

Who Does Voter ID Keep from Voting?

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Abstract

Voter identification laws have sparked concerns of vote suppression, but existing evidence relies on aggregate analyses or survey self-reports. We leverage unique information from Texas, where registrants without identification filed “Reasonable Impediment Declarations” (RIDs) before voting. Linking 16,000 RID forms to the Texas voter file, we provide the first direct documentation of the traits of voters who would be stopped from voting under strict identification laws. Our pre-registered analysis finds registrants voting without ID in 2016 were disproportionately Black and Latinx, versus voters voting with ID. Examining voters’ stated reasons for not providing ID, we find socioeconomic hardships are not the most commonly cited impediment, but voters with hardships were less likely to vote in a strict ID election than those who previously had identification. Our findings indicate strict identification laws will stop a disproportionately minority, otherwise willing set of registered voters from voting.

Keywords: voter identification laws; voter turnout; race, ethnicity, and politics; voter suppression

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1 Introduction

States exercise a great deal of control over their voting laws, resulting in substantial cross-state variation in voters’ experiences on Election Day. In the wake of the contested 2000 presidential election, the 2002 Help America Vote Act (HAVA), and the Supreme Court’s decision in *Shelby County v. Holder* (570 U.S. 529 (2013)), there was a flurry of activity as states modified their election regulations. Some of the most controversial new policies are “voter ID” laws, which require poll workers to request photo identification (ID) from registered voters. The recent trend in voter ID laws has been toward “strict” policies, which mandate that in-person voters cannot cast a regular ballot without first presenting a photo ID from a pre-defined list. Such laws are controversial because some otherwise-eligible voters may not have a qualifying ID, and thus could be considered disenfranchised or “suppressed” by voter ID laws.

The groups least likely to possess correct identification, such as young, Black, Latinx, less-frequent, or less-affluent voters, are also more likely to support the Democratic Party. As such, the debate over voter ID has taken on a partisan hue, and has attracted attention from policy influencers and scholars seeking to determine whether the laws prevent individuals from voting and if so, whether their impact disproportionately burdens voters from certain groups. While journalists and advocates strongly assert both of these claims (Wang 2012; Berman 2015), the broader body of academic work appears less certain (Ansolabehere 2009; Erikson and Minnite 2009; Barreto, Nuño and Sanchez 2009; Highton 2017; Hajnal, Lajevardi and Nielson 2017; Grimmer et al. 2018; Hajnal, Kuk and Lajevardi 2018; Burden 2018).

We leverage a unique change in a state’s voter identification statute to examine who is impacted by voter identification mandates. While Texas implemented a strict voter identification law in the 2014 election, a last-minute federal court decision allowed Texans without qualifying identification to vote in the 2016 election. These voters were required to submit a paper declaration listing the reason they lacked ID. We link these declarations to entries in the Texas voter file, extracting turnout data and address information that allows us to

model individual race/ethnicity. Using this information, we are able to study the characteristics and geographic distribution of the over 16,000 Texans who arrived at polling places without proper identification—and would have been turned away under the previous strict identification policy.

We find evidence pointing to the deleterious effects of voter identification laws for particular subsets of the population. Our pre-registered analysis establishes that at minimum, more than 16,000 Texans would have been disenfranchised for lack of compliant identification in 2016. We also demonstrate that registrants voting without ID in 2016 were less likely to vote when a strict ID mandate was in place, and significantly more likely to be Black and Latinx than the population voting with ID. Evaluating the mechanisms that produce these effects, we find that the most commonly cited reason for not providing identification is not related to socioeconomic hardships: instead, most voters who voted without ID possessed photo identification but for some reason could not produce it on Election Day. County-level factors do not appear to explain these results. Taken together, our analyses demonstrate that strict voter identification laws prevent otherwise eligible voters from voting—including a large group that possesses photo identification—and that such laws have disproportionately negative impacts on minority citizens.

2 How Might Voter ID Laws Shape the Electorate?

Canonical theories of voter turnout posit that the decision to vote is a cost-benefit calculation (e.g., Downs 1957), influenced by the availability of individual resources (e.g., Verba et al. 1993). Among adults who do not already possess qualifying identification, voter ID mandates increase the cost of voting and, in theory, will reduce turnout. Furthermore, for those with economic hardships, disabilities, or family care responsibilities preventing them from acquiring photo ID, such laws add to existing formidable hurdles to political participation. Yet this assumes that voters have the resources, in the form of political knowledge, necessary to *know* that they lack qualifying ID. In states with the strictest forms of

photo identification laws, some may incorrectly assume that an ID they possess—such as a university-issued ID or out-of-state driver’s license—is acceptable, while other voters who lack identification might not hear about a voter ID law at all. Voters in either group may be turned away despite the ability to acquire ID. Thus, regardless of desire to overcome hurdles to voting, voter ID laws have clear implications for turnout among voters who lack ID.

Well before the post-2008 spike in voter ID laws, the bipartisan National Commission on Federal Election Reform indicated that a substantial share of “poor and urban” adults did not have photo identification (NCFER 2001). Conforming with the resource-based models of who is already less likely to vote, subsequent research has identified low turnout prone subsets of the population are less likely to have compliant ID (Barreto, Nuño and Sanchez 2009; Stewart 2013; Ansolabehere 2014; Highton 2017). A multi-state and multi-year meta-analysis by Barreto et al. (2018) established that minority citizens are consistently less likely to have photo identification than non-Hispanic Whites. Importantly, this differential may not be solely a result of economic hardship, as legislators may intentionally target minorities in crafting the list of acceptable IDs,¹ or when deciding to introduce voter ID laws at all (Bentele and O’Brien 2013; Rocha and Matsubayashi 2014; Hicks et al. 2015; Biggers and Hanmer 2017; Highton 2017). Minority voters might interpret these conditions as a signal of hostility, which may result in feelings of alienation from the political process that could deter even minority voters who have acceptable ID.

Despite these factors, analyses of the effect of voter identification laws on turnout have produced mixed results. Early studies indicated that few individuals cited ID requirements as keeping them from turning out to vote (Ansolabehere 2009; Hershey 2009; Mycoff, Wagner

¹For example, in *North Carolina State Conference of NAACP v. McCrory* (831 F.3d 204 (4th Cir. 2016)) the 4th Circuit Court of Appeals found that North Carolina lawmakers “target(ed) African Americans with almost surgical precision” when lawmakers sought lists of residents’ ID possession by race, found African Americans were less likely to have driver’s licenses, and barred alternative IDs that they were more likely to possess.

and Wilson 2009). Highton (2017)’s review of the literature notes that previous work has not uncovered a large effect of voter ID on turnout, and underscores methodological challenges that exist when examining state-level aggregate data. Furthermore, while the *possibility* of a disparate effect of voter ID laws is clear, again results are mixed (Hood and Bullock 2012; Dropp 2013; Rocha and Matsubayashi 2014; GAO 2014). Recent work by Hajnal, Lajevardi and Nielson (2017) uses survey data to investigate the relationship between implementation of voter identification statutes and the overall Black-White and Latinx-White turnout gaps, finding racial/ethnic disparities in turnout grow when strict ID laws are implemented. Grimmer et al. (2018) contest these findings, again indicating that debates regarding the impact of voter ID laws are ongoing (Hajnal, Kuk and Lajevardi 2018; Burden 2018).

However, there may be theoretical reasons for the apparently limited relationship; for instance, any negative impact on turnout could be matched (or exceeded) via a “backlash effect” as Democrats in particular mobilize in response to what they perceive as an unjust law (Valentino and Neuner 2017). Civic education campaigns can offset decreases in turnout due to voter identification laws (Citrin, Green and Levy 2014; Hopkins et al. 2017), as indeed, Mayer and DeCrescenzo (2018) find that a substantial share of nonvoters believe they do *not* have qualifying identification, when in reality they would be allowed to vote even under a strict ID mandate. Quantifying the effect of ID mandates, combining direct, deterrent, and mobilizing forces, remains elusive.

While deterrent and backlash effects of voter ID laws are important to analyze, the desire to quantify the net effect of voter identification laws distracts from deeper analyses of who is most impacted by these laws: voters without identification. Only a handful of studies have focused on this population, finding that registrants without qualifying identification pre-ID law implementation are less likely to vote in the subsequent, strict ID election (Hood and Bullock 2012) or non-strict ID election (Henninger, Meredith and Morse 2018). While minority voters’ lower rates of photo ID possession suggests that minority voters will be most impacted, mixed evidence emerges on the racial/ethnic composition of these nonvoters as

well. Notably, Hood and Bullock (2012) finds white registered voters without ID were more likely to stay home due to Georgia’s strict ID law than minority registrants. We seek to return attention to this theoretically crucial population, and as we detail in the next section, a unique sequence of election law changes allows us to better understand whose turnout is impacted by voter identification mandates.

3 Leveraging Changing Voter ID Mandates

Though many states have long had some sort of identification requirement for voters, in the mid-2000s, Indiana became the first state to require that voters present government-issued photo identification. After the Supreme Court upheld Indiana’s law in *Crawford v. Marion County Election Board* (553 U.S. 181 (2008)), other states soon followed suit. In 2011, Texas enacted Senate Bill 14 (Election Code §63.001 et seq., hereafter SB 14), shifting from a more common non-photo ID requirement to the strictest photo ID requirement in the nation, designating only three types each of acceptable federal and Texas-issued IDs.² Coupled with the fact that Texas was by far the largest state to pass a strict voter ID law, the small number of acceptable IDs meant that SB 14 had the potential to impede voting for an especially large number of people. Indeed, expert testimony in subsequent litigation revealed that more than 600,000 registered voters in Texas lacked adequate identification under SB 14 (Ansolabehere 2014).

The Department of Justice initially blocked SB 14 under the pre-clearance provisions of the Voting Rights Act (VRA), but it was ultimately implemented hours after the U.S. Supreme Court struck down the VRA’s coverage formula in *Shelby County v. Holder* (570 U.S. 529 (2013)). SB 14 was challenged in federal court as discriminatory, continuing a protracted battle over the ID provision in litigation that became known as *Veasey v. Perry*

²Acceptable identification includes: U.S. military ID, U.S. passport, U.S. citizenship certificate, Texas election identification certificate, Texas ID or driver’s license, Texas license to carry a concealed handgun.

(71 F. Supp. 3d 627, S.D. Tex. 2014). In October 2014, the 5th Circuit Court of Appeals temporarily blocked a previous District Court ruling striking down the law, so SB 14 was fully in place for the 2014 general election. However, in 2015 a three-judge panel in the 5th Circuit affirmed a District Court ruling that the law had a “discriminatory effect.” The entire 5th Circuit affirmed this ruling in July of 2016, sending the case back to the U.S. District Court for the Southern District of Texas, whose job it was to find an interim solution “that disrupts voter identification rules for the 2016 election season as little as possible, yet eliminates the [Voting Rights Act] discriminatory effect violation.”

In August of 2016, the District Court crafted such a remedy, ordering that all voters who possessed a required ID must produce it before voting.³ However, the court mandated that voters who lacked identification that would satisfy SB 14’s requirements should be allowed to vote if they met two conditions: First, voters had to complete a “reasonable impediment declaration” (RID) attesting that they did not possess a valid photo ID, as well as the reason why they could not obtain one. Second, before obtaining an RID form, voters had to produce “supporting identification” from a wider list of sources largely coinciding with the previous non-photo ID requirement, including a government document, utility bill, bank statement, paycheck, or birth certificate.

The District Court thus weakened SB 14 to a non-strict photo identification requirement by allowing voters lacking the required photo identification to vote — so long as they completed an RID. However, this change from the 2014 election was not well-advertised by Texas election officials, who spent about one-fifth the sum that the much smaller state of Missouri allocated to educate voters about the law and often provided incomplete, unclear, or inaccurate information (Huseman 2017). Indeed, in September 2016 the Department of Justice found the state was using “incorrect and far harsher” language in poll worker training regarding circumstances under which individuals could vote without qualifying photo

³Texas was also required to accept identification that had been expired for up to four years, as opposed to the statutes’ sixty-day limit.

ID (Malewitz 2016). Later, as early voting began, Bexar County (San Antonio) was sued by MALDEF for displaying and providing misleading information regarding the change to Voter ID laws (Zielinski 2016). While the court ruling made it possible for individuals to vote without qualifying identification, many people likely assumed (or were told) that the strict ID regime was in place when deciding to vote.

In mandating that individuals who arrive at the polls without qualifying identification sign an RID, the District Court’s ruling creates a unique opportunity to observe a population that would have been turned away from the polls in the absence of the eleventh-hour District Court order—and which has heretofore been impossible to observe.⁴ The RIDs include voters’ names and in many cases other identifying information, as well as the reason(s) they cited for lacking appropriate identification. Merged with other data sources, these records therefore facilitate unprecedented insight into the demographics and previous voting behavior of Texas voters lacking ID in 2016, while avoiding the documented problems associated with survey data in this area.⁵ Notably, Henninger, Meredith and Morse (2018) employs a similar strategy to the one we use in this paper, exploiting Michigan’s non-strict voter ID law that requires voters lacking identification to sign an affidavit. They find that a very small minority (0.6%) of Michigan voters lack identification, but also that non-white voters were between 2.5 and 6 times more likely than whites to arrive at the polls without qualifying ID.

