3.25 (0.04)	-0.99 (0.14)	-1.04 (0.14)	-0.34 (0.10)	-0.41 (0.10)
2020	2.52 (0.13)		1.21 (0.03)		11.64 (0.14)		-10.33 (0.08)	
2018	-4.26 (0.14)		-0.26 (0.02)		-0.92 (0.14)		-3.07 (0.10)	
2016	0.61 (0.14)		0.03 (0.03)		4.10 (0.14)		-3.52 (0.10)	
2014	-19.41 (0.14)		-0.58 (0.02)		-19.43 (0.13)		0.59 (0.11)	
Intercept (2012 mean)	62.34		0.93		45.68		15.74	
# Obs	2,645,223	2,645,223	2,645,223	2,645,223	2,645,223	2,645,223	2,645,223	2,645,223
County-by-Year FE	N	Y	N	Y	N	Y	N	Y

Robust standard errors in parentheses. Unit of observation is an individual by year. Texans aged 64 or younger who are eligible to vote must provide a valid excuse if they wish to vote absentee. Those aged 65 or older who are eligible to vote can vote absentee without an excuse.

In the first column, we see that the estimated increase in turnout for 65-year-olds, who are eligible to vote absentee without an excuse in Texas, is 0.02 percentage points—i.e., 2 basis points. The upper bound of the 95% confidence interval (with robust standard errors) for this effect is 0.26 percentage points.

In the second column, we add county-by-year fixed effects so that we are estimating these year-specific jumps within each county, in case the mix of voters and ballot items varies across counties in ways that could change the estimated jumps. We find no major difference in the estimate when we include these fixed effects; the effect on turnout actually shrinks a bit more.

In sum, in columns 1 and 2 we confirm the graphical evidence from before that suggested no apparent, major effect of vote-by-mail on turnout in 2020. Despite the salience of voting by mail in 2020, and despite the attention paid to the potential health risks of voting in

person during the pandemic, the ability to vote by mail in Texas had at most, a quite modest effect on turnout.

Interestingly, we do find initial evidence for a positive, though still relatively modest, effect on turnout in previous years, with estimates ranging from roughly 1.2 percentage points in 2016 to 2.9 percentage points in 2014. These jumps appear to be larger in midterm elections than in presidential elections, suggesting that vote-by-mail might be more effective at mobilizing voters when voter attention and salience are lower.

The remainder of the table breaks down this overall turnout effect into its constituent parts, studying the three mutually exclusive voting modes in Texas—absentee voting, voting early in person, and voting on election day in person. These three estimates by construction sum to the estimate on overall turnout (holding regression specification fixed).

Looking across the columns, it is evident that being old enough to vote by mail in 2020 led to noticeably higher rates of voting by mail (columns 3 and 4), but that nearly all of this increase came from decrease in voting early in person (columns 5 and 6), and voting in person on election day (columns 7 and 8). While rates of absentee voting increased by approximately 9.5 percentage points, rates of early in person voting decreased by roughly 8.8 percentage points, and rates of in person voting on election day decreased by roughly 0.7 percentage points. Hence, almost all of the effect of eligibility on voting absentee came from voters who would have otherwise voted early in person, and this is an important part of why the policy appears to have no effect on turnout during the pandemic.

3.7 Accounting for Age Trends

The estimates above present the simplest and most straightforward way to analyze the effects of Texas’s age cutoff on voting by mail and turnout. However, because age and turnout are correlated (see Figure 3), overall comparisons of 64 and 65-year-olds risks confusing the effect of absentee voting eligibility with the simple fact that 65-year-olds are a year older than 64-year-olds. This upward bias is probably not large and is unlikely to affect the 2020

analysis much, since we found a non-effect on turnout in 2020 without accounting for it, but it is important to try to get the best estimate we can, and it is particularly important for estimates for prior years, where we did find positive estimates in the analysis above. With this in mind, we pursue several potential strategies.

3.7.1 Day-Level RD

The best potential way to account for these age trends is to perform the analysis at the level of dates of birth, rather than crudely binning voters into their age measured in integer years. This would theoretically allow us to estimate the effect for a voter who turns 65 on the day of the election, and hence is just eligible to vote by mail, to a voter who turns 65 the day after the election, and therefore is not eligible. Because these two hypothetical voters would only differ by 1 day in their age, there would be much less potential trending than when comparing 65-year-olds to 64-year-olds.

There are two potential limitations to this approach, however. Perhaps because voters do not pay close attention to the eligibility conditions of signing up for absentee voting, and because you sign up for absentee voting well in advance of the election when you are not necessarily closely attuned to whether your birthday falls on election day or not, uptake in Texas’s vote-by-mail program is not complete at the birthdate cutoff—a fact first observed in Meredith and Endter (2015). As the uptake increases to the right of the threshold, just a few days after individuals’ 65th birthday, the local average treatment effect estimated right at the threshold could underestimate the overall effect of the policy, which phases in over time. Second, because we do not have data on the population of Texas by date of birth, we cannot construct the ideal denominator for measuring turnout rates like we can in the year-level analysis.

Despite these limitations, the day-level RD analysis does show a sizable first-stage effect on take-up of absentee voting at the birthdate threshold, and, consistent with the analysis above, no effect on turnout. Using the `rdrobust` approach from Calonico, Cattaneo, and

Titunik (2014), we estimate that being just old enough to vote absentee without an excuse causes more than a 7 percentage-point increase in the rate of voting absentee, yet causes a -0.76 percentage-point *decrease* in the share of 2016 voters who turned out in the 2020 election. The upper bound of the 95% confidence interval for this estimate is 0.2 percentage points—similar the upper bound we estimated above in the year-level analysis.

Appendix A.6 reports the details of these analyses.

3.7.2 Year-Level RD

To try to account for the age trend issue in the year-level analysis directly, we can estimate age trends on either side of the 65-year-old age cutoff, akin to a regression discontinuity design or interrupted time series analysis. However, this analysis is fairly weak compared to the day-level RD; estimating the running variable at the year level does not provide much data, and the estimates are quite sensitive to the bandwidth and specification used. Nevertheless, no obvious evidence for a large effect is found; the largest positive estimate we report is 0.88 percentage points, while the largest negative one is -1.41 percentage points, giving a sense of the instability of this approach.

