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Abstract

Critics of the recent proliferation of strict photo identification laws around the country

claim that these laws impose a disproportionate burden on racial and ethnic minority voters. Yet,

empirical studies of the impact of these laws on minority turnout have reached decidedly mixed

results. Courts have responded, in part, by offering unclear and mixed opinions about the

constitutionality of these laws. By focusing on recent elections with a broad set of strict photo

ID laws in place, by relying on official turnout data rather than surveys, and by employing a

research design that assesses change over time using a difference-in-difference approach that

helps alleviate the inference problems that have plagued most existing studies, this article seeks

to offer a more rigorous test that will help advance the empirical literature and contribute to the

legal debate. Our primary analysis uses aggregate county turnout data from 2012 to 2016 and

finds that the racial gap in turnout between more diverse and less diverse counties grew more in

states enacting new strict photo ID laws than it did elsewhere – even after controlling for other

factors that could impact turnout. Strict voter ID laws appear to discriminate.

KEYWORDS: voter identification law, voter turnout, racial and ethnic minorities

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Strict voter identification laws are proliferating around the country. Prior to 2006, no state required citizens to provide a valid photo identification in order to vote. That year, Indiana implemented a strict voter identification law that required citizens to produce photo identification in order for their ballot to count. Since then, ten additional states have passed strict photo identification laws,¹ and more states appear to be waiting in the wings. In 2017, four state legislatures were actively considering new strict photo identification laws (Pickett 2017).

Because these laws focus on a core feature of democracy – determining who can and cannot vote - they have garnered considerable attention. Critics have vilified these laws as antidemocratic and anti-minority (Weiser 2014). From this perspective, strict voter ID laws have little purpose other than to limit the legitimate participation of racial and ethnic minorities and other disadvantaged groups and to bias outcomes in favor of the Republican legislators who pass them. If these detractors are correct, voter identification laws are having widespread consequences not only for who wins and who loses, but also for the representativeness and fairness of our democracy.

But on the other side of the debate supporters have been just as vocal. They argue that voter identification laws are necessary to reduce voter fraud and instill greater legitimacy in the democratic process (Kobach 2011). Supporters note that these laws are popular with the public, with a recent Gallup poll finding support for them among 80% of Americans.² Advocates also

¹ The laws passed in Arkansas, North Carolina, Pennsylvania, and Texas have been struck down by the courts.

² "Four in Five Americans Support Voter ID Laws, Early Voting" Gallup. August 22, 2016. http://www.gallup.com/poll/194741/four-five-americans-support-voter-laws-early-voting.aspx.

argue that voter identification laws do not reduce the participation of citizens because they do not prevent legitimate voters—almost all of whom have identification - from entering the voting booth. They also claim that for those who do not have valid identification, acquiring it is a small hurdle that is easily overcome. After listening to both sides of the debate, the only thing that is clear is that the stakes for American democracy are high and growing higher by the year.

In many ways, the courts have served as the primary battle site over these laws. Almost every strict ID law has been challenged in the courts. Critically, despite all of the legal proceedings, the constitutionality of these laws remains in question. Moreover, the fate of these laws is very likely to be adjudicated in the not too distant future. Many of these cases remain outstanding and more challenges to these laws are expected to emerge in the future. Practitioners and academics alike believe that the Supreme Court might offer a more definitive ruling in the near future.

At its heart, the constitutionality question seems to rest more than anything else on the balance between the burden that these laws pose on racial and ethnic minorities and the state's interests in the integrity of the electoral process. And that balance often seems to rest on the weight of the empirical evidence about the burden these laws pose to minorities. When the empirical evidence to document a substantial burden has been found wanting, the courts – including the Supreme Court – have generally ruled that these laws are constitutional.³ When in other cases, more convincing evidence of a real burden has been put forward, several courts have ruled against these laws.⁴

³ E.g. Crawford vs Marion County Election Board (2008).

⁴ E.g. United States Courts of Appeals for the Fourth Circuit No. 16-1468 (2016).

Unfortunately, despite all of the attention given to these laws, the empirical evidence is not yet entirely convincing one way or another. In particular, on the question of whether or not these laws have disproportionately impacted racial minority turnout, the results are somewhat mixed. Earlier studies tended to find fewer effects (Hood and Bullock 2012, De Alth 2009, Alvarez et al 2008, Mycoff et al 2009). More recent studies tend to demonstrate a racially disproportionate impact (Hajnal et al 2017, GAO 2014). There are reasons to put more weight on the recent studies but even the recent work remains incomplete.

In order to advance the empirical literature and to effectively contribute to the legal debate, any new study needs to address three critical flaws evident in much of the existing empirical studies. It must focus on recent elections and distinguish between strict photo ID laws and other less stringent ID laws, it must rely on official turnout data rather than on potentially problematic survey data as much of the research has done, and it must employ a research design that assesses change over time using a difference-in-difference approach to overcome inference problems that have plagued most existing studies.

In moving forward on all three fronts, this study contributes both to the empirical debate and to the legal discussion by providing concrete evidence about the consequences of voter identification laws for turnout among marginalized segments of the American public. Using official county voter turnout data from general elections between 2010 and 2016, we assess whether or not the implementation of these laws leads to disproportionate declines in racial and ethnic minority turnout. Specifically, we find that turnout in racially diverse counties declined faster in states that enacted strict photo identification laws for the first time than it did over the same time period in states that did not enact new strict ID laws. Moreover, the racial gap in turnout between more and less diverse counties grew more in the new strict ID states than it did

elsewhere over the same years. All of this also holds after controlling for other factors that could impact turnout across different states including partisan competition, state electoral laws, and county demographics. In other words, the evidence indicates that strict voter ID laws do discriminate.