⁴Under most strict ID statutes, voters without ID can cast a *provisional* ballot that is counted if they provide identification within a narrow time frame after voting. However, election administrators exercise some discretion in offering this opportunity. One study indicates that more than 75% of individuals casting provisional ballots for lack of ID do not return with ID (Pitts 2013). Thus we do not consider the availability of provisional ballots to be equivalent to the regular ballots that could be cast without ID under SB 14.

⁵In their failed replication of Hajnal, Lajevardi and Nielson (2017), Grimmer et al. (2018) note, “national surveys are ill-suited for estimating the effect of state election laws on voter turnout,” and “researchers should turn to data that allow more precision than surveys offer.”

We believe that administrative records may allow researchers to better understand the impact of voter ID laws. While existing analyses make important progress, the particulars of Texas’ voter ID implementation allow us to go even further. Similar to Henninger, Meredith and Morse (2018), we can match RID-filers to voter records and other databases to compare their demographics to voters who presented identification. Moreover, because the District Court ordered voters to state the reason they lacked ID, we can include a descriptive element in our analysis, examining whether voters would be deterred due to enduring socioeconomic hardships or more ephemeral issues. In short, the RID data allow us to engage important, largely unanswered questions of paramount importance to assessing the impact of strict voter ID laws: Who does voter ID legislation keep from voting, and why?

4 Data

We obtained copies of each Reasonable Impediment Declaration that voters completed via requests made under the Texas Public Information Act. In total, we received 16,097 unique RID forms, organized by county. An example of the most common RID form may be found in Figure 1. The upper portion of each RID provides a space for the voter to print and sign her name, indicate the date, a brief statement indicating that the voter faces a “reasonable impediment or difficulty that prevents [her] from getting an acceptable form of identification,” and a series of boxes allowing the voter to claim one of eight reasons for lacking proper identification.⁶ These options were a lack of necessary documents, disability, family or work obligations, lack of transportation, lost or stolen ID, applied for an ID that

⁶More than 90% of RID forms we received were as depicted here or translated into Spanish, Vietnamese, or Chinese. For Maverick County, we also received 133 forms that combined a RID with an in-person absentee ballot request. We have not included these forms in our analysis, as absentee ballot submissions were not provided for other counties. Five additional non-standard RID forms are excluded.

Figure 1: Example Reasonable Impediment Declaration

REASONABLE IMPEDIMENT DECLARATION	
TO BE COMPLETED BY VOTER	
Name: <u>Jacobo A. [REDACTED]</u>	
VOTER'S DECLARATION OF REASONABLE IMPEDIMENT OR DIFFICULTY	
By signing this declaration, I swear or affirm under penalty of perjury that I am the same individual who personally appeared at the polling place, that I am casting a ballot while voting in-person, and I face a reasonable impediment or difficulty that prevents me from getting an acceptable form of photo identification.	
My reasonable impediment or difficulty is due to the following reason(s):	
(Check at least one box below)	
<input type="checkbox"/> Lack of transportation	<input type="checkbox"/> Disability or illness
<input type="checkbox"/> Lack of birth certificate or other documents needed to obtain acceptable photo ID	<input type="checkbox"/> Family responsibilities
<input type="checkbox"/> Work schedule	<input type="checkbox"/> Photo ID applied for but not received
<input checked="" type="checkbox"/> Lost or stolen photo ID	<input type="checkbox"/> Other reasonable impediment or difficulty _____
The reasonableness of your impediment or difficulty cannot be questioned.	
X <u>[REDACTED]</u>	<u>10-28-2016</u>
Signature of Voter	Date
Sworn to and subscribed before me this	
<u>28</u> day of <u>Oct</u> 20 <u>16</u>	
Presiding Judge <u>[Signature]</u>	
TO BE COMPLETED BY ELECTION OFFICIAL	
The voter provided one of the following forms of identification or information:	
<input checked="" type="checkbox"/> Valid Voter Registration certificate; or	
<input type="checkbox"/> A copy or original of one of the following was provided:	
_____ certified birth certificate (must be an original)	
_____ current utility bill	
_____ bank statement	
_____ government check	
_____ other government document that shows the voter's name and an address (with the exception of a government document containing a photograph which must be an original)	
_____ paycheck	
Location: <u>Bxaalenny Eric Dor</u>	
Date of Election: <u>11-08-2014</u>	

was not yet received, or some other reason.⁷ The RIDs also include a section completed by the election judge, with precinct location, the name of the certifying election judge, and which alternate form of identification the voter provided.

As Figure 1 indicates, RIDs were completed at the polling place with much of the information hand-written. The authors and a team of research assistants hand-coded each RID form, entering the name, impediment, date, judge, precinct, and all other information into a spreadsheet with one entry per RID form. Occasionally, additional information was

⁷These options were mandated by the District Court and were listed on all RID forms.

provided on the RID form, either because the form included the voter’s (handwritten) Texas Voter Unique Identifier (VUID) number, or because a pollbook-generated sticker was placed on the form providing full name, address, and/or VUID.⁸

In February of 2017, we acquired a copy of the current Texas voter registration file from the Secretary of State’s office, along with turnout history for each registrant (including canceled registrations) for federal general elections for 2008, 2010, 2012, 2014, and 2016. The Texas voter file contains far more information about each registrant than the RID forms, and given that individuals had to be registered to vote to file an RID, we merged each unique RID form to a unique record in the voter file. 2,297 RID forms included the Texas VUID for the voter (14.3% of RIDs), and could be matched directly into the voter file. For the remaining RIDs, we used a combination of county, name, information about whether the RID was filed on Election Day or in early voting, and any additional information on the form to match RIDs to voter file records. 12,624 RIDs (78.4% of RIDs) matched with precisely one Texas voter file record using this information, and 761 (4.7% of RIDs) matched to multiple records in the voter file.⁹

After merging RID forms with Texas voter file records, we sought to add an additional key demographic variable: voter race/ethnicity. The Texas voter file does indicate whether a registrant has a Spanish surname, but does not differentiate between Whites, African-Americans, and Asian Americans. To do so, we used address, sex, date of birth, and surname information to generate probabilistic estimates of the race of every individual in the Texas

⁸In Figure 1, the voter’s last name and signature is hidden. In the forms with which we were provided, this information was not hidden, though in some counties additional information provided by a pollbook sticker (such as address) was redacted. For approximately 1% of provided RIDs (211), there was no voter name information provided on the form, the signature was not legible, and no other identifying information was provided.

⁹A disproportionate share of these multiple matches have a Spanish surname in the Texas voter file. We discuss how we account for multiply matched individuals below.

voter file. Geocoding each address to the Census Tract level with Open Street Map data, Google Geocoding API data, and FCC block information, we used the `wru` package in R to generate these estimates (Imai and Khanna 2016).¹⁰ For each individual, we thus gained a probability that the registrant is [non-Hispanic] White, Black, Hispanic/Latinx, Asian, or “Other Race.”¹¹

Combining all of the above match types, 15,682 RID forms were matched to Texas voter records. Excluding the small number of RIDs with no name or other identifying information, 98.7% of RIDs were successfully matched. Thus, the RID data, merged with the Texas voter file and modeled race/ethnicity, provide a complete picture of the voters who reported a reasonable impediment to obtaining identification in the 2016 election, along with their stated rationale, age, race, gender, and vote history. That said, given that there are certainly voters who did not receive information about the possibility of filing an RID, there is likely a non-trivial number of Texans who mistakenly believed that their lack of identification would bar them from voting—and who therefore did not turn out to vote.¹² In terms of the number of voters affected by the Texas law, our tally of RID forms is therefore best understood as a lower bound of the overall effect of Texas’s voter ID law.

¹⁰The Online Appendix provides more details regarding individual race estimation.

¹¹Due to difficulties in parsing addresses, and the distinctiveness of some surnames, 0.7% of voters in 2016 do not have race estimates (1.1% of matched RID filers).

¹²It is also possible that though the “secondary” identification required for RID filers was the same as the pre-strict law requirement in Texas, voters did not hear about the need to bring a secondary identification to file an RID and were similarly turned away.

5 Areas of Inquiry and Estimation Strategy

Prior to conducting the above matching process, we outlined our areas of inquiry and pre-registered key parts of our analysis.¹³ In our pre-analysis plan, we focused on three questions: *Were RID filers less likely to vote under a strict ID mandate?* *Are RID filers disproportionately non-White?* and *What impediments to obtaining identification do voters who can produce ID cite?* Hypotheses and estimation strategies related to these questions were pre-registered as research assistants were hand-coding the RIDs, but prior to merging RIDs with the Texas voter file. We believe that the decision to pre-register our analyses is important to consider when evaluating the credibility of our findings; past work on voter identification laws has been critiqued for unclear and non-obvious estimation strategies (Grimmer et al. 2018).

First, we sought to determine whether Texas' strict photo ID law barred individuals who lacked qualifying identification from voting in 2014. SB 14 was in full effect in 2014, before being reduced to a non-strict form by the District Court's injunction allowing voters lacking compliant identification to vote via the RID process in 2016. We cannot directly observe who lacked identification in 2014, yet would have voted in the absence of the strict law. Thus, we cannot make assertions about the effect of the 2014 strict ID law on non-ID holders who did not file an RID in 2016 and did not vote, since our measure of ID holding is post-treatment. However, 2016 RID filers may be a population more likely to lack identification in 2014, and thus be prevented from voting in 2014. If RID filers were less likely to vote under a strict ID regime than those who voted with ID, we should expect that voter turnout in 2014 was lower for 2016 RID filers than for non-RID filing 2016 voters.

In our pre-analysis plan, we stated that we would use a nonparametric difference-in-differences (DID) model that uses the RID data to identify individuals who voted without qualifying identification in 2016, and then examine whether or not those individuals were

¹³EGAP ID #:20180205AA. Available at <https://osf.io/c58qm>.

less likely to vote in the 2014 election than 2016 voters who did have identification, after accounting for trends in pre-2014 turnout at the individual level. Full results and discussion of this analysis may be found in Online Appendix A2, but in short, we find that RID filers were significantly less likely to vote in the previous, strict ID election than those who voted with ID in 2016. As a result, we are confident that RID filers are at least part of the population of voters who would be turned away from the polls under a strict ID mandate. Such an interpretation is supported by contextual information indicating that most individuals did not intentionally avoid producing ID due to the availability of the RID option. As mentioned above, awareness of the court order was (and is) not high and election officials were accused of not devoting enough pre-election resources to advertising the change to the strict voter identification mandate. The analysis of cited impediments below also indicates a very small portion of individuals voting without ID to “protest” ID mandates, or because they were not aware they needed ID to vote. While we cannot directly measure the population that was deterred from attempting to vote by the strict photo ID law, it is clear that individuals arriving at the polls without ID in 2016 were substantially less likely to vote when the strict regime was in force.

With this in mind, our first set of main results is a *distributional* comparison with individual-level race/ethnicity estimates to determine whether non-White voters in 2016 were disproportionately likely to vote using RIDs. In our pre-analysis plan, we indicated that we would compare the share of the 2016 voting population that is Black, Latinx, and/or Asian—as well as the overall non-White share—without qualifying ID to the share of the 2016 voting population that is Black, Latinx, Asian, and/or non-White with qualifying ID. Guided by previous literature (e.g., Barreto, Nuño and Sanchez 2009; Barreto et al. 2018; Stewart 2013), we hypothesize that non-White registered voters are less likely to have qualifying identification, and thus will be less likely to present said identification at the polling place; non-Whites should comprise a disproportionate share of RID filers as a result. If Texas’ strict voter ID law disproportionately affected racial and/or ethnic minorities, we should therefore observe

a higher proportion of non-Whites among RID-filers than among voters overall.¹⁴ In making this distributional comparison, we make no assumptions regarding the population that is deterred from attempting to vote or registering to vote for reasons associated with the strict voter identification laws. Instead, we examine whether non-White individuals are less likely to have qualifying identification when arriving at the polling place.

The pre-registered distributional comparison allows us to reevaluate claims made in previous work regarding populations most impacted by voter identification laws. However, drawing on the rich dataset provided by the RID filings, we extend our pre-registered analyses and examine the mechanisms that shape the patterns explored above. The first exploration of potential mechanisms focuses on the reasons voters give for not providing qualifying identification, an under-explored area of inquiry in previous research. The policy debate surrounding voter ID laws often centers on lowering hurdles to obtaining identification for the subpopulation of voters who lack it, under the assumption that they have *never* had a photo ID. Another common theme in public debate over voter ID laws is that older and/or less affluent voters, as well as those from minority groups, find it more difficult to obtain identification due to a lack of necessary documents (Horwitz 2016). The RIDs require voters to list the reason why they cannot obtain ID, such that we can scrutinize the check-boxes on the RIDs and the rationales that voters wrote after choosing the “other” option. We also examine differences in rates of voter turnout in the previous, strict ID election depending on

¹⁴To account for the 4.7% of RID filers who matched to multiple records in the Texas voter file, we weight each entry in the voter file with a value of 0 if she was not matched to an RID, 1 if she was a unique match to an RID, and a value inversely proportional to the number of other voter file records to which the single RID matched if she was not a unique match. For example, a voter file entry would have an RID value of 0.5 if it was one of two matches to a single RID, as it has a 50/50 chance of being an RID-filer. The existence of multiply matched individuals was not anticipated when developing the pre-analysis plan. See the Appendix for a more extended discussion of this deviation.

the impediment type that an RID filer listed in 2016.