Interestingly, the year-level RD approach does sharpen the contrast between effects in previous presidential years vs. previous midterm election years. The RD estimates are not terribly stable, looking across the columns, but do support the idea of a meaningful and positive effect on turnout in 2018 and 2014, with more modest and possibly null effects in 2016 and 2012. Again, this suggests that the mobilizing effect of vote by mail, while never very large, are larger when voter attention and salience are lower.

Appendix A.7 reports the details of these analyses.

3.7.3 Triple Differences Strategy

A final strategy is to assume that the relationship between age and turnout is highly similar within a particular set of years (logically, within all presidential years in the sample), and

then estimate the difference in the jump at the age cutoff for 2020 compared to previous jumps. This assumes that the bias in the simple difference between the turnout of 65-year-olds and 64-year-olds is constant across presidential elections, so that it can be differenced out in this way.

When we do this, we estimate a *negative* interaction effect for no-excuse absentee voting in 2020. This is implied by Table 1, where we see that the effect is estimated to be 0.02 percentage points in 2020, but 1.21 percentage points in 2016 and 1.92 percentage points in 2012. The shrinkage in the effect in 2020 likely reflects the enormous rise in voter interest in 2020, relative even to previous presidential elections, a point we will revisit later in the paper.

3.8 Partisan Effects of Vote-by-Mail in Texas

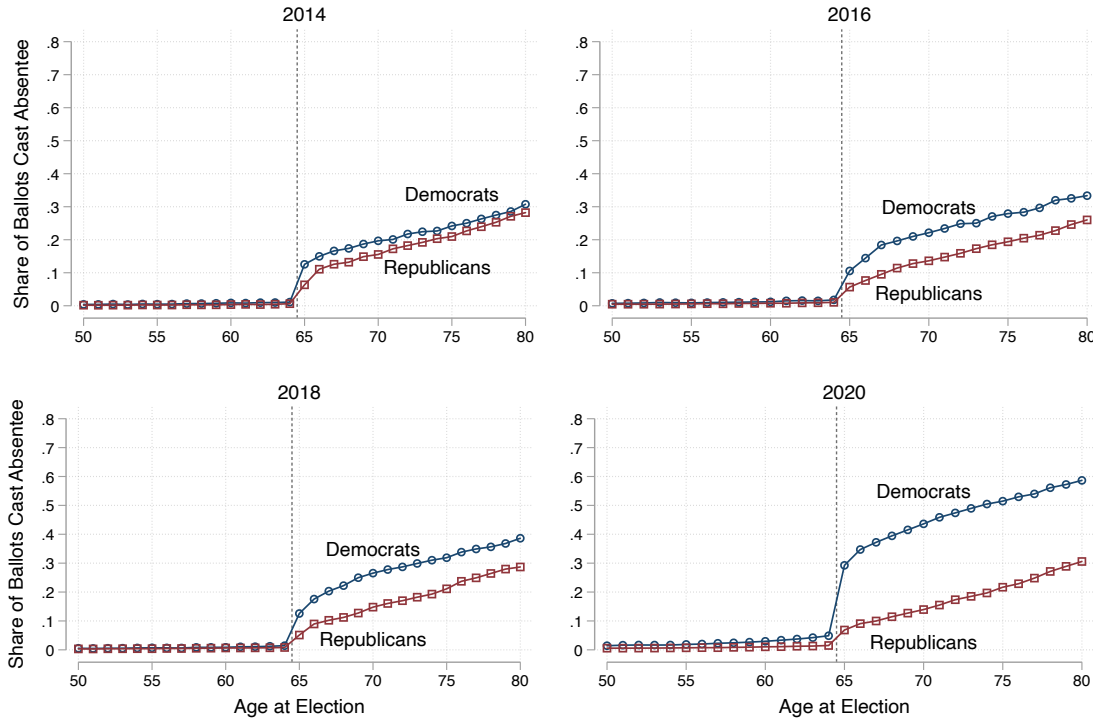
One of the major narratives around vote-by-mail in 2020 is that it helped Democrats electorally. “Blue shifts” in recent elections helped to cement this view, with people seeing Democratic vote shares improve with mail-in votes counted later in the process. During the 2020 campaign, attitudes towards vote-by-mail shifted even more, with Democrats embracing the practice and using it to vote while Republicans opposed it and chose to vote in person instead (Kousser et al. 2020; Lockhart et al. 2020).

3.8.1 Partisan Polarization in Absentee Voting

We start by documenting substantial partisan polarization in absentee voting. Figure 4 compares the rates of absentee voting, as a proportion of all ballots cast, across age and party for the last four general elections. As we mentioned earlier, we define party based on a voter’s most recent partisan primary or runoff participation.²⁰ Although no partisan gap is present in 2014, a noticeable gap appears in 2016, with roughly 20% of ballots cast

²⁰In Texas, any voter may vote in a party’s primary runoff election, with one exception: Texans who vote in the primary of one party are only able to vote in that party’s primary runoff election (<https://www.sos.state.tx.us/elections/laws/advisory2018-15.shtml>).

Figure 4 – Share of Ballots Cast Absentee, By Age and Party, 2014-2020 General Elections. While a partisan gap in absentee voting is evident in 2016 and 2018, grew dramatically in 2020.



by 65-year-old Democrats being cast absentee while only roughly 10% of ballots cast by 65-year-old Republicans are cast this way. It is worth noting that, around this time, the Texas Democratic Party launched a long-term strategic effort to mail absentee ballot applications to Democratic seniors, which they claim nearly tripled the number of Democratic absentee votes by 2018.²¹ However, the Texas Republican Party also reported organizing absentee ballot mailer campaigns around the same time, so it is unclear how much of the gap results from differences in party strategy versus differences in voter preferences.²² This partisan gap is unchanged in 2018, but in 2020, it more than doubles in size, with more than 30% of ballots cast by 65-year-old Democrats cast absentee while 65-year-old Republican absentee rates remain largely unchanged from past election cycles.