As a final step, we evaluate whether county-level factors shape the rate of RID filing among 2016 voters. Using information about the county of the RID filer, we constructed rates of RID filing among all 2016 voters and evaluated how county-level factors affected them. Such an analysis clarifies whether administrative discretion produced differences in rates of RID filing, a mechanism that would imply individual-level correlations could be a product of jurisdiction-level variation in implementation.

6 Results

6.1 Non-Whites Are More Likely to Vote Without ID than Whites

We first examine the racial/ethnic composition of the population that votes without mandated identification, compared to those that voted with qualifying ID. We term this test a *distribution comparison* in the pre-analysis plan. To estimate the racial/ethnic composition of the 2016 voting population that voted with ID versus voting without ID, we summed the probabilities that each voter was of a particular racial/ethnic group (Elliott et al. 2008). In effect, this allows us to account for uncertainty in race/ethnicity estimates, and when combined with uncertainty in who filed an RID for multiply matched records, ensures that our results are not influenced by differences in unique match likelihood across racial/ethnic groups.¹⁵

Table 1 provides estimates of the racial/ethnic composition of the population voting with ID in 2016 (non-RID filers) and the population voting without ID in 2016 (RID filers). Both the percentage and the estimated N for each group of 2016 voters is provided. The first three columns of Table 1 demonstrate that the population voting without identification in

¹⁵For example, Latinx RID filers are disproportionately likely to match to multiple voter file records, and are easier to classify than African-Americans or Whites. Categorical methods of estimating race, or categorical definitions of who filed an RID, could produce an upwardly biased estimate of this population.

Table 1: 2016 Voters by Race and ID Usage

	White	Black	Latinx	Asian	Other
<i>Voted with ID</i>	63.5%	11.4%	19.8%	3.6%	1.7%
<i>N</i>	5,662,757	1,014,706	1,764,490	316,159	153,748
<i>Voted without ID</i>	57.7%	16.1%	20.7%	2.9%	2.6%
<i>N</i>	8,409	2,353	3,014	418	383

Note: Includes individuals marked as having cast a ballot in the Texas voter file. “Voted with ID” represents the percentage or number of voters who were not matched to Reasonable Impediment Declarations (RIDs). “Voted without ID” represents the percentage or number of voters who were matched to RIDs. 1.3% of RIDs have not been matched to voter file records, and are thus included in the “Voted with ID” category. Race could not be estimated for 0.7% of 2016 voters. These individuals are excluded from the above totals.

2016 was disproportionately Black and Latinx, and substantially less [non-Hispanic] White, when compared with the population voting with ID. We estimate that 63.5% of Texas voters voting with ID were White in 2016, while only 57.7% of Texans voting without ID were White: a difference of 5.8 percentage points. 11.4% of 2016 voters voting with ID were African-American, while over 16% of non-ID voters were African-American. For Latinxs, we see a smaller difference between the RID and non-RID filing population, but again, RID filers are disproportionately Latinx. Asian Americans, on the other hand, are slightly *less* likely to file RIDs than other groups. Individuals grouped as “Other” in the race/ethnicity estimates are a 1 percentage point larger share of RID filers versus non-RID filers.

In the pre-analysis plan, we outlined that a two-sample *t*-test would be used to compare the racial/ethnic distribution of RID filers versus 2016 voters who did not file an RID. In independent tests, we indicated that we would examine the Black, Latinx, Asian, and overall non-White share across RID filing status. To do so, we are forced to strictly separate RID filers from non-RID filers, removing the roughly 5% of multiply matched individuals. Tests of statistical significance indicate a *p*-value < 0.001 for African-Americans, Latinxs, and the overall non-White share. For Asian Americans, the *t*-test indicates that Asians are significantly *less* likely to be in the RID-filing group. To incorporate multiply-matched individuals, we instead estimate a linear regression model with our non-binary RID measure,

which accounts for uncertainty in who filed an RID. Under this test, all of the differences in Table 1 are statistically significant.

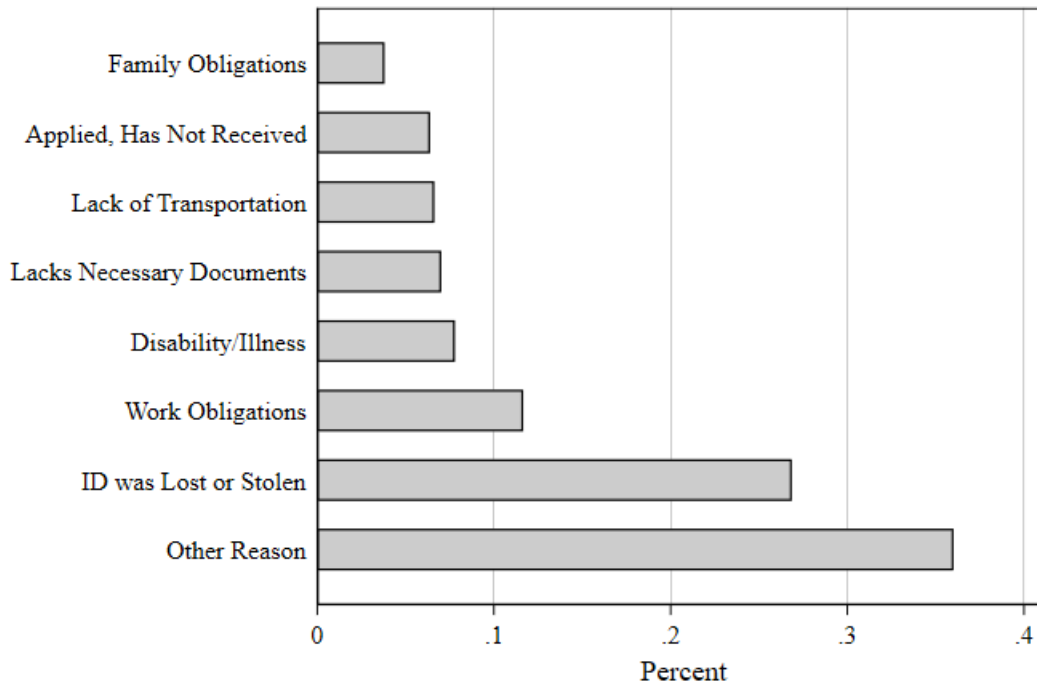
Previous literature asserts that racial/ethnic minority groups are less likely to have qualifying forms of identification in strict voter identification states. Thus, in our pre-analysis plan we hypothesized that the composition of the RID-filing population would be more minority, and less non-Hispanic White, than the non-RID filing population of 2016 voters. Table 1 confirms our pre-registered hypothesis, with the strongest difference for African-Americans who are substantially more likely to not provide ID at the polls. Black voters were approximately 54% more likely to vote without identification than non-Hispanic Whites, while Latinx voters were 14% more likely to do so than non-Hispanic Whites. Under a strict voter identification law, such as that in force in Texas in 2014, minority voters would be disproportionately likely to show up to vote, but be turned away at the polls, and thus prevented from participating in an election that they would like to participate in and are eligible to vote in absent the strict ID law.

6.2 Many Voting Without Photo ID Possess Photo ID

Are voters' traits associated with specific reasons they cited for lacking qualifying identification, and are those reasons consistent with some of the commonly posited narratives surrounding voter ID laws? As described above, the mandated RID format required eight check-boxes allowing voters to say why they lacked photo identification. An examination of these responses allows us to both assess the veracity of commonly held assumptions about voters who lack ID and better understand the mechanisms that induce the disparate turnout and racial/ethnic patterns found above. If voter traits are correlated with cited impediments, policy efforts to diminish the deleterious effects of voter ID laws might also be improved.

Figure 2 depicts the percentage of RID-filers citing each impediment (some voters selected more than one option). "Family" obligations are the least-cited impediment among Texas voters, with 3.8% of people selecting that reason. Six to eight percent of voters cited either pending application, lack of transportation, problems with necessary documents, or an illness

Figure 2: Impediments Cited by Texas Voters in 2016



or disability as impeding them from obtaining appropriate identification. About 11.7% of voters cited “work” obligations. Of the categories listed as check-offs on the RID petitions, “lost or stolen” is the most widely chosen, with 27% of voters selecting it. That said, a clear plurality (36%) of voters chose the “other” option, writing their own explanation for why they lacked identification.¹⁶

The frequency with which voters opted for the “other” category suggests that the potential impediments that the District Court mandated for the RID forms were not all-encompassing. We therefore further coded the RID petitions into categories based on the explanation that voters wrote in the “other” field on the RID document. The frequencies of those responses appear in Table 2.¹⁷ The clear leader among these responses was a change of address that

¹⁶This pattern holds up fairly well when examined by race; while White, Black, and Latinx voters all selected “other” and “lost” most frequently. See Appendix Figure A1

¹⁷These responses were human-coded. When voters marked “other” and then described a reason consistent with one of the check-box categories—such as an illness—we recoded “other” as zero and reassigned the voter to the appropriate category.

had not yet been reflected on the voter’s ID. RIDs that explicitly mentioned a recent move comprised a majority of the voters (nearly 3,000) marking the “other” option on the RID form; an additional 338 voters explicitly mentioned their relocation-related status as students.¹⁸ More than 650 voters said that while they possessed identification, they forgot it on Election Day. About 230 voters presented a non-compliant identification (such as an expired driver’s license), while an additional 101 cited legal issues such as a suspended driver’s license. Finally, about one-fifth of voters marking “other” did not offer further insight into the impediment they faced. For instance, many voters simply reiterated that they did not have identification, rather than stating why they lacked it.

Table 2: Coded Responses from Written Descriptions of Voters Selecting “Other” Option

	Count	Percent
Recent Relocation	2,971	51.2%
Other/Unclear	1,236	21.3%
Forgot ID	658	11.4%
Student	338	5.8%
Presented Non-Compliant ID	232	4.0%
Legal Issues	101	1.7%
Cost	81	1.4%
Lack of Time	70	1.2%
Protesting Law	46	0.8%
Administrative Decision	41	0.7%
Ignorance of Law	23	0.4%
Religious Objection	2	0.03%

In tandem with the marked check-boxes, the re-coded “other” responses can shed additional light on the broad reasons why voters lacked acceptable identification. For instance, we can see which voters are “ID-Capable”—those who have demonstrated a previous ability to obtain photo identification—by binning those who said they had either lost or forgotten their ID or were refusing to show it in order to protest SB 14. We can also identify voters

¹⁸It is often difficult from the RIDs to discern why a voter has recently moved. While students broadly fit in the “relocation” category, we placed voters in the “student” category if they referenced their status as a student on the RID.

with a relocation-related problem by combining voters who referenced a student status, a recent move, or awaiting new identification after applying for it. We classify all other RID-filers (except for those for whom the reason was unclear) as having an enduring hardship that impedes them from acquiring acceptable identification.

Figure 3: Binned Impediments Cited

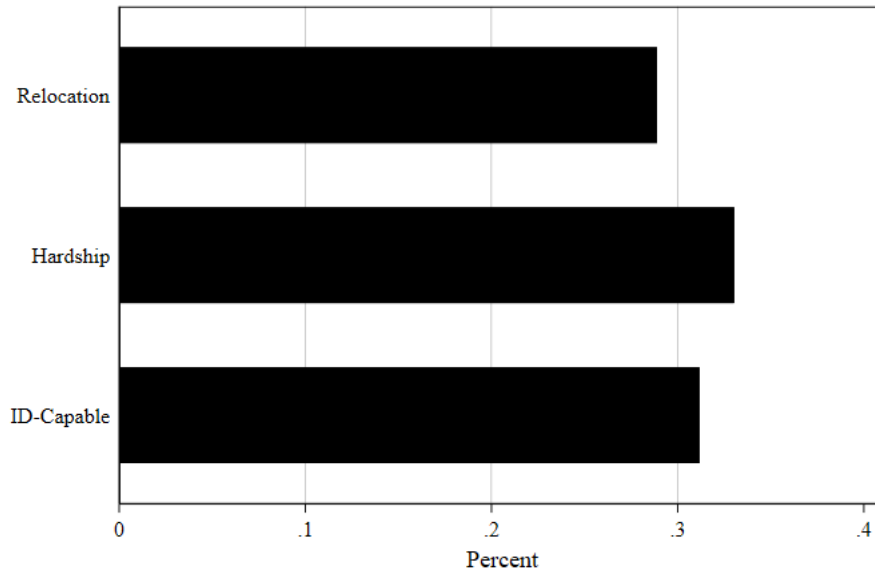


Figure 3 depicts the percentage of RID-filers falling into each of these bins. For more than 33% of RID-filers, the impediment appeared to be an enduring hardship. This is consistent with much of the popular conversation surrounding voter ID laws, which often assumes that a lack of identification is a longstanding and difficult-to-overcome condition. However, Figure 3 also shows that more than 5,000 voters—whose petitions comprised more than 31% of all RIDs—could be classified as being ID-capable.¹⁹ Furthermore, about 29% of voters had recently relocated, so their identification may have been from another state. If we assume

¹⁹The same relative ranking is observed for Black and White voters separately. Latinx voters were less likely to report a relocation, and more likely to be in the ID-Capable category. A multivariate regression also indicates Black and Latinx RID filers were less likely to cite a relocation-related impediment, and more likely to be in the ID-Capable category controlling for age and gender. See the Online Appendix for more details.

that voters who cited a recent move had obtained photo identification while living at their prior address, a combination of the “relocation” and “ID-Capable” categories in Figure 3 indicates that a majority of voters who filed RIDs in 2016 had demonstrated the capability to obtain compliant identification at some point.²⁰ Our results therefore suggest that the reasons people have for lacking photo identification might be more varied than previously thought, and implies that some voters are more susceptible to enduring disenfranchisement as a result of voter ID laws than others.