²¹<https://www.texasdemocrats.org/blog/texas-democrats-path-to-victory/>

²²<https://www.texasgop.org/your-party-and-the-state-republican-executive-committee-have-been-busy/>

3.8.2 Partisan Substitution from Early In-Person Voting

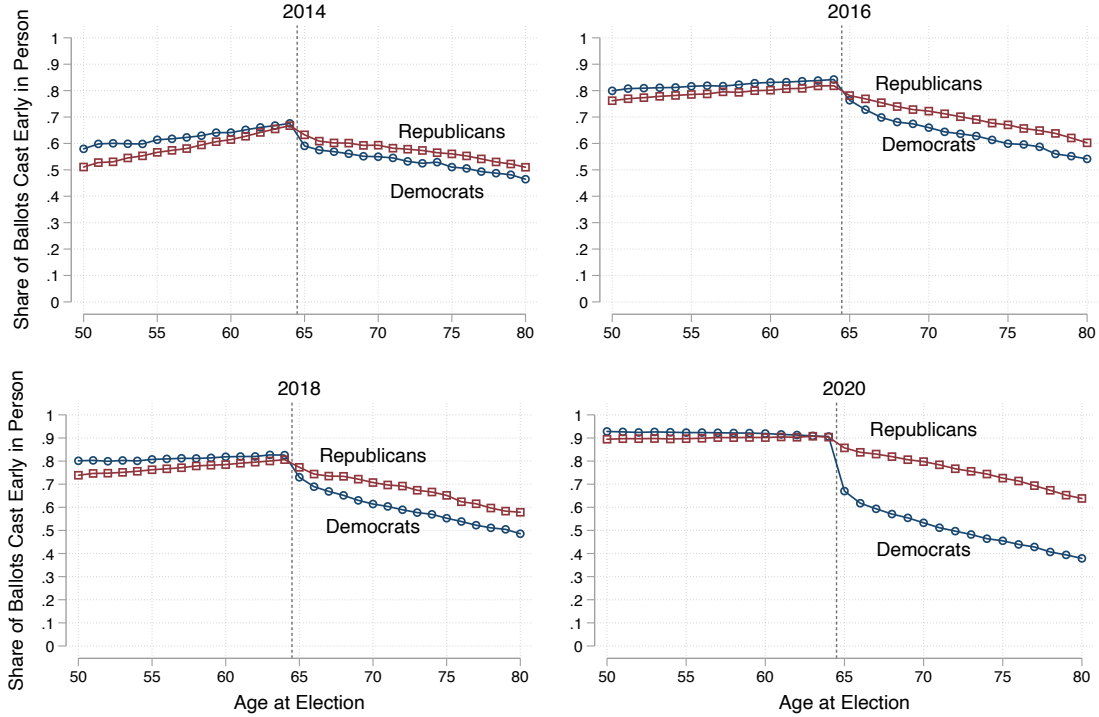
Next, we show that the increased rate of absentee voting among Democrats comes in large part from their substitution away from early in-person voting. Figure 5 compares the rate of early in-person voting, again as a proportion of all ballots cast, by age and party in the last four primary general elections. Again, we see a partisan gap in vote mode begin to appear in 2016 and 2018, but it grows dramatically in 2020. While Democrats have increased their use of absentee voting over time (Figure 4), they have correspondingly decreased their use of early in-person voting over time (Figure 5). In each year, the gap between Democrats and Republicans in the use of early in-person voting roughly corresponds to the gap in absentee voting. Overall, these patterns document substantial polarization in vote mode—with more Democrats voting absentee and more Republicans voting early in-person—and this polarization in vote mode has increased dramatically in 2020, during the COVID-19 pandemic.

3.8.3 No Major Partisan Effects of No-Excuse Absentee Voting

Next, we show that despite the much larger rate of absentee voting among 65-year-old Democrats in 2020 compared to 65-year-old Republicans, the option to vote absentee without an excuse did not have large effects on the partisan composition of overall turnout in 2020. In column 1 of Table 2, we estimate the effect of the no-excuse absentee policy on whether on the share of overall turnout of ballots cast by Democrats. We include a set of year fixed effects to control for unobservable characteristics of the election that might affect the Democratic share of turnout, like candidates on the ballot, for example. The interaction terms in column 1 of Table 2, then, tell us the difference in the Democratic share of turnout between 65-year-olds, who can vote absentee without an excuse, and 64-year-olds, who cannot.

As the table shows, in 2020, the Democratic share of turnout among 65-year-olds was about 0.22 percentage points higher than the Democratic share of turnout among 64-year-

Figure 5 – Share of Ballots Cast Early In-Person, By Age and Party, 2014-2020 General Elections. While the media focused on the growing partisan gap in voting by mail, there was an equally large partisan gap in early in-person voting—but in the other direction.



olds. The 95% confidence interval ranges from -0.06 to + 0.5 percentage points, so we can rule out dramatic effects of the no-excuse absentee policy on the partisan share of turnout.

That being said, there have been a number of instances of important elections that were decided by less than a percentage point, so we cannot rule out the idea that no-excuse absentee voting could tip a particular election to the Democrats. In 2020, a 0.5 percentage-point shift could have tipped Arizona and Georgia, not quite enough to overturn President Biden’s electoral college victory, but enough to make it extremely close. On the other hand, our best estimate of the effect is less than a quarter of a percentage point, and there will probably never be sufficient statistical precision to rule out the possibility of no-excuse absentee voting some election, in some place, at some point in time. What we can say is that, in the aggregate, the evidence suggests that the effect on the relative turnout of Democrats

Table 2 – Effect of No-Excuse Absentee Voting on Party Turnout, Texas General Elections, 2012-2020.

	Dem % of Turnout	Absentee % of Turnout		Early % of Turnout		Elec. Day Ballots % of Turnout	
		D	R	D	R	D	R
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
No-Excuse (Age=65) × 2020	0.22 (0.14)	24.37 (0.22)	11.09 (0.10)	-23.61 (0.24)	-9.96 (0.14)	-0.76 (0.12)	-1.13 (0.11)
No-Excuse (Age=65) × 2018	0.25 (0.15)	11.14 (0.18)	6.09 (0.08)	-9.59 (0.30)	-4.39 (0.18)	-1.55 (0.26)	-1.70 (0.17)
No-Excuse (Age=65) × 2016	0.47 (0.14)	8.78 (0.18)	5.61 (0.08)	-7.86 (0.30)	-4.15 (0.17)	-0.91 (0.26)	-1.46 (0.16)
No-Excuse (Age=65) × 2014	-0.11 (0.17)	11.44 (0.24)	7.78 (0.10)	-8.54 (0.47)	-4.13 (0.24)	-2.90 (0.44)	-3.65 (0.23)
No-Excuse (Age=65) × 2012	-0.09 (0.13)	3.02 (0.16)	5.35 (0.08)	-2.40 (0.40)	-3.96 (0.18)	-0.62 (0.39)	-1.40 (0.17)
2020	11.77 (0.13)	3.49 (0.12)	1.21 (0.05)	13.65 (0.31)	14.94 (0.15)	-17.15 (0.29)	-16.15 (0.15)
2018	8.49 (0.14)	0.05 (0.10)	-0.45 (0.04)	5.62 (0.34)	2.74 (0.17)	-5.67 (0.33)	-2.29 (0.17)
2016	6.28 (0.14)	0.38 (0.11)	-0.04 (0.05)	7.24 (0.34)	5.07 (0.17)	-7.63 (0.33)	-5.03 (0.17)
2014	4.92 (0.15)	-0.28 (0.11)	-0.77 (0.05)	-9.37 (0.43)	-13.06 (0.21)	9.65 (0.42)	13.83 (0.21)
Intercept (2012 mean)	14.73	1.39	1.51	76.97	72.63	21.64	25.87
# Obs	1,570,098	337,728	1,232,370	337,728	1,232,370	337,728	1,232,370

Robust standard errors in parentheses. Unit of observation is an individual by year. Texans aged 64 or younger who are eligible to vote must provide a valid excuse if they wish to vote absentee. Those aged 65 or older who are eligible to vote can vote absentee without an excuse.

vs. Republicans is quite modest, probably so modest as to rarely change election outcomes, and could be zero.

Despite the modest-to-null effects of no-excuse absentee voting on the partisan composition of the electorate, in columns 2-7 we provide formal estimates to document the substantial polarization in vote mode. Columns 2, 4, and 6 of Table 2 show the effects of the no-excuse absentee policy on the share of Democratic turnout that uses absentee voting, early in-person voting, and election day voting, respectively. Columns 3, 5, and 7 show the same for Republicans.

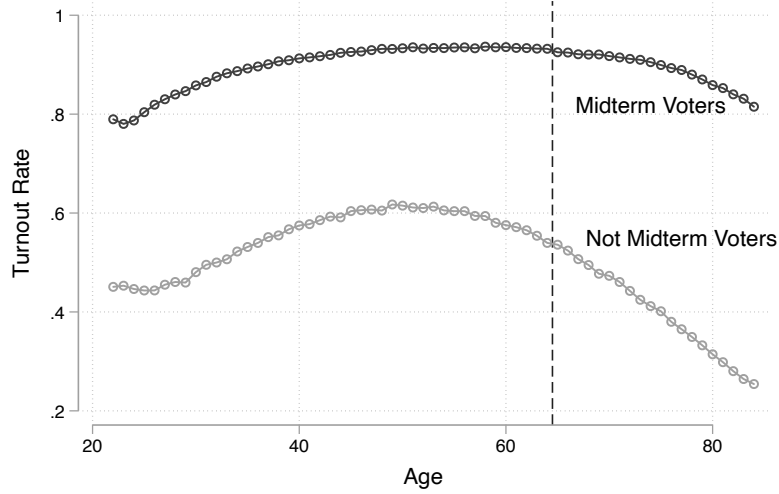
As we saw graphically in Figure 4, having access to no-excuse absentee voting in 2020 led to a large increase in the use of absentee voting among Democrats, about 24.4 percentage points, compared to about an 11.1 percentage point increase among Republicans. Comparing this difference between Democrats and Republicans separately for each year, we see that the partisan gap in vote mode appeared prior to 2020, but has grown dramatically during the COVID-19 pandemic. As we showed graphically in Figure 5, these increases in absentee voting for both parties are drawn primarily from substitution away from early in-person voting.

In sum, our evidence suggests that no-excuse absentee voting has a modest-to-null effect on how Democratic the composition of turnout is in an election. Although we cannot conclusively say that no election outcome could be changed by no-excuse absentee voting—indeed, it is unlikely any statistical analysis could ever reach this conclusion—we can say that the modest size of the effect is at odds with much of the public discussion about vote-by-mail and the supposed strength of its benefit for Democrats.

4 Understanding the Effect of Absentee Voting: Evidence from Low-Propensity Voters

To better understand the non-effect of no-excuse absentee voting policies in 2020, we conduct one further heterogeneity analysis. Because voter turnout was extraordinarily high in 2020, and citizens over 60 years old are generally quite likely to vote, our Texas analysis is focused on citizens who were very likely to vote even without a no-excuse absentee policy. Might this mask an effect for lower propensity voters, and especially for younger voters who could vote no-excuse absentee in many other states? This is an important question: to evaluate the effects of vote-by-mail in 2020 writ large, we need to understand how the effect we are able to estimate in Texas might generalize to other states and other age groups.

Figure 6 – No Effect of No-Excuse Absentee Policy on 2020 General Election Turnout for Low-Propensity Voters. This graph shows the turnout rate in 2020 across age for people who voted in the 2016 general election and the 2018 midterm vs. those who only voted in the 2016 general election, who are lower-propensity voters.



In Figure 6 we present evidence that extending no-excuse absentee voting did not make low-propensity voters more likely to turnout in 2020, in Texas at least. Citizens who voted in 2016 and 2018 were much more likely to vote in 2020 than those who voted in 2016 but not 2018—93% of the 64-year-old midterm voters voted in 2020 while only 54% of the 64-year-old non-midterm voters participated in 2020. Even for low-propensity voters, extending no-excuse absentee voting did not increase participation, as illustrated in the lack of a discontinuous jump up in the turnout rate from age 64 to age 65 for non-midterm voters in the plot.

One potential concern with this analysis is that we count a citizen as a non-voter if they move out of state or pass away. While this implies that the turnout rate is higher among citizens who did not move and are still alive, and the non-midterm voters are more likely to be movers or to have deceased, we expect that the probability a voter has moved or passed away to change smoothly by age. If this is true, the lack of a discontinuity in 2020 turnout between 64 and 65-year-olds who did not vote in the midterm is strong evidence that the

effect of no-excuse absentee is very small or nonexistent for these low-propensity voters as well.

That the effect of no-excuse absentee voting is not larger for low-propensity voters suggests two important takeaways. First, the non-effect of no-excuse absentee voting we document for 65-year-olds in Texas may generalize to other age groups, and therefore to other states where no-excuse absentee voting was made available to all age groups. This issue of generalizing from Texas is particularly important since Texas has a somewhat unusual system of voting in which the bulk of voters cast their votes in person before Election Day. Our nationwide analysis, which documented no dramatic changes in turnout between states that did and did not implement no-excuse absentee voting for 2020, helps in this regard.