6.3 RID Filers Were Less Likely to Vote in 2014

These results beg a question: Do we see lower participation in the 2014 election (when the law was fully implemented with no RID option) for those indicating a hardship-related impediment in 2016? The models in Table 3 compare turnout in previous elections among those who filed RIDs in 2016 and those who did not, while separating RID filers by the binned impediment they listed.²¹ Here we restrict the analysis to those who were registered on or before October 1, 2014, and were thus eligible to vote in the 2014 election.²²

²⁰Figure A3 in the Online Appendix is also consistent with this conclusion; the majority of RID filers showed a Texas Voter Certificate when they arrived at the polls. For all but first-time voters who registered by mail, possessing a valid certificate means that voters had at some point presented identification in the past.

²¹These are least-squares models regressing individual turnout in the indicated election on the type of RID filed, with or without county fixed effects. The indicated coefficients may therefore be interpreted as the difference in turnout rates between RID filers of the indicated type and non-RID filing voters, or the difference in means after removing county-level variation. For a more detailed discussion of differences in turnout between RID-filing voters and non-RID voters, see Online Appendix section A2.

²²Such a restriction is important, because many RID filers were too young to vote in 2014. Our voter file snapshot was acquired in February 2017, shortly after the November 2016 election but when turnout data was available. Since it was acquired from the State of Texas,

Across all groups, we see substantially lower turnout in 2014, when the law was fully implemented with no RID option. Turnout in 2010 and 2012 is also lower for RID filers regardless of impediment—indicating that as a group they are less habitual voters—but in no circumstance is the decrease in turnout as large as in 2014.²³ Thus, regardless of the impediment listed, turnout for RID filers was significantly lower in that strict ID election than in other years.

Table 3: Difference in Turnout, RID Filers vs. Regular Voters by Impediment Type

	All RID Filers		Hardship Only		Relocation Only		ID Capable Only	
	(1)	County FE (2)	(3)	County FE (4)	(5)	County FE (6)	(7)	County FE (8)
2014	-0.194	-0.194	-0.246	-0.246	-0.291	-0.293	-0.141	-0.139
	[-0.207,-0.182]	[-0.206,-0.181]	[-0.268,-0.223]	[-0.269,-0.224]	[-0.327,-0.255]	[-0.329,-0.257]	[-0.158,-0.124]	[-0.156,-0.122]
2012	-0.086	-0.077	-0.101	-0.093	-0.136	-0.131	-0.068	-0.058
	[-0.095,-0.076]	[-0.087,-0.067]	[-0.119,-0.084]	[-0.11,-0.076]	[-0.167,-0.106]	[-0.161,-0.101]	[-0.081,-0.055]	[-0.071,-0.045]
2010	-0.091	-0.082	-0.085	-0.077	-0.155	-0.149	-0.087	-0.079
	[-0.105,-0.077]	[-0.096,-0.068]	[-0.111,-0.059]	[-0.102,-0.051]	[-0.202,-0.108]	[-0.195,-0.103]	[-0.106,-0.068]	[-0.098,-0.06]

Note: Includes individuals marked as having cast a ballot in the Texas voter file for the 2016 election, and were registered to vote in each of the indicated election years. “Hardship Only” compares RID filers who listed a hardship as their impediment to non-RID voters. “Relocation Only” compares RID filers who indicated a relocation impediment to non-RID voters. “ID-Capable Only” compares RID filers who have demonstrated a previous ability to obtain identification to non-RID voters. “County FE” models include fixed effects for county. 95% confidence intervals displayed in brackets below point estimates.

Yet in theory, individuals indicating a hardship—such as lacking necessary documents or work obligations—should be even *less* likely to vote in 2014 than those who may have temporarily lacked identification. Such an understanding is confirmed in Table 3, where RID filers listing a hardship were 24 percentage points less likely to vote, versus ID-capable RID filers who were only 14 percentage points less likely to vote in 2014 as compared to non-RID filers. Individuals who stated that they relocated recently, yet were registered to

it only covers turnout in Texas elections. Individuals who were registered to vote in Texas on October 1, 2014, but voted in another state in November 2014, would appear as non-voters here. See Yoder (2019) for a discussion of the use of multiple voter file snapshots to track the turnout of intra and inter-state movers over time. We also use the same weighting technique as outlined in Section 6.1 for RID filers matched to multiple Texas voter file records.

²³These analyses only include those registered by October 1, 2010 or 2012, respectively.

vote in Texas in previous elections, look more similar to hardship RID voters. However, it is difficult to make firm conclusions about the mechanisms at work for this population, as their turnout is also substantially lower than other RID filers in the 2010, non-strict ID election.²⁴

As outlined in our pre-analysis plan, we also compared the rate of voter turnout of 2016 RID filers in the previous, strict ID election (2014) to those that voted with identification in 2016, using exact matching to gain balance on pre-treatment (that is, pre-2014) patterns of voter turnout across the RID and non-RID groups. We assume that accounting for the pre-treatment trend in voter turnout accounts for underlying vote propensity in the absence of a strict voter identification law, and that a parallel trend in turnout would be observed otherwise. In case the parallel trends assumption does not hold, we also produce estimates with a lagged dependent variable model conducted via a least-squares regression. Those results can be seen in Appendix A2. Notably, models with lagged dependent variables in Table A1—which control for previous turnout—are generally consistent with Table 3.

The fact that many RID-filers had previously demonstrated a capacity to obtain identification might be taken as evidence that voter ID laws are not a burden. However, we believe this conclusion should be weighed against three other facts. First, regardless of their reason for lacking appropriate identification, all 16,000 voters who filed RIDs would likely have been disenfranchised in the absence of federal court intervention. Second, our tabulation implies that examining state ID databases in an effort to identify the voters likely to be disenfranchised—as is commonly done in litigation surrounding voter ID laws (e.g., Ansolabehere and Hersh 2017)—might still not capture the true impact of these policies, because it will fail to count as disenfranchised the voters who have obtained state identification that cannot be presented for voting purposes. Finally, $\approx 1/3$ of RID filers *do* have a hardship

²⁴As indicated above, individuals who voted in states other than Texas would be counted as non-voters. This may explain the lower rate of turnout for “Relocation” RID filers versus other categories, though importantly, all of the “Relocation” RID filers voted in the State of Texas in 2016.

posing a meaningful impediment to obtaining ID associated with decreased 2014 turnout, a pattern that would presumably manifest in future elections absent the RID option.

6.4 County-Level Factors Do Not Explain Individual-Level Racial Disparities

As is the case in most states, county officials in Texas enjoy considerable discretion when it comes to election administration. As such, it is possible that election officials in counties with larger minority populations—who may have believed that their voters were particularly likely to lack compliant identification—were more actively communicating the possibility that voters could file RIDs. If so, this might have increased the probability that a given minority voter filed a petition relative to a given white voter, which could affect the conclusions we report above with respect to the disproportionately non-White population who filed RIDs. We therefore conclude by considering the possibility that our results could be spuriously driven by county-level factors.

If the opportunity to file an RID was presented more often to Black and/or Latinx voters than it was to White/Anglo voters, we would expect to find rates of RID filing to be positively and significantly correlated with a county’s percentage of Black and/or Latinx residents. Table 4 contains OLS regression coefficients and robust standard errors for models of the percentage of voters casting ballots in 2016 who filed RIDs in a given county.²⁵ We fit models of the overall county RID percentage, the percentage of voters filing RIDs for reasons relating to a relocation or hardship, and the rate of ID-capable RID filers. These models clarify whether county-level attributes affected the county’s rate of RIDs that were filed out of all ballots cast, and also whether those same attributes were related to rates of RIDs binned in the three categories we describe above: relocation, ID-capable, and hardship. Model coefficients indicate county factors that were associated with more/less RIDs filed, and are therefore broadly informative about the probability that voters were offered the

²⁵The dependent variable is a percentage ranging from 0 to 1.

chance to file an RID if they lacked adequate identification.

Table 4: Determinants of County-Level RID Rates

	All RIDs	Relocation Only	I.D.-Capable Only	Hardship Only
Perc. Obama, 2012	0.50*	0.08*	0.24*	0.14*
	(0.12)	(0.03)	(0.08)	(0.04)
Perc. Black	-0.49*	-0.02	-0.28*	-0.11*
	(0.20)	(0.07)	(0.12)	(0.05)
Perc. Latinx	-0.20*	-0.05*	-0.09*	-0.05*
	(0.06)	(0.02)	(0.04)	(0.02)
Perc. No College	0.13	-0.05	0.17*	0.02
	(0.18)	(0.06)	(0.08)	(0.07)
Perc. Aged 18-24	1.09*	0.44*	0.31	0.40*
	(0.48)	(0.19)	(0.20)	(0.12)
Perc. Aged 75+	0.46	0.33	-0.00	0.46
	(0.92)	(0.24)	(0.40)	(0.28)
Med. HH Income (Ten Thousands)	0.02	0.01	0.00	0.01*
	(0.02)	(0.00)	(0.01)	(0.01)
Constant	-0.26	-0.05	-0.16	-0.12
	(0.33)	(0.09)	(0.15)	(0.10)
<i>N</i>	254	254	254	254
<i>R</i> ²	0.17	0.16	0.16	0.13
F-Statistic	4.88	3.26	2.17	6.18
Root Mean Sq. Error	0.13	0.04	0.07	0.05

Note: * = $p < 0.05$. Robust standard errors in parentheses. The rate for counties filing no RIDs is set to zero. Demographic information from U.S. Census 2015 5-year ACS estimates, except household income in Loving County, which is an inflation-adjusted imputation from the 2016 5-year estimates to account for missingness in the 2015 ACS estimates. “Perc. Obama” is Obama’s share of the county two-party vote. “Relocation” are voters marking “Other” and noting a recent move and/or student status. “ID-capable” are voters who claimed to have lost an ID, as well as those choosing “other” and writing that they forgot their ID or were protesting the law. All other voters fall into the “hardship” category.

All models in Table 4 indicate that the percentage of the two-party vote that Barack Obama received in a given county during the 2012 election is positively, meaningfully, and significantly associated with the percentage of people whom SB 14 would have deterred from voting. Thus, the county-level models offer evidence either that SB 14 may be disproportionately burdensome in Democratic-leaning counties or that officials in those areas are more likely to offer voters RIDs. Yet, holding Democratic support constant, the filing rate does not appear to rise as a result of higher concentrations of two core Democratic constituencies in a given county: Black and Latinx voters. Indeed, the coefficients for the percentage of both African-American and Latinx residents are *negatively* signed in all models and achieve

statistical significance in all but one. That said, counties with a large proportion of very *young* voters (another traditionally Democratic-leaning group) do see more voters reporting an impediment. The burden on young voters (those aged 18 to 24) appears to accrue especially in the “relocation” and “hardship” categories. Finally, the coefficient for median household income is positive and statistically significant, indicating that more hardship petitions are filed in *wealthier* counties. Though this effect is quite small, it could indicate that poll workers in these counties are more proactive in offering petitions.²⁶

As we suspect that county noncompliance may not be orthogonal to the racial/ethnic composition of a jurisdiction, we also conduct this test on a subset of the data where counties filed at least one RID petition, which can help to determine whether disparate implementation affects the results in Table 4.²⁷ The results of the models in Table 4 are generally consistent with those using data only from counties filing at least one RID, which can be found in Appendix Table A9.²⁸ Whether we examine RID filing rates from all counties or

²⁶A \$10,000 shift in median household income—about one standard deviation—is associated with an increase in the rate of hardship RID filing of about one percentage point.

²⁷Sixty-five counties reported no RIDs. There are a number of possible reasons for this. Given the potential for election officials to exercise discretion in administrative decisions (Kimball, Kropf and Battles 2006), some counties may have refused to comply with the court order. This could result in some counties turning away voters who tried to vote without qualifying identification. But it is equally plausible that these counties followed the process and still had no RIDs. In Appendix Table A10, we demonstrate that neither county partisanship nor race or ethnicity is associated with filing at least one RID. Indeed, the most important factor appears to be county population. The overall rate of RID filing statewide is 0.2%. The mean population of counties reporting no RIDs is 10,312, and 49 had populations under 10,000. Statistically, we may expect some of these counties to have no RID filers.