Second, it is consistent with the theoretical argument that lowering the costs of voting through convenience voting reforms generally has modest or null effects on turnout because the dominant driver of individuals’ decisions to participate is interest rather than convenience. When voter interest is high, such as in 2020, even low-propensity voters, who at baseline are more likely to be the sorts of “marginal voters” that could base their decision to vote on the convenience of doing so, turn out at the same rate whether or not they can take advantage of no-excuse absentee voting. When voter interest is low, there is likely to be more room for altering the costs of voting to affect turnout, as we saw above when we documented small but detectible effects of no-excuse absentee voting on turnout in off-cycle elections.

5 Conclusion

The 2020 election brought extraordinary challenges to the American electoral system. The dramatic expansion of vote-by-mail in response to the COVID-19 pandemic, the sharp increase in partisan polarization concerning questions of election administration, and the unprecedented refusal of former President Trump to acknowledge the election results have all

contributed to a crisis of confidence in American democracy. This crisis has triggered an ongoing debate about how the U.S. should administer its elections, and about what role absentee voting should play going forward.

A conventional wisdom about vote-by-mail in the 2020 election has already congealed and is setting the terms of this debate. By this account, the expansion of vote-by-mail triggered widespread adoption of absentee voting, which in turn massively increased turnout, which in turn helped the Democratic party. Both parties have accepted this narrative and are engaged in rhetorical combat on these terms.

The problem with this conventional wisdom is that it is based on a fallacy. It's true that more people voted by mail than ever before in the 2020 election. It's also true that turnout was extraordinarily high in 2020. And it's also true that the Democratic party won the Presidency and the Senate and maintained control of the House. But these facts do not imply that voting by mail increased turnout or helped the Democrats.

In fact, as we've shown, the major effect of expanding absentee voting is to change *how* people vote, not *whether* they vote. Simply observing that many people voted by mail in 2020, and that many of the people who voted by mail were Democrats, is insufficient to conclude that vote-by-mail helped the Democrats; many of these voters would probably have voted in person had they not had the opportunity to vote absentee instead.

Using nationwide data, we have shown that states that implemented absentee voting for the 2020 election saw no obvious, dramatic increases in turnout relative to states that did not. Indeed, turnout was up across the board in 2020, and increased markedly in states that offered no absentee voting at all.

Using data from Texas, we offered a more rigorous evaluation of the effects of absentee voting, taking advantage of a natural experiment where 65-year-olds could vote absentee without an excuse while 64-year-olds could not. This rule led many more 65-year-olds to vote absentee than 64-year-olds, but it did not make them turn out at higher rates. In fact, turnout was up most in Texas for voters in their 20s, almost none of whom were able to

vote absentee. Moreover, the proportion of voting 65-year-olds in the 2020 election who were Democrats was barely higher (0.2 percentage points) than the proportion of voting 64-year-olds who were Democrats, despite the dramatic gap in absentee voting between the two age groups.

The results of our paper do not offer a clear recommendation for the policy debate around vote-by-mail, but they do suggest that both sides of the debate are relying on flawed logic. Vote-by-mail is an important policy that voters seem to like using, and it may be a particularly important tool during the pandemic. Despite all that, and despite the extraordinary circumstances of the 2020 election, vote-by-mail’s effect on turnout and on partisan outcomes is very muted, just as research prior to the pandemic would have suggested.

Documenting that the effect of vote-by-mail on turnout is so muted even during a historic pandemic is important for our theories of why people vote. Even during COVID-19, the chance to cast your vote without having to go to the polls in person made little difference for participation. Instead, turnout increased dramatically everywhere because voters on both sides cared more than usual about the outcome. This does not mean that the costs of voting are never important—especially when they are made artificially high in an attempt to suppress participation—but it does suggest that expanding participation requires understanding how to engage voters and make them interested in the election more than it requires focusing on the details of different convenience voting reforms.

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Online Appendix

Intended for online publication only.

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A.1 Texas Absentee Ballot Application

Figure A.1 shows a sample absentee ballot in Texas. As section 5 of the form shows, valid reasons for voting by mail include being 65 years of age or older, a disability, expecting to be absent from one's county on Election Day, or confinement in jail.

Figure A.1 – Texas Absentee Ballot Application

DO NOT REMOVE PERFORATED TABS. Moisten here and fold bottom to top to seal. DO NOT REMOVE PERFORATED TABS. Moisten here and fold bottom to top to seal.

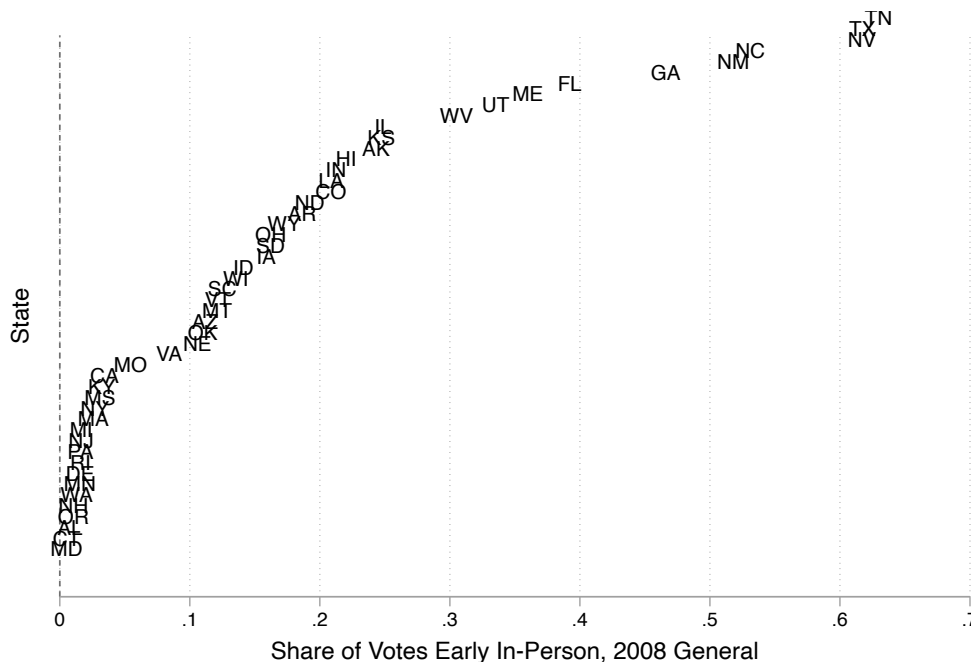
Application for Ballot by Mail		Prescribed by the Office of the Secretary of State of Texas AS-15 12/17		For Official Use Only VOID #, County Election Precinct #, Statement of Residence, etc.							
1	Last Name (Please print information)	Suffix (Jr., Sr., III, etc)	First Name	Middle Initial							
2	Residence Address: See back of this application for instructions.		City	, TX	ZIP Code						
3	Mail my ballot to: If mailing address differs from residence address, please complete Box # 7.		City	State	ZIP Code						
4	Date of Birth (mm/dd/yyyy) (Optional) [][]/[][]/[][][][]		Contact Information (Optional)* Please list phone number <u>and/or</u> email address: * Used in case our office has questions.								
5	Reason for Voting by Mail: ☐ 65 years of age or older. (Complete Box #5a) ☐ Disability. (Complete Box #5a) ☐ Expected absence from the county. (Complete Box #5b and Box #8) You will receive a ballot for the upcoming election only. ☐ Confinement in jail. (Complete Box #5b) You will receive a ballot for the upcoming election only.		7 If you are requesting this ballot be mailed to a different address (other than residence), indicate where the ballot will be mailed. See reverse for instructions. ☐ Mailing Address as listed on my voter registration certificate ☐ Nursing home, assisted living facility, or long term care facility ☐ Hospital ☐ Retirement Center ☐ Address of the jail ☐ Relative; relationship _____ ☐ Address outside the county (see Box #8)								
6a	ONLY Voters 65 Years of Age or Older or Voters with a Disability: If applying for one election, select appropriate box. If applying once for elections in the calendar year, select "Annual Application." ☐ Annual Application <u>Uniform and Other Elections:</u> ☐ May Election ☐ November Election ☐ Other _____ <u>Primary Elections:</u> You must declare <u>one</u> political party to vote in a primary: ☐ Democratic Primary ☐ Republican Primary ☐ Any Resulting Runoff		8 If you selected "expected absence from the county," see reverse for instructions [][]/[][]/[][][][] — [][]/[][]/[][][][] Date you can begin to receive mail at this address Date of return to residence address 9 Voters may submit a completed, signed, and scanned application to the Early Voting Clerk at: (early voting clerk's e-mail address) (early voting clerk's fax) NOTE: If you fax or e-mail this form, please be aware that you must also mail the form to the early voting clerk within four business days. See "Submitting Application" on the back of this form for additional information.								
6b	ONLY Voters Absent from County or Voters Confined in Jail: You may only apply for a ballot by mail for one election, and any resulting runoff. Please select the appropriate box. <u>Uniform and Other Elections:</u> ☐ May Election ☐ November Election ☐ Other _____ <u>Primary Elections:</u> You must declare <u>one</u> political party to vote in a primary: ☐ Democratic Primary ☐ Republican Primary ☐ Any Resulting Runoff		10 "I certify that the information given in this application is true, and I understand that giving false information in this application is a crime." →  _____ Date _____ SIGN HERE If applicant is unable to sign or make a mark in the presence of a witness, the witness shall complete Box #11.								
If someone helped you to complete this form or mails the form for you, then that person must complete the sections below.											
11	See back for Witness and Assistant definitions. If applicant is unable to mark Box #10 and you are acting as a Witness to that fact, please check this box and sign below. ☐ If you assisted the applicant in completing this application in the applicant's presence or e-mailed/mailed or faxed the application on behalf of the applicant, please check this box as an Assistant and sign below. ☐ ★ If you are acting as Witness and Assistant , please check <u>both boxes</u> . Failure to complete this information is a Class A misdemeanor if signature was witnessed or applicant was assisted in completing the application. <table><tr><td>☒ Signature of Witness/Assistant</td><td>☒ Printed Name of Witness/Assistant</td></tr><tr><td>Street Address Apt Number (if applicable)</td><td>City</td></tr><tr><td>State</td><td>ZIP Code</td></tr></table> Witness' Relationship to Applicant (Refer to Instructions on back for clarification)					☒ Signature of Witness/Assistant	☒ Printed Name of Witness/Assistant	Street Address Apt Number (if applicable)	City	State	ZIP Code
☒ Signature of Witness/Assistant	☒ Printed Name of Witness/Assistant										
Street Address Apt Number (if applicable)	City										
State	ZIP Code										

Este formulario está disponible en Español. Para conseguir la versión en Español favor de llamar sin cargo al 1.800.252.8683 a la oficina del Secretario de Estado o la Secretaría de Votación por Adelantado.

A.2 Early In-Person Voting Frequency by State

In this section, we show how common voting early in-person is in each state. As we note in the main text, Texas is a state where early in-person voting is very common, and we suspect the effects of extending no-excuse absentee policies on turnout would be larger in states with fewer convenience voting options. Figure A.2 uses survey data from the 2008 Survey of the Performance of American Elections (Alvarez et al. 2009; Alvarez, Levin, and Sinclair 2012), which asks each respondent who voted in the 2008 general election to report their vote mode. Figure A.2 shows the share of voters in each state who report voting early in-person. As we see, early in-person voting is more common in Texas (over 60% of voters) than almost any other state, and as the data in the body of our paper shows, the early voting rate in Texas has increased substantially since 2008, too.

Figure A.2 – Early In-Person Voting Share, by State The x-axis shows the share of votes cast in the 2008 general election that were reported as voting early in-person, and each point represents a state. As we see, early in-person voting is very common in Texas (TX), and is more common in Texas than nearly every other state.



A.3 No-Excuse Absentee Policies by State

In this section, we summarize each state’s absentee voting policy for the 2020 general election.

Table A.1 – Review of No-Excuse Absentee Policies for 2020 General Election. Universal Absentee refers to a policy where states mail every registered voter an absentee ballot application, in contrast to Universal Vote-by-Mail, where each registered voter is sent a mail ballot. States where COVID-19 fears are considered a valid excuse are coded as No-Excuse.