²⁸Percent Latinx fails to achieve statistical significance in those models, but they are negatively signed. The coefficient for median household income is also insignificant in the

just those reporting at least one RID, we see no evidence that voters in counties with higher minority populations were more likely to be offered an RID option.

As such, the models in Table 4 yield further evidence that the results we describe above should be taken as a lower-bound estimate of the number of voters disenfranchised by SB 14. Specifically, in Table 1 we showed that at the individual level, people who voted without an ID were significantly less white than those who voted with compliant identification. However, this individual-level result is apparent despite the fact that a higher proportion of minority voters is associated with *lower* rates of RID filing at the county level. Put another way, the county-level results in Table 4 could be indicative of the kind of backlash effect Valentino and Neuner 2017 describe, whereby voters lacking identification to obtain it before the election—perhaps aided by community organizations. Even so, our individual-level results suggest that minorities were more likely to lack compliant identification in the 2016 election, and would therefore have been more likely to be turned away from the polling place absent the federal court order mandating the usage of reasonable impediment declarations.

Returning to the potential mechanisms that induce voting without identification, these county-level results also appear to discount the possibility that differential enforcement of the RID mandate produces the racial/ethnic differences found in Table 1. A plausible mechanism for producing this effect is that heavily minority counties may be the types of places where minority advocacy groups, co-ethnic election officials, or campaigns put extra effort into advertising the availability of the RID option. However, we see the opposite relationship at the county level. Thus, the individual-level patterns we find are not likely to be a product of mechanisms relating to selective advertising of the RID option.

7 Conclusion

Due to their potential to disenfranchise otherwise-eligible voters who lack photo identification, strict voter identification laws have proven controversial. Indeed, these policies

Hardship Model, but is equal in size to that in Table 4.

are an important component in a larger debate about how facially non-discriminatory laws described as targeting voter fraud might instead be used as instruments of voter suppression (Bentele and O'Brien 2013). This is particularly salient after the Supreme Court's ruling in *Shelby County v. Holder* (570 U.S. 529 (2013)) struck down the pre-clearance provisions in the Voting Rights Act that required municipalities with a history of discriminatory voting laws to receive advance permission from the Department of Justice before changing their election procedures. Characterized as "Old Poison, New Bottles," (Berman 2015) voter list maintenance, gerrymandering, and limits on early voting join strict ID laws as new policies achieving old aims of reducing minority voter participation, but voter ID laws continue to take on a particularly large share of the blame for recent reductions in minority turnout (Anderson 2018, Clinton 2017: 420-421).

In the case of strict voter ID laws specifically, past research points to the patterns described above. Yet, data with which we can answer the question of whether strict voter ID laws actually *do* have disproportionately disenfranchising effects have been difficult to acquire. Particularly when it comes to understanding subgroup effects, survey data have proven to be a suboptimal platform by which to examine the effects of state laws on individual behavior (Ansolabehere, Luks and Schaffner 2015; Grimmer et al. 2018) A District Court ruling in Texas created an invaluable source of such data. Examining the RIDs that Texas officials produced under court order, we identify more than 16,000 Texans who arrived at polling places in 2016 who would have been turned away had SB 14 been in full effect. This is a very small percentage of voters: about 0.18% of ballots cast. Normatively, this can be taken as good news in one respect: Relatively few people seem to have been disenfranchised for lack of identification, which is broadly consistent with previous findings (Highton 2017).

However, some caution in interpreting this result is in order, as it should be taken as a lower bound of the *net* number of voters SB 14 would have disenfranchised in 2016. Proponents of voter identification policies argue that in combating perceived voter fraud, the laws increase public confidence in the election process. If this effect is real, it might increase

turnout among those who previously had low confidence in the democratic process. Similarly, previous work (Valentino and Neuner 2017) has found that voter ID laws can lead to a “backlash effect;” individual voters might see the policies as intended to disenfranchise them, and in response obtain identification and register to vote. Since voters successfully mobilized by SB 14 did not file RIDs, and combined with the likely substantial number of voters who erroneously believed that SB 14 would bar them from voting and never turned out at all, the effect we report may be a conservative estimate of the number of voters who lack compliant identification when strict voter ID laws are passed. That said, the percentage of would-be disenfranchised voters we report is more than seven times greater than the rate of double-voting in the United States (Goel et al. 2020) and many times greater still than reported instances of election fraud (e.g., Levitt (2007)), both of which are cited as rationales for strict voter ID policies. Even the small effects we find suggest that the costs of strict voter ID laws in terms of disenfranchised voters exceed the benefit in fraud these policies are designed to prevent.

That said, if a law is disproportionately burdensome on racial minorities, then the number of voters it disenfranchises must be a secondary consideration in a legal debate. We determine that the population voting without identification was disproportionately Black and Latinx, and overall less White than the population of 2016 voters who provided qualifying ID. Buttressing work that indicates a disparate racial impact of voter identification laws, we find significant differences in the racial/ethnic composition of the population that shows up at the polls without identification versus those meeting strict ID mandates. Such a finding has important implications for ongoing investigations of Texas’s voting practices, especially its potential violation of Section 2 of the Voting Rights Act. County-level factors do not explain these differential racial impacts, implying that differences in implementation do not explain the racial/ethnic effects we find. More broadly, the fact that racial/ethnic minority groups would be disproportionately turned away from the polls under the strictest forms of voter identification laws suggests the need to soften such laws if all Americans are

to have equal access to the ballot.

The court's ruling also allows us not only to identify voters who arrived at the polls without proper identification in 2016, but also to gain an understanding of *why* they could not produce ID. Going beyond survey reports that indicate what share of non-voters claim lack of identification as an impediment to voting, we find direct evidence that a majority of the individuals who showed up to the polls without qualifying ID in 2016 had demonstrated the capability to obtain qualifying identification at some point in the recent past, or were actively trying to acquire it. This suggests that estimates of the population impacted by ID laws relying on measures of the population *without* ID, such as those relying on matching to driver's license databases, are likely underestimating the pool of potential individuals who would be turned away under the strictest forms of identification laws.

While we provide evidence regarding the impact of ID laws in at least two domains, it is important to recognize the limitations inherent in our study. First among these is the fact that our study relies on individuals deciding to *try* to cast a ballot. The RIDs do not provide a total measure of how many voters SB 14 and the softened ID requirements deterred from voting and did not even attempt to vote. Relatedly, our test for disparate impacts of voter identification laws is inherently strict. Despite evidence indicating limited publicity of the RID option, individuals who had awareness of the law, perhaps from experience voting in 2014, may have shifted their behavior and produced identification for the 2016 election when they would otherwise have not done so. Thus it is possible that our findings underestimate racial/ethnic disparities produced by voter identification laws, making the measurable overall and racial/ethnic disparities in participation all the more important to emphasize.

Our analysis also leverages a single state where circumstances allowed us to view who votes without identification. The enhanced internal validity provided by the RID provision meant a focus on Texas was obligatory. That said, we do not believe this focus diminishes the impact of our study. In the 2020 election, six other states employed strict photo ID laws that function essentially the same as SB 14 did during the 2014 election. In addition,

besides Texas, eleven other states have “photo identification requested” policies whereby voters lacking identification on Election Day may either submit an RID-like affidavit or vote on a provisional ballot; many of these policies function in much the same way as SB 14 under the federal court order. As such, the experience of voters in Texas is not unique. Moreover, Texas is the largest and most diverse state to put in place a voter identification law of any sort; at the time of Texas’ move to a strict voter ID law, its residents comprised more than half of all voting-age Americans subject to such laws. Moreover, when it was fully implemented in 2014, the list of six acceptable identifications for voting in Texas was narrower than any other state. Voter ID was therefore likely to affect more Texans in both absolute terms and as a percentage of state residents than in any other state. The scope of affected voters is especially important. Studies relying on jurisdiction-level turnout or survey data often report that voter ID laws have no effect on turnout or no disparate effect on minority populations (e.g., Highton 2017). However, a recent shift to individual-level designs employing administrative records has discovered detectable—but small—effects (Grimmer and Yoder N.d.; Henninger, Meredith and Morse 2018). If we expect the affected population to be relatively small, then examining the largest population of voters subject to a strict voter ID law (Texans) may provide the best opportunity to isolate effects.

Implementation of the strictest form of Texas’s law continues to be the subject of legal action, and in 2017 Texas enacted a new voter ID law, which includes an RID provision. Variation induced by both the legal and lawmaking processes provides a unique opportunity to understand the impact of voter identification laws on infrequent voters and racial/ethnic minority voters more broadly. We find substantial evidence that strict voter identification laws impede voting for otherwise eligible citizens, many of whom are only temporarily unable to produce qualifying identification, and a disproportionate share of which belong to historically disadvantaged groups. While debates may continue regarding the magnitude of negative impacts resulting from voter ID laws, our evidence clearly indicates that a negative impact exists and further diminishes the political voice of those already less likely to

participate in politics.

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Online Appendix for Bernard L. Fraga and Michael G.
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A1 Deviation from Pre-Analysis Plan

In the course of completing the project we discovered two methodological challenges leading to deviations from the pre-analysis plan. The most substantial deviation was produced by the unforeseen issue of individual RID forms matching to multiple persons in the Texas voter file. As a result, the difference-in-differences analysis is conducted on a subset of individuals who matched 1:1 with a single record in the voter file. This is because the matching procedure employed demands a dichotomous treatment status, and we have a measurable amount of uncertainty for which voter file entry approximately 5% of RID forms matches to. Any RID records matching multiple voter registration records are removed from models relying on the difference-in-differences approach, along with their corresponding voter file records.

A second deviation lies in the decision to model race using the `wru` package in **R** instead of race estimates provided by Catalist, LLC.¹ The estimates of race provided by Catalist are aggregate estimates, and under the terms of the contract available to the researchers cannot be linked to individuals. As a result, accounting for multiply-matched RID records would not have been possible. However, the Catalist race model is built on principles of surname-plus-geography race modeling that form the core of peer reviewed academic research (Enos 2016; Elliott et al. 2008) and the `wru` package (Imai and Khanna 2016). Estimates conducted on a subset of matches using Catalist race information produce disparities similar to those found in Table 1.

¹<http://www.catalist.us>.

A2 Analysis of previous turnout of RID voters, compared to non-RID voters

As outlined in our pre-analysis plan, we compared the rate of voter turnout of 2016 RID filers in the previous, strict ID election (2014) to those that voted with identification in 2016. There we noted that we would conduct exact matching to gain balance on pre-treatment (that is, pre-2014) patterns of voter turnout across the RID and non-RID groups. We assume that accounting for the pre-treatment trend in voter turnout accounts for underlying vote propensity in the absence of a strict voter identification law, and that a parallel trend in turnout would be observed otherwise. In case the parallel trends assumption does not hold, we also produce estimates with a lagged dependent variable model conducted via a least-squares regression.² Such a technique has many of the same bias-reducing features of a difference-in-differences approach, but allows for a more flexible relationship between past voter turnout and turnout post-treatment (O’Neill et al. 2016). Here turnout in the 2014 election is predicted by RID status, controlling for a voter’s rate of turnout in 2012, 2010, and 2008.

In Table A1 we document the difference in rates of voting in the 2014 election between those who voted with qualifying identification in 2016 and those voting without qualifying identification in 2016. In this portion of the study, and in the results found in main text Table 3, we restrict the analysis to those who were registered on or before October 1, 2014, and were thus eligible to vote in the 2014 election.³ This restriction reduces the number of eligible registrants to 7,269,723 (including 7,558 persons who were matched to RID forms).

We begin by providing the raw difference in voter turnout in the 2014 election, labeled as

²Such a technique has many of the same bias-reducing features of a difference-in-differences approach, but allows for a more flexible relationship between past voter turnout and turnout post-treatment (O’Neill et al. 2016).

³See the main text for more details about the filtering process we employ.

column (1) in Table A1.⁴ We see a 19.4 percentage point difference in turnout rates in 2014 for those filing RIDs in 2016 versus those who voted without filing an RID. When conducting a non-parametric difference in differences analysis, as outlined in our pre-analysis plan (PAP), we see that equalizing turnout in the 2012, 2010, and 2008 elections across RID-filing status still yields a 13.7 percentage point difference in rates of voting in the 2014 election. A similar, lagged dependent variable approach (column 5) produces the same estimate of 13.7 percentage points lower voter turnout in a strict voter identification election for those who voted without ID in 2016 after accounting for turnout in three previous elections.