State	Abbr.	2020 General Election Policy	State	Abbr.	2020 General Election Policy
Alabama	AL	No-Excuse	Montana	MT	No-Excuse ²³
Alaska	AK	No-Excuse	Nebraska	NE	Universal Absentee, No Excuse Required
Arizona	AZ	Universal Absentee, No Excuse Required	Nevada	NV	Universal Vote-by-Mail
Arkansas	AR	No-Excuse	New Hampshire	NH	No-Excuse
California	CA	Universal Vote-by-Mail	New Jersey	NJ	Universal Vote-by-Mail
Colorado	CO	Universal Vote-by-Mail	New Mexico	NM	No Excuse ²⁴
Connecticut	CT	Universal Absentee, No Excuse Required	New York	NY	No-Excuse
Delaware	DE	Universal Absentee, No Excuse Required	North Carolina	NC	No-Excuse
Florida	FL	No-Excuse	North Dakota	ND	No-Excuse
Georgia	GA	No-Excuse	Ohio	OH	Universal Absentee, No Excuse Required
Hawaii	HI	Universal Vote-by-Mail	Oklahoma	OK	No-Excuse
Idaho	ID	No-Excuse	Oregon	OR	Universal Vote-by-Mail
Illinois	IL	Universal Absentee, No Excuse Required	Pennsylvania	PA	No-Excuse
Indiana	IN	Excuse Required	Rhode Island	RI	Universal Absentee, No Excuse Required
Iowa	IA	Universal Absentee, No Excuse Required	South Carolina	SC	No-Excuse
Kansas	KS	No-Excuse	South Dakota	SD	No-Excuse
Kentucky	KY	No-Excuse	Tennessee	TN	Excuse Required ²⁵
Louisiana	LA	Excuse Required ²⁶	Texas	TX	Excuse Required
Maine	ME	No-Excuse	Utah	UT	Universal Vote-by-Mail
Maryland	MD	Universal Absentee, No Excuse Required	Vermont	VT	Universal Vote-by-Mail
Massachusetts	MA	Universal Absentee, No Excuse Required	Virginia	VA	No-Excuse
Michigan	MI	No-Excuse Required	Washington	WA	Universal Vote-by-Mail
Minnesota	MN	Universal Absentee, No Excuse Required	West Virginia	WV	No-Excuse
Mississippi	MS	Excuse Required ²⁷	Wisconsin	WI	No-Excuse ²⁸
Missouri	MO	No-Excuse	Wyoming	WY	No-Excuse

²³Counties authorized to send mail-in ballot applications.

²⁴Counties authorized to send mail-in ballot applications.

²⁵Can cite COVID-19 as excuse if caring for individuals with special vulnerability.

²⁶Absentee eligibility extended to medically vulnerable individuals, individuals under quarantine or who are caring for quarantined patients, and those experiencing COVID-19 symptoms.

²⁷Can cite COVID-19 as excuse if under physician-ordered quarantine or caring for individual under quarantine.

²⁸Absentee ballot applications sent to most general election voters.

A.4 Summary of the Extant Literature on No-Excuse Absentee Effects

This section summarizes the literature to date on the effects of no-excuse absentee programs. Each row of Table A.2 is a study on the effects of no-excuse absentee policies on turnout. Each column summarizes information about that study, including its setting, research design, effect on overall turnout, and its effect on absentee turnout.

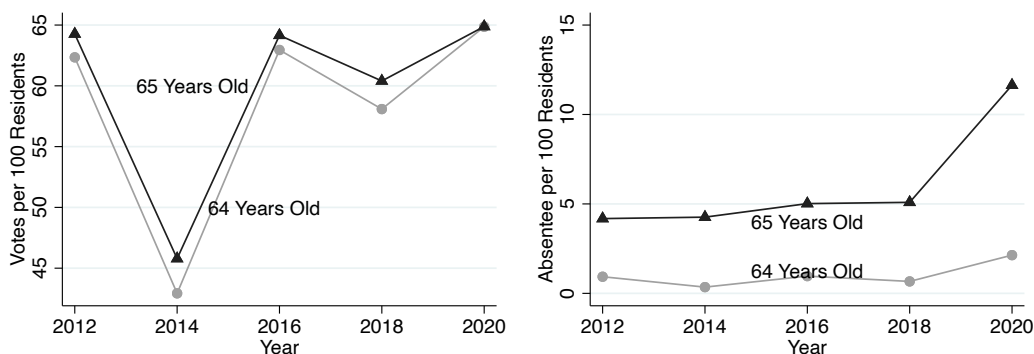
Table A.2 – Review of No-Excuse Absentee Effects Literature. X-Section (X-S) refers to a cross-sectional design, and DiD refers to a difference-in-differences design, and RDD refers to a regression discontinuity design.

Paper	Setting	Design	Unit	Treatment Level	Turnout Effect	Absentee Mode Effect
Oliver (1996)	US	X-Section	Individual	State	Null to Modest +	Large +
Karp and Banducci (2001)	US	X-Section	Individual	State-Year	Modest +	Large +
Francia and Herrnson (2004)	US	X-Section	St. Leg District	State	Modest +	
Fitzgerald (2005)	US	DiD	State-Year	State-Year	Null	
Gronke, Galanes-Rosenbaum, and Miller (2007)	US	Panel	State-Year	State-Year	Null	
Leighley and Nagler (2009)	US	Panel	State-Year	State-Year	Null to Modest +	
Giammo and Brox (2010)	US	Panel	County-Year	State-Year	Modest – to Modest +	
Larocca and Klemanski (2011)	US	Pooled X-S	Individual	State-Year	Modest +	
Leighley and Nagler (2011)	US	Panel	State-Year	State-Year	Modest +	
Springer (2012)	US	DiD	State-Year	State-Year	Null	
Burden et al. (2014)	US	Pooled X-S	Individual	State-Year	Modest – to Large –	
Burden et al. (2014)	US	DiD	County-Year	State-Year	Modest –	
Meredith and Endter (2015)	TX	RDD	Individual	Age Discontinuity	Null	Large +

A.5 Evaluating Trends in Turnout Among 64 and 65-Year-Olds

In this section, we present graphical evidence supporting our identification strategy. 65-year-olds are permitted to vote absentee without an excuse during our entire study period, and 64-year-olds have always needed an excuse. We use a difference-in-differences design to study how COVID-19 changed the effect of this policy. This design only works if we can safely assume that 64-year-olds and 65-year-olds would have been on the same trend if COVID-19 had not occurred. We assess the plausibility of this assumption by plotting the turnout and absentee voting rates for both groups over time. We find that turnout and absentee voting rates move approximately in parallel for 64-year-olds and 65-year-olds over time, suggesting that our parallel trends assumption is plausible.