Table A1: Difference in Turnout in Previous Elections, RID Filers vs. Regular Voters

	Raw Difference		Diff-in-Diff		Lagged DV	
	(1)	<i>County FE</i> (2)	(3)	<i>County FE</i> (4)	(5)	<i>County FE</i> (6)
2014	-0.194 [-0.207,-0.182]	-0.194 [-0.206,-0.181]	-0.137 [-0.150,-0.124]	-0.136 [-0.148,-0.123]	-0.137 [-0.148,-0.126]	-0.139 [-0.150,-0.128]
2012	-0.086 [-0.095,-0.076]	-0.077 [-0.087,-0.068]	-0.057 [-0.068,-0.047]	-0.030 [-0.038,-0.022]	-0.058 [-0.067,-0.049]	-0.052 [-0.061,-0.042]
2010	-0.091 [-0.105,-0.077]	-0.082 [-0.096,-0.068]	-0.060 [-0.075,-0.045]	-0.018 [-0.026,-0.010]	-0.061 [-0.075,-0.047]	-0.058 [-0.071,-0.044]

Note: Includes individuals marked as having cast a ballot in the Texas voter file for the 2016 election, and were registered to vote in each of the indicated election years. “Raw Difference” indicates the difference in voter turnout rates for RID filers versus 2016 voters who voted with ID. “Diff-in-Diff” is the difference in turnout rates after exact matching RID vs. non-RID voters on turnout in the 2008 election, and any other federal elections prior to the election year examined. “Lagged DV” is the modeled difference in turnout rates when controlling for turnout in the 2008 election, and any other federal elections prior to the election year examined. “County FE” models include fixed effects for county. 95% confidence intervals displayed in brackets below point estimates.

The above aligns with what we hypothesized in our pre-analysis plan, namely, that RID filers would be significantly less likely to vote in the strict voter identification election (2014) after accounting for turnout in the 2012, 2010, and 2008 elections. However, individuals filing RIDs may be *generally* infrequent voters: are RID filers especially unlikely to vote in 2014

⁴We also use the same weighting technique as outlined in Section 6.1 of the main text for RID filers matched to multiple Texas voter file records.

versus other election years? Rows 2 and 3 of Table A1 examine this possibility, and indeed find that RID filers were between two and nine percentage points less likely to vote in the 2012 and 2010 elections, even after accounting for registration date⁵ and turnout in previous elections. However, the magnitude of this difference is consistently less than half of the size of of the difference we see in the strict identification mandate 2014 election. Columns 2, 4, and 6 also model the difference in voter turnout through a least-squares regression model with fixed effects for voters' county, which has little effect on the estimates for the 2014 election.

Obviously, not providing qualifying identification in 2016 could not have *caused* a person to not vote in 2014. However, voters without ID in 2016 may be similar to, or indeed the same individuals as, those who did not have qualifying identification in the strict voter identification election of 2014. While we cannot directly measure the population that was deterred from attempting to vote by the strict photo ID law, it is clear that individuals arriving at the polls without ID in 2016 were substantially less likely to vote when the strict regime was in force.

Do we see differential effects of RID filing on past turnout by race/ethnicity? In Table A2 we explore this possibility. Here we use the probabilistic race estimates as weights in a linear probability model, with and without county fixed effects, to estimate the impact of RID filing on turnout (given registered) in 2014, 2012, and 2010 by race/ethnicity. Again, Table 1 indicates that Black and Latinx voters were more likely to file RIDs than non-Hispanic Whites, but the impact of filing an RID may vary by race/ethnicity.

With the important caveats noted earlier in this section, we see evidence that the largest effects of RID filing on past turnout are present for African-American registrants. Black RID filers were 25 percentage points less likely to vote in the strict identification-mandate 2014

⁵These analyses only include individuals registered to vote by October 1, 2012 (6,401,213 registrants, 6,350 RID filers) and October 1, 2010 (5,798,821 registrants, 5,628 RID filers), respectively.

Table A2: Difference in Turnout, RID Filers vs. Regular Voters by Race/Ethnicity

	White		Black		Latinx		Asian	
	(1)	<i>County FE</i> (2)	(3)	<i>County FE</i> (4)	(5)	<i>County FE</i> (6)	(7)	<i>County FE</i> (8)
2014	-0.213	-0.217	-0.253	-0.255	-0.065	-0.085	-0.074	-0.086
	[-0.226,-0.199]	[-0.23,-0.204]	[-0.265,-0.242]	[-0.267,-0.244]	[-0.076,-0.054]	[-0.096,-0.074]	[-0.093,-0.054]	[-0.106,-0.066]
2012	-0.089	-0.089	-0.097	-0.093	-0.039	-0.037	-0.023	-0.026
	[-0.099,-0.08]	[-0.099,-0.079]	[-0.106,-0.089]	[-0.102,-0.085]	[-0.049,-0.029]	[-0.047,-0.027]	[-0.041,-0.005]	[-0.045,-0.008]
2010	-0.091	-0.092	-0.13	-0.135	-0.012	-0.011	0.031	0.022
	[-0.106,-0.075]	[-0.107,-0.077]	[-0.143,-0.116]	[-0.149,-0.122]	[-0.025,0.001]	[-0.024,0.001]	[0.007,0.054]	[-0.001,0.046]

Note: Includes individuals marked as having cast a ballot in the Texas voter file for the 2016 election, and were registered to vote in each of the indicated election years. “County FE” models include fixed effects for county. 95% confidence intervals displayed in brackets below point estimates.

midterm election, as compared with Black 2016 voters who did not file an RID. This is much greater than the 14 percentage point difference for voters overall, and significantly larger than the effect for White RID filers (21 points), Latinx or Asian RID filers (7-9 percentage points), or the effect we see on turnout in previous non-strict ID elections. Black voters are thus disproportionately likely to file RIDs, and Black RID filers are disproportionately likely to have not voted in the previous, strict identification election when the RID option was not available.

Finally, in Table 3 of the main paper, we fit separate models for RID filers binned in the three categories we identify: those with an enduring hardship, those who recently relocated, and those who are ID-capable, to compare their recorded turnout in previous elections with non-RID filers. In Table A3, we replicate those models using the lagged dependent variable approach described above. The results are broadly consistent with those we report in the paper: RID filers with an enduring hardship were considerably less likely to turn out than RID filers overall.

A3 Coding Race/Ethnicity in the Texas Voter File

As noted above and in the main text, we model the race of each individual in the Texas voter file using the `wru` package (Imai and Khanna 2016). To do so, we rely on the name and

Table A3: Difference in Turnout, RID Filers vs. Regular Voters by Impediment Type

	All RID Filers		Hardship Only		Relocation Only		ID Capable Only	
	(1)	<i>County FE</i> (2)	(3)	<i>County FE</i> (4)	(5)	<i>County FE</i> (6)	(7)	<i>County FE</i> (8)
2014	-0.137	-0.139	-0.189	-0.192	-0.177	-0.182	-0.095	-0.094
	[-0.148,-0.126]	[-0.15,-0.128]	[-0.209,-0.169]	[-0.212,-0.172]	[-0.209,-0.145]	[-0.215,-0.15]	[-0.11,-0.079]	[-0.11,-0.079]
2012	-0.058	-0.051	-0.075	-0.068	-0.086	-0.082	-0.043	-0.036
	[-0.067,-0.049]	[-0.061,-0.042]	[-0.091,-0.058]	[-0.085,-0.052]	[-0.115,-0.057]	[-0.11,-0.053]	[-0.056,-0.031]	[-0.048,-0.023]
2010	-0.061	-0.058	-0.054	-0.051	-0.107	-0.104	-0.061	-0.059
	[-0.075,-0.047]	[-0.071,-0.044]	[-0.079,-0.029]	[-0.075,-0.026]	[-0.152,-0.062]	[-0.147,-0.06]	[-0.08,-0.043]	[-0.077,-0.041]

Note: Includes individuals marked as having cast a ballot in the Texas voter file for the 2016 election, and were registered to vote in each of the indicated election years. “Hardship Only” compares RID filers who listed a hardship as their impediment to non-RID voters. “Relocation Only” compares RID filers who indicated a relocation impediment to non-RID voters. “ID-Capable Only” compares RID filers who have demonstrated a previous ability to obtain identification to non-RID voters. All models use the “Lagged DV” specification as described in Table A1. “County FE” models include fixed effects for county. 95% confidence intervals displayed in brackets below point estimates.

address information as listed in the voter file, specifically, the individual registrant’s listed last name and the “Registration Address.” We also incorporated information about the age of the registrant in 2010 (based on date of birth), and the sex of the registrant where listed in the file. Where information about the age or sex was not available, we relied on name and geography alone.

In order to determine the geography of the registrant, we geocoded the registration address in a multi-part address. We first relied on Open Street Map data, determining which addresses could be geocoded using the Open Street Map database to the Census block group level. Any addresses that could be associated with a single block group were considered correctly coded. Addresses that could not be matched with a block group, either due to address parsing issues or insufficient detail in the Open Street Map data, were geocoded using the Google Geocoding API.⁶ Census tract information was obtained through the Federal Communications Commission (FCC) database.

⁶A small share of addresses could not be parsed due to errors in the Texas voter file, consisting of most of the failed race codings indicated in the main text (<1% of all registrants). These cases were removed from our analysis.

The `wru` process relies on Census data regarding the distribution of racial/ethnic groups in the 2010 Census in order to generate geography-specific race estimates. The distribution of the Texas population changed between 2010 and 2016, in some cases substantially. Given this, and the uncertainty in the geocoding process, we relied on Census tract-level estimates of the racial/ethnic composition of a registrant’s neighborhood. As Texas became more diverse over the period, and non-Hispanic Whites tend to live in the most homogeneous communities, we expect that our estimates of individual race are biased in the direction of producing false negatives for racial/ethnic minority status (type II error, given our pre-registered hypotheses).

We rely on probabilistic estimates of race as produced by the `wru` package in our analysis. These measures allow us to average the race estimates for the approximately 5% of RID filers who match to multiple records in the voter file. Other work relies on a categorical definition of race/ethnicity, which better aligns with survey self-reports (Fraga 2018). Our main results do not change when assigning each registrant the “plurality” race prediction.

A4 Racial/Ethnic Distribution, RID-filing Counties Only

Sixty-five counties reported no RIDs were filed in 2016. There are a number of possible reasons for this. For instance, noncompliance with/ignorance of the court injunction could result in some counties turning away voters who tried to vote without qualifying identification, while others may have not asked for RIDs at all. But it is equally plausible that these counties followed the process and still had no RIDs. The overall rate of RID filing statewide is 0.2%. The mean population of counties reporting no RIDs is 10,312, and forty-nine had populations under 10,000. Thus, we might statistically expect most of these counties to have no instances of voters needing RIDs.

To evaluate the possibility that county noncompliance not orthogonal to the racial/ethnic composition of a jurisdiction is driving our racial/ethnic distribution analysis, we reproduce

Table 1 from the main text below, but excluding voters from counties where no RIDs were filed. While some of the percentages change slightly, the overall pattern is the same as in Table 1 and measures of statistical significance are similar as well.

Table A4: 2016 Voters by Race and ID Usage, Counties with RID Filers Only

	White	Black	Latinx	Asian	Other
<i>Voted with ID</i>	63.4%	11.5%	19.7%	3.6%	1.7%
<i>N</i>	5,548,275	1,006,384	1,726,760	315,892	151,043
<i>Voted without ID</i>	57.7%	16.1%	20.7%	2.9%	2.6%
<i>N</i>	8,409	2,353	3,014	418	383

Note: Includes individuals marked as having cast a ballot in the Texas voter file, and residing in counties where at least one RID was filed. “Voted with ID” represents the percentage or number of voters who were not matched to Reasonable Impediment Declarations (RIDs). “Voted without ID” represents the percentage or number of voters who were matched to RIDs. Approximately 1% of RIDs have not been matched to voter file records, and are thus included in the “Voted with ID” category. Race could not be estimated for 0.7% of 2016 voters. These individuals are excluded from the above totals.

A5 Reasons Cited, Subsetting by Race

We reproduce Figure 2 and Figure 3, tabulating cited reasons by race (White, Black, Latinx). As Figure A1 shows, the pattern of frequency for each cited impediment is similar to the overall pattern observed in Figure 2 for both Black and Latinx voters: a fairly similar proportion selected all categories except “lost/stolen” and “other.” While White voters were also more likely to choose these categories than any other, the response pattern for White voters displays less consistency across the other impediments.

Figure A1: Impediments Cited by Texas Voters in 2016, by Race

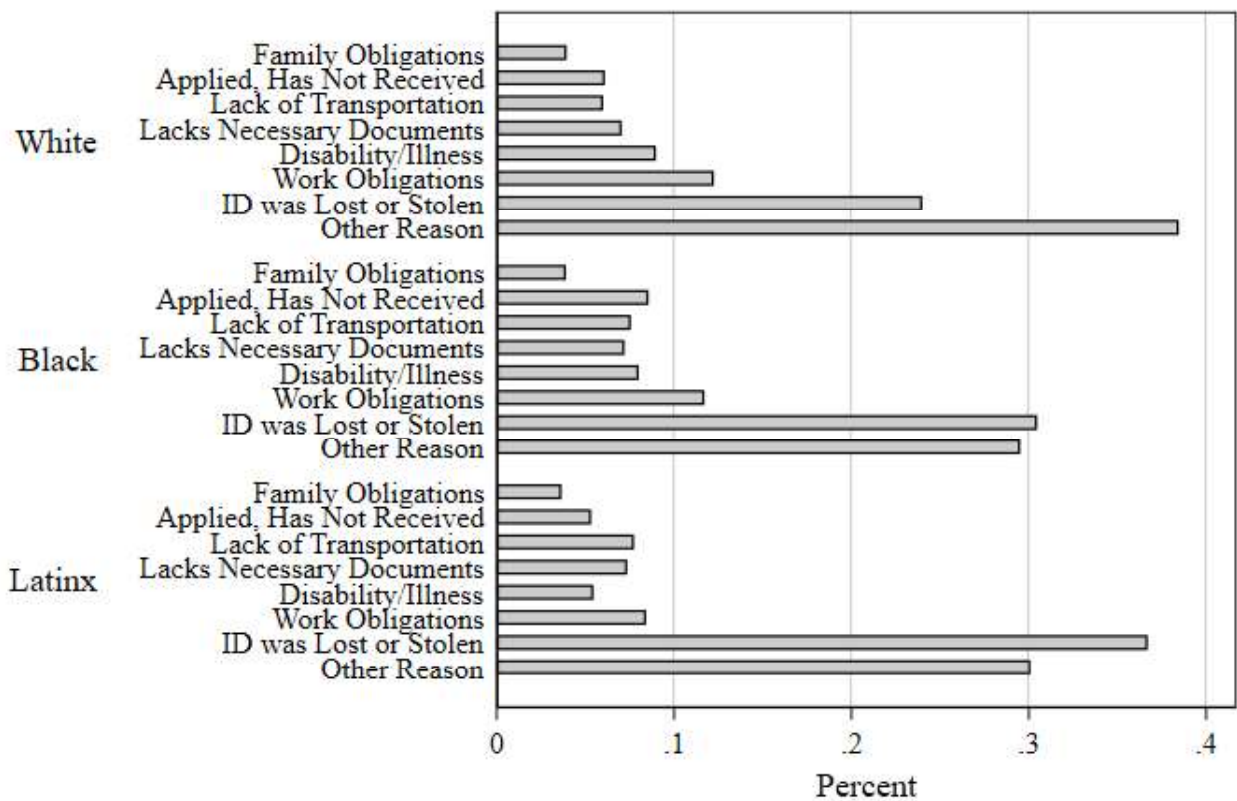
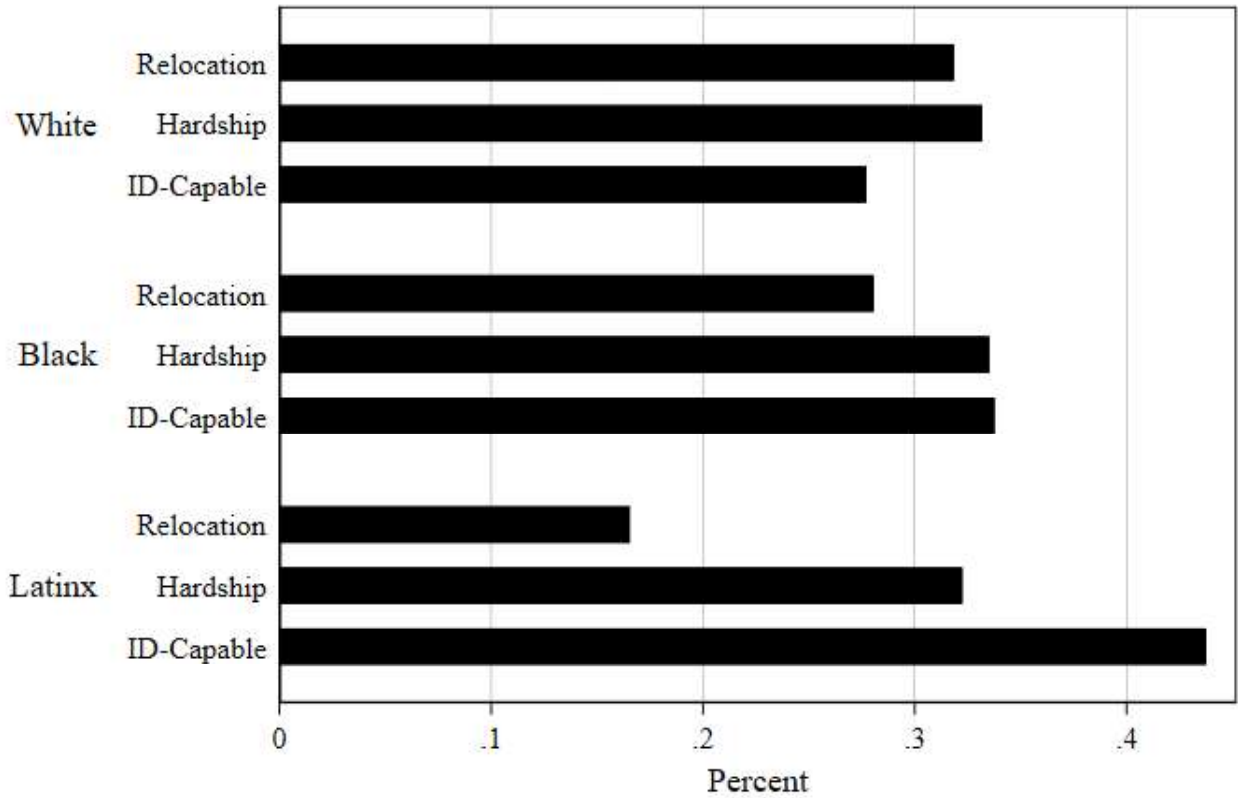


Figure A2: Impediments Cited by Texas Voters in 2016, by Race



With respect to the binned categories (Hardship, Relocation, and ID-Capable voters), Figure A1 demonstrates that the pattern in Figure 3 holds for white and black voters, but not for Latinx voters. Latinx voters were less likely to cite a relocation-related impediment, and were more likely to fall in the ID-Capable category.

A6 Regression Models of Individual Response Categories

In the main text, we provide descriptive statistics of the impediment justifications provided by voters, finding that a large number of voters are recent movers or “ID-capable,” in that they previously had photo identification. We also note broad patterns of consistency across groups. However, most attention has focused on “hardship” impediments to possessing qualifying identification, such as cost or lacking necessary documents. We might also expect older voters to be more likely to cite illness or disability, or women to cite family obligations. Yet, these suppositions have not been verified.

To do so, we examine whether RID filers’ age, gender, and/or race is associated with the reasons they gave for lacking identification. whether certain voters are more likely to cite certain reasons. We ⁷ This analysis yields insight into how enduring the impediments that voters face are, and also whether they are experienced disproportionately by voters from certain groups.

Here we present eight logistic regression models, in which the dependent variable is a binary indicator of affirmative response to seven impediment categories listed on the RID form: Lack of transportation or documents, work- or family-related reasons, a disability or illness, a lost or stolen ID, or an ID that has been applied for, but not received.

Table A5 contains coefficients and standard errors (clustered by county) from these models. The models return several significant results with respect to the seven RID check-box categories.⁸ For instance, women are less likely than men to cite work obligations as preventing them from obtaining an ID, but more likely than men to report family obligations

⁷Here, for RID filers who matched to multiple records in the Texas voter file, we take the average value of the voter file-linked variables (age, voter turnout, and modeled race/ethnicity) across all of the possible matches.

⁸See Table A7 below for a substantively similar result using seemingly unrelated linear probability models.

Table A5: Logistic Regression Coefficients: Determinants of Choosing Various RID Categories

	Lacks Transportation	Lacks Documents	Work- Related Reasons	Lost Stolen	Disability/ Illness	Family- Related Reasons	Applied, Have Not Received
Voter's Age	-0.08* (0.01)	-0.02 (0.01)	0.11* (0.02)	0.06* (0.01)	0.07* (0.01)	0.01 (0.01)	0.01 (0.01)
Voter's Age ²	0.00* (0.00)	0.00 (0.00)	-0.00* (0.00)	-0.00* (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Voter is a Woman	-0.09 (0.08)	-0.01 (0.08)	-0.16* (0.05)	0.05 (0.04)	-0.06 (0.08)	0.43* (0.11)	-0.09 (0.08)
Voter is African-American	0.24 (0.17)	0.02 (0.13)	-0.15 (0.09)	0.36* (0.09)	0.34* (0.11)	-0.04 (0.12)	0.36* (0.12)
Voter is Latinx	0.26* (0.11)	0.04 (0.12)	-0.47* (0.10)	0.67* (0.10)	-0.26* (0.12)	-0.16 (0.12)	-0.20 (0.11)
Voter is Asian-American	0.36 (0.20)	-0.20 (0.28)	0.40* (0.19)	-0.58* (0.15)	-0.99* (0.39)	0.08 (0.37)	0.05 (0.20)
Voter is Other (non-White) Race	0.30* (0.11)	-0.05 (0.16)	0.07 (0.14)	0.08 (0.10)	0.12 (0.20)	-0.10 (0.15)	0.40* (0.14)
Constant	-1.10* (0.19)	-2.27* (0.30)	-3.42* (0.29)	-2.51* (0.26)	-5.62* (0.35)	-3.45* (0.31)	-2.88* (0.24)
Number of Observations	14,916	14,916	14,916	14,916	14,916	14,916	14,916
Log Likelihood	-3,594	-3,785	-5,020	-8,550	-3,436	-2,386	-3,498
Wald Chi-Square	236.3	7.2	355.8	197.0	807.5	71.1	66.6

Note: * = $p < 0.05$. Standard errors clustered by county. For race indicators, “White” is the referent category. We omit petitions from this analysis for voters whose gender and/or race we could not determine.

as an impediment. The age variable is also significant in four of the seven categories. Once age and age-squared are considered, the models show that older voters are more likely to report that work obligations impeded their ability to obtain ID, that they had lost their ID, and also that illnesses and/or disabilities prevented them from obtaining a photo ID. In contrast, older voters were less likely to cite a lack of transportation as impeding their ability to procure an ID.

With respect to race, Asian-Americans were significantly less likely than Whites to either report lost IDs or illness as a reason for lacking ID. The models also yield evidence that African-Americans filing RIDs were significantly more likely to report lost or stolen IDs, disabilities, or pending applications. Model 4 also suggests that Latinx voters were significantly more likely than Whites to cite lost/stolen IDs; notably, the effect size for

Latinx voters is approximately double that of African-Americans—a statistically significant difference.⁹ Latinx voters differed from African-Americans however on the disability/illness measure; the former were significantly *less* likely than either Whites or African-Americans to report illness or disabilities. Latinx voters were also significantly less likely to cite work obligations, but were more likely than Whites (but not African-Americans) to cite a lack of transportation as the reason they lacked an ID.

Finally, we test for a relationship between voter demographics and the binned impediment reasons (relocation, hardship, or ID-capable) using logistic regression models. The dependent variable in these models is a binary indicator of whether a given voter’s response on the RID placed her in a given bin. The models include each voter’s age (and a squared age term) as independent variables, as well as indicators for race (the referent category is “White”) and whether the voter was a woman. While this analysis is mainly descriptive, it is informative with respect to policies that might alleviate the disenfranchising effects (if any) of strict voter ID laws. We therefore include this analysis to provide greater context in this area.

Table A6 contains the results of those models. These models suggest that older voters are less likely to report a hardship—and are more likely to have shown the ability to get an ID—than younger voters. Women are also more likely than men to be ID-capable, and less likely to report a hardship. While Asian-American voters are more likely than Whites to cite a recent relocation as the reason for lacking identification, both African-American and Latinx voters are less likely to fall into this category. That said, both African-American and Latinx voters are also more likely than Whites to be ID-capable.

A7 Seemingly Unrelated Regression Models

Since voters were able to cite more than one impediment on the RID form, there is a possibility that error terms are correlated across the models we report in Table A6 in the

⁹Wald test, $p=0.0003$.

Table A6: Determinants of Falling Into Binned Categories

	Relocation- Related	Has Hardship	Is ID- Capable
Voter's Age	0.01 (0.01)	-0.03* (0.01)	0.06* (0.01)
Voter's Age ²	-0.00* (0.00)	0.00* (0.00)	-0.00* (0.00)
Voter is a Woman	0.02 (0.04)	-0.08* (0.04)	0.11* (0.04)
Voter is African-American	-0.35* (0.08)	0.10 (0.07)	0.34* (0.10)
Voter is Latinx	-1.01* (0.10)	0.01 (0.08)	0.80* (0.10)
Voter is Asian-American	0.36* (0.12)	0.00 (0.10)	-0.34 (0.19)
Voter is Other (non-White) Race	-0.18 (0.11)	0.09 (0.06)	0.09 (0.10)
Constant	-0.46* (0.23)	-0.34* (0.13)	-2.60* (0.27)
Number of Observations	14,916	14,916	14,916
Log Likelihood	-8,475	-9,328	-9,026
Wald Chi-Square	579.0	153.3	179.7

Note: * = $p < 0.05$. Robust standard errors. For race indicators, “White” is the referent category. Voters who had “relocated” are those who marked the “Other” category and noted a recent move and/or student status. Voters who are “ID-capable” are those who claimed to have lost an ID, as well as those who chose “other” and wrote that they had forgotten their ID or were protesting the law. All other voters fall into the “hardship” category.

main paper, as well as in Appendix Table A5. In Tables A7 and A8, we therefore replicate those models in a seemingly unrelated regression framework. Because SUR models cannot be fit using logistic link functions, we specify the equations as linear probability models. Generally, the results we report in the article replicate in the SUR specifications. There are three notable exceptions. The first is the finding in Table A7 that African Americans are more likely than whites to report a lack of transportation. In Table A5, this coefficient is positively signed, but does not achieve statistical significance. In Table A7, Latinx voters

appear less likely than Whites to cite work- and disability-related impediments, whereas they are *more* likely to cite these impediments in Table A5.