Figure A.3 – Trends in Turnout and Absentee Voting for 64 and 65-Year-Olds.



Starting in 2017, Texas implemented two policies that might increase absentee turnout for voters over 65. The first law slightly extends the amount of time an absentee ballot can arrive after election day and still be counted.²⁹ The second law automatically sends election judges from each party to any assisted living facility with more than 5 absentee ballot requests so that any resident can fill out an application and vote absentee on the spot, even if they were not the ones who requested an absentee ballot.³⁰ While these laws may have had an effect on absentee voting rates, it is not so large as to dominate other changes across elections.

²⁹<https://capitol.texas.gov/billlookup/History.aspx?LegSess=85R&Bill=HB1151>

³⁰<https://www.capitol.state.tx.us/BillLookup/History.aspx?LegSess=85R&Bill=HB658>

A.6 Effects of No-Excuse Absentee Voting: Day-Level RD Analysis

In this section, we present additional estimates of the effect of no-excuse absentee eligibility comparing individuals' age using their precise birthdate, rather than just age. This approach allows us to restrict the comparison at the eligibility cutoff to individuals very similar birthdates. Doing so allows us to alleviate concerns about potential underlying differences between 64- and 65-year olds. Since precise estimates of population by exact birthday are not available, we report our turnout measure as the share of voters in the preceding presidential election year ($t - 4$) who turned out in t .

The running variable in the regression discontinuity design expresses the number of days passed since an individual's 65th birthday at the day of the respective election. We restrict analyses to individuals within 700 days of their 65th birthday, so approximately 2 years around the threshold. Below, we present graphical analyses in support of our main results using the Calonico, Cattaneo, and Titiunik (2014) approach and fitting a fourth-order polynomial to outcomes in 2020 and 2016. The results are consistent with our findings in the main paper. As mentioned before, we see an increase in the uptake of absentee voting *after* individuals' 65th birthday, which makes the LATE estimated at the threshold a less policy-relevant quantity.

Figure A.4 – Share of Previous Election's Voters Voting In Next Election (left); Share of Absentee Voters Among All Voters In Election.

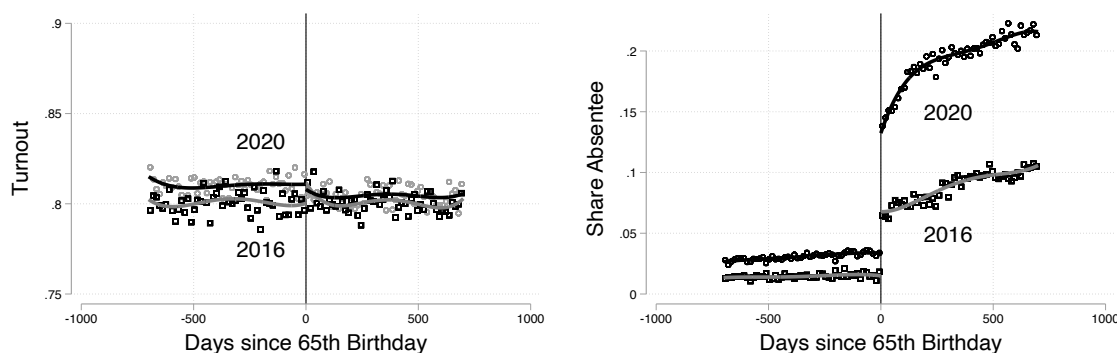


Table A.3 – Day-level RD Shows Very Small Effects on Turnout, Large Effects on Absentee Share.

	Turnout [0-100]		% Absentee [0-100]	
	(1)	(2)	(3)	(4)
Age 65+ at Election	1.09 (0.56)	-0.76 (0.48)	2.70 (0.24)	7.13 (0.30)
BW (left)	174	205	118	170
BW (right)	174	205	118	170
N	130049	171071	91,825	145839
Year	2016	2020	2016	2020

Robust standard errors in parentheses. Unit of observation is an individual voter in a presidential election year. Age 65+ at Election is a binary indicator if voter was 65 years or older at the time of the election.

A.7 Effects of No-Excuse Absentee Voting: Year-Level RD Analysis

Table A.4 shows the results across a variety of specifications for two different bandwidths.³¹ In all cases, we estimate the running variable model separately for each year, because, as Figure 3 showed, the steepness of the relationship between age and turnout varies by election.

Looking across the top row, we see that while implementing the RD makes the estimates noisy and more fragile, there is no consistent evidence for a large and positive effect. While several estimates are positive and significant for 2020, the largest upper bound of the 95% confidence interval here among the significant estimates is still only an effect of 0.57 percentage points. Moreover, in the most flexible cubic specifications, the estimate actually becomes negative, and the 95% confidence interval does not contain any positive effects. The only larger positive estimate comes in column 1, but it is by far the noisiest estimate—likely because, based on Figure 3, the functional form to the right of the discontinuity looks distinctly parabolic and not linear.

³¹Because we use frequency weights to mimic an individual-level dataset of the entire population of the state of Texas, we are unable to use the popular `rdrobust` estimation package, which cannot accommodate frequency weights.

Table A.4 – RD Estimates of the Effect of No-Excuse Absentee Voting on Turnout.

	Turnout [0-100%]				
	(1)	(2)	(3)	(4)	(5)
No Excuse (Age 65) $\times$ 2020	0.88 (0.08)	0.13 (0.12)	-1.41 (0.18)	0.15 (0.08)	-0.56 (0.12)
No Excuse (Age 65) $\times$ 2018	2.08 (0.08)	1.30 (0.13)	1.28 (0.20)	0.92 (0.09)	1.28 (0.12)
No Excuse (Age 65) $\times$ 2016	0.68 (0.08)	-0.95 (0.13)	-0.43 (0.20)	-0.54 (0.09)	0.07 (0.12)
No Excuse (Age 65) $\times$ 2014	2.25 (0.09)	1.38 (0.14)	2.41 (0.21)	1.09 (0.10)	1.53 (0.13)
No Excuse (Age 65) $\times$ 2012	0.74 (0.09)	0.76 (0.14)	1.18 (0.21)	0.46 (0.10)	0.78 (0.13)
BW	10	10	10	20	20
Spec	Linear	Sq	Cubic	Sq	Cubic
# Observations	26,404,531	26,404,531	26,404,531	48,248,213	48,248,213

Robust standard errors in parentheses. Unit of observation is an individual by year. Running variable model estimated separately for each year.