We reproduce the binned models from Table A6 in Appendix Table A8. There are no meaningful differences between the logistic regression models reported in the former and the SUR models in the latter.

Table A7: Seemingly Unrelated Linear Probability Regression Coefficients: Determinants of Choosing Various RID Categories

	Lacks Transportation	Lacks Documents	Work- Related Reasons	Lost Stolen	Disability/ Illness	Family- Related Reasons	Applied, Have Not Received
Voter's Age	-0.01* (0.00)	-0.00* (0.00)	0.00* (0.00)	0.01* (0.00)	-0.00* (0.00)	0.00 (0.00)	0.00 (0.00)
Voter's Age ²	0.00* (0.00)	0.00* (0.00)	-0.00* (0.00)	-0.00* (0.00)	0.00* (0.00)	-0.00 (0.00)	-0.00* (0.00)
Voter is a Woman	-0.01 (0.00)	-0.00 (0.00)	-0.01* (0.01)	0.01 (0.01)	-0.00 (0.00)	0.02* (0.00)	-0.01 (0.00)
Voter is African-American	0.01* (0.01)	0.00 (0.01)	-0.02* (0.01)	0.07* (0.01)	0.02* (0.01)	-0.00 (0.00)	0.02* (0.01)
Voter is Latinx	0.02* (0.01)	0.00 (0.01)	-0.04* (0.01)	0.14* (0.01)	-0.01* (0.01)	-0.01 (0.00)	-0.01* (0.01)
Voter is Asian-American	0.02 (0.02)	-0.01 (0.02)	0.06* (0.02)	-0.09* (0.03)	-0.03 (0.02)	0.00 (0.01)	0.00 (0.02)
Voter is Other (non-White) Race	0.02 (0.01)	-0.00 (0.01)	0.01 (0.01)	0.02 (0.02)	0.00 (0.01)	-0.00 (0.01)	0.03* (0.01)
Constant	0.19* (0.01)	0.09* (0.01)	0.12* (0.01)	-0.01 (0.02)	0.06* (0.01)	0.04* (0.01)	0.06* (0.01)
Number of Observations	14,916	14,916	14,916	14,916	14,916	14,916	14,916
R ²	0.01	0.00	0.03	0.03	0.11	0.00	0.00

Note: * = $p < 0.05$. For race indicators, "White" is the referent category. We omit petitions from this analysis for voters whose gender and/or race we could not determine. Coefficients are derived from linear regressions of binary dependent variables; this model specification therefore allows for errors to be correlated across models of each dependent variable, but differs from the logistic specification presented in the main body of the article.

Table A8: Seemingly Unrelated Linear Probability Regression Coefficients: Determinants of Falling Into Binned Categories

	Relocation- Related	Has Hardship	Is I.D.- Capable
Voter's Age	-0.00 (0.00)	-0.01* (0.00)	0.01* (0.00)
Voter's Age ²	-0.00* (0.00)	0.00* (0.00)	-0.00* (0.00)
Voter is a Woman	0.00 (0.01)	-0.02* (0.01)	0.02* (0.01)
Voter is African-American	-0.07* (0.01)	0.02 (0.01)	0.07* (0.01)
Voter is Latinx	-0.18* (0.01)	0.00 (0.01)	0.18* (0.01)
Voter is Asian-American	0.09* (0.03)	0.00 (0.03)	-0.06* (0.03)
Voter is Other (non-White) Race	-0.04* (0.02)	0.02 (0.02)	0.02 (0.02)
Constant	0.43* (0.02)	0.42* (0.02)	-0.05* (0.02)
Number of Observations	14,916	14,916	14,916
R ²	0.05	0.02	0.04

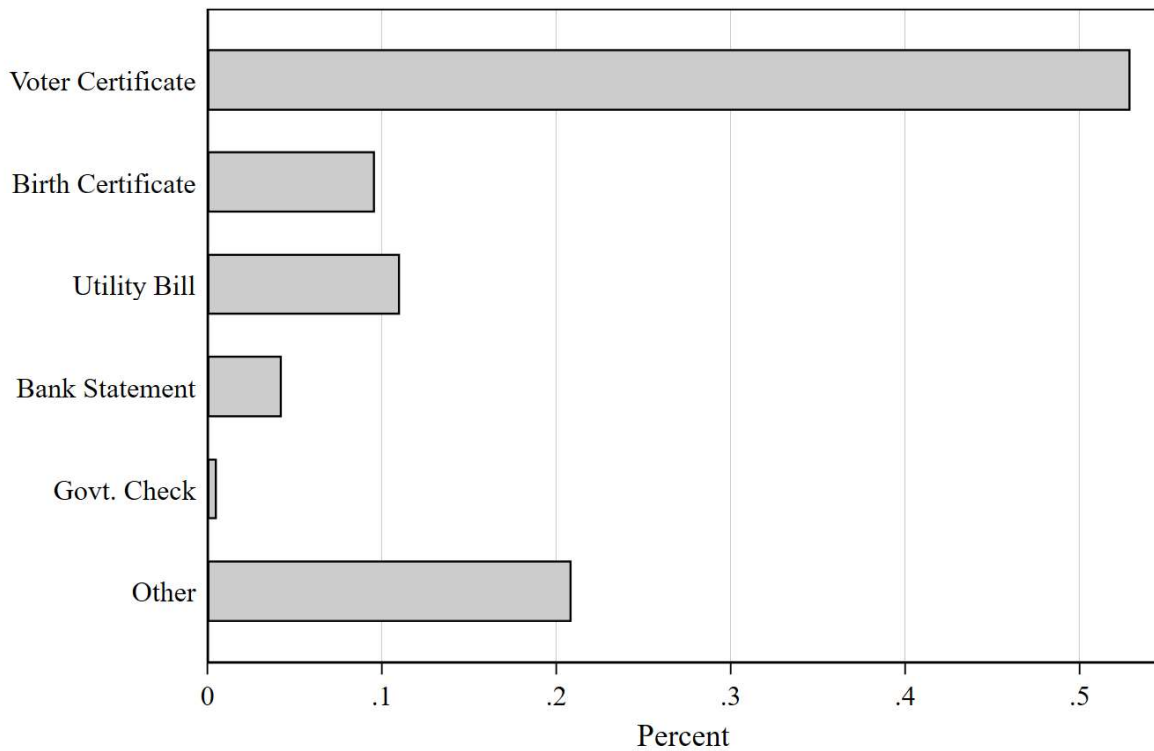
Note: * = $p < 0.05$. For race indicators, “White” is the referent category. Voters who had “relocated” are those who marked the “Other” category and noted a recent move and/or student status. Voters with “hardships” listed family/work obligations, illness, financial constraints, religious reasons, or a lack of transportation, documents, or time. Voters who are “ID-capable” are those who claimed to have lost an ID or were awaiting one from the state, as well as those who chose “other” and wrote that they had forgotten their ID, were unaware of or were protesting the law, had recently relocated/were a student, had presented some form of ID that was not accepted (such as an expired ID), or claimed a legal impediment, such as a suspended driver’s license. Coefficients are derived from linear regressions of binary dependent variables; this model specification therefore allows for errors to be correlated across models of each dependent variable, but differs from the logistic specification presented in the main body of the article.

A8 Non-Photo IDs Presented at Polls

In Figure A3, we depict the percentage of voters who presented various (non-photo) forms of identification when they checked in to vote. As can be seen, a majority of voters presented a Texas Voter Certificate. This is broadly consistent with our conclusion that many RID

filers were ID-capable. Texas asks voters for driver’s license or identification card numbers when they register; this information is cross-checked to verify identity. Voters do not need a photo ID in order to register, but if they do not submit information from a state ID they do need to show identification upon voting for the first time. Some voters who presented a Voter Certificate were no doubt first-time voters who registered by mail, but it is highly likely that most of them had previously shown an ID in the registration process and were showing the Voter Certificate in lieu of state ID in 2016.

Figure A3: Non-Photo ID Presented at Polls



A9 Alternate Specification of County-Level Model

Because it is possible that some counties may not have allowed voters to file RIDs at all, in Table A9 we subset the analysis depicted in Table 4 to the 189 Texas counties reporting at least one RID. Though there are some differences with respect to statistical significance

of some coefficients, the sign and substantive size of the coefficients—especially those in which we are particularly interested (Democratic vote, percent black, and percent Latinx) are similar.

Table A9: OLS Regression Coefficients: Determinants of County-Level RID Rates in Counties Filing at Least One RID

	Overall Rate	Relocation Rate	I.D.-Capable Rate	Hardship Rate
Perc. Obama, 2012	0.50* (0.14)	0.08* (0.04)	0.26* (0.10)	0.13* (0.05)
Perc. Black	-0.61* (0.22)	-0.04 (0.08)	-0.35* (0.13)	-0.13* (0.06)
Perc. Latinx	-0.12 (0.07)	-0.05 (0.03)	-0.06 (0.04)	-0.01 (0.03)
Perc. No College	0.01 (0.25)	-0.06 (0.09)	0.14 (0.12)	-0.02 (0.09)
Perc. Aged 18-24	0.73 (0.71)	0.52 (0.27)	0.08 (0.29)	0.33* (0.15)
Perc. Aged 75+	1.01 (1.30)	0.63 (0.34)	0.05 (0.57)	0.87* (0.37)
Med. HH Income (Ten Thousands)	0.01 (0.03)	0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)
Constant	-0.07 (0.48)	-0.07 (0.15)	-0.06 (0.22)	-0.10 (0.14)
Number of Observations	189	189	189	189
R ²	0.21	0.16	0.25	0.17
F-Statistic	4.16	2.38	2.16	3.84
Root Mean Sq. Error	0.13	0.05	0.07	0.05

Note: * = $p < 0.05$. Robust standard errors in parentheses. Demographic information from U.S. Census 2015 5-year ACS estimates, except household income in Loving County, which is an inflation-adjusted imputation from the 2016 5-year estimates to account for missingness in the 2015 ACS estimates. “Perc. Obama” is Barack Obama’s share of the county-level two-party vote. Voters who had “relocated” are those who marked the “Other” category and noted a recent move and/or student status. Voters who are “ID-capable” are those who claimed to have lost an ID, as well as those who chose “other” and wrote that they had forgotten their ID or were protesting the law. All other voters fall into the “hardship” category.

A10 Determinants of Filing at Least One RID

Previous work has found that state-level partisanship can influence rules governing election administration (Kimball, Kropf and Battles 2006). We therefore investigate the possibility that county-level traits affected the likelihood that counties allowed voters to cast ballots after filing RIDs. Table A10 contains coefficients and robust standard errors from logistic regression models of a binary indicator of whether counties submitted at least one RID after the election. The models include a variable for whether Barack Obama won more votes than Mitt Romney in the 2012 presidential election; this variable is labeled “Democratic County.” As Model 1 indicates, there is no difference in the likelihood of submitting RIDs between Democratic and Republican counties, nor is the percentage of Black and/or Latinx residents associated with whether voters filled out RIDs in a given county. In Model 2, we interact the Democratic County indicator with the percent Black and Latinx variables, and again observe no statistically significant effects. While local discretion is a difficult concept to measure, we believe that as Kimball, Kropf and Battles (2006) found, partisanship is a likely motivator of officials’ decisions when it comes to how (or whether) to implement the law. The results in Table A10 are not suggestive of party-driven effects. In both models, the only significant predictor is county population.

Table A10: Logistic Regression Coefficients: County-Level Determinants of Filing at Least One RID

	(1)	(2)
Democratic County	-0.42 (1.00)	3.09 (13.22)
Perc. Black	-1.83 (4.00)	-1.96 (4.00)
Democratic X Perc. Black		-9.10 (33.29)
Perc. Latinx	-0.08 (1.44)	-0.07 (1.43)
Democratic X Perc. Latinx		-3.99 (14.94)
Perc. No College	0.29 (4.31)	0.47 (4.43)
Perc. Aged 18-24	0.19 (7.49)	0.15 (7.57)
Perc. Aged 75+	2.69 (12.73)	2.51 (12.73)
Med. HH Income (Ten Thousands)	0.31 (0.30)	0.30 (0.29)
Log Population	1.33* (0.24)	1.33* (0.23)
Constant	-12.98* (5.71)	-13.10* (5.78)
Number of Observations	254	254
Pseudo Log Likelihood	-96.55	-96.47
Wald χ^2	55.53	62.04

Note: * = $p < 0.05$. Robust standard errors in parentheses. Demographic information from U.S. Census 2015 5-year ACS estimates, except household income in Loving County, which is an inflation-adjusted imputation from the 2016 5-year estimates to account for missingness in the 2015 ACS estimates. “Democratic County” denotes the 26 Texas counties Barack Obama won in 2012.

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