The rest of the paper is structured as follows. First, we offer a brief review of the key legal decisions relating to voter identification laws and provide a more detailed account of the current state of legal reasoning on voter identification laws. Second, we review the empirical literature on voter ID laws. Third, we present our own empirical evidence by assessing changes in turnout in more and less diverse counties in states with and without new strict ID laws.

Voter Identification in the Courts

More than anywhere else, the battle for and against strict voter identification laws has been fought in the courts. Cases have been brought forward in nearly every state where strict ID laws have been passed. Those cases have resulted in a variety of often contradictory rulings. While strict identification laws in Arkansas, North Carolina, Pennsylvania, and Texas have been struck down by the courts, strict voter ID laws have been allowed to stand in other states. In some cases, Section 5 preclearance had been used to prevent these laws from being implemented.⁵ Laws in North Carolina, South Carolina, and Texas were (at least temporarily)

⁵ Section 5 – which was ruled unconstitutional by the Supreme Court in 2013- mandated that covered states and counties seeking to adopt or implement a change in their "standard, practice, or procedure with respect to voting" must have first obtained *preclearance* and must show that the desired change would not result in the discrimination based on race.

blocked this way. In others, litigants have used state laws guaranteeing the fundamental right to vote as a means to successfully challenge photo ID laws. The implementation of voter ID laws in Missouri, Arkansas, and Pennsylvania was halted through this type of litigation.⁶

In this mass of cases the courts have struggled to articulate a clear set of criteria delineating what is and what is not constitutional. But what has become more apparent over time is the important role that hard empirical evidence about racial burden can play in shaping court decisions (Overton 2007).⁷ An evaluation of the burden on minorities and other disadvantaged voters was central to the court's logic in the most important voter identification case: the Supreme Court's ruling in *Crawford v. Marion County Election Board*. In upholding Indiana's law and in affirming the constitutionality of voter ID laws the Court explicitly balanced the state's justification for the law against the burden that the law imposed on voters. As de Alth has characterized it, "Central to the Justices' debate and the applicable constitutional balancing test was the degree of the burden that the law imposes on voters" (2009:185). Notably because the plaintiff did "not provide any concrete evidence of the burden imposed on voters who currently lack photo identification," the balance fell toward the state's interest in protecting the integrity of

⁶ The 14th Amendment and Section 2 of the Voting Rights Act have also been employed to try to challenge voter ID laws.

⁷ In several rulings, courts have paid particularly close attention to the availability of valid identification across the population and the costs of obtaining new identification for those who do not have it. In assessing these costs, courts appear to have considered the number of locations that provide IDs, the geographic distribution of those locations, and the length of the process states require to obtain identification.

the election. A focus on the existence or non-existence of any empirical evidence about the burden on different segments of voters has been evident in many other more recent cases and is epitomized by Federal District Court Judge, Thomas D. Schroeder's 2016 decision on North Carolina's voter ID law. In upholding that state's voting requirements, Judge Schroeder concluded that no evidence had been produced to demonstrate that Blacks would be adversely affected. He ruled that "...minorities enjoy (an) equal and constitutionally compliant opportunity to participate in the electoral process" (Scott 2016). What this means is that new evidence that demonstrates an undue burden on minorities might hold sway. As de Alth notes, future litigants who can produce evidence of sharp, differential effects "will have a much stronger case to have these laws declared unconstitutional" (2009:185).

While the logic has not been fully articulated, the pattern of results seems to suggest that the core issue for the courts is the size of the burden and whether that burden disproportionately impacts racial and ethnic minorities. When courts have ruled in favor of voter ID laws, the rulings have often cited the lack of hard evidence of disproportionate burden. Without this evidence, the balance of the empirical case shifts in favor of the constitutionality of voter ID laws. Essentially without documented proof of the harm that these laws inflict on minority

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⁸ Research also indicates that the partisanship of judges matters in shaping court decisions on voter identification laws (Peretti 2016). Given the conservative majority in the current Supreme Court one might, therefore, predict that strict voter identification laws will ultimately be upheld. But the most recent decision by current court – not to take on the North Carolina case and in doing so effectively barring the North Carolina law from being implemented – makes any conclusion about future court decisions less certain.

voters, states are justified in implementing these laws in order to try to prevent fraud and instill greater legitimacy in the voting process. Given upcoming legal challenges, there is a chance that clear and objective empirical answers to the core voter identification questions could actually sway outcomes.

Existing Evaluations of Voter ID Laws

All of this begs for hard empirical evidence about the effects or non-effects of these laws. Fortunately, we now know a fair amount about the likely impact of these laws.

On the fraud side, the evidence is clear. Study after study has found little evidence of voter fraud in American elections (Minnite 2010, Ahlquist et al 2014, Levitt 2007). President Trump's own voter fraud commission that was convened to investigate the 2016 presidential election was dissolved less than one year into his presidency without producing any evidence that illegal and fraudulent voting was taking place. More specifically, evidence of voter impersonation – the type of fraud that voter identification is designed to prevent – is essentially nonexistent. All of this suggests strict identification laws are hardly justified on the basis of fraud prevention. The type of fraud prevention.

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⁹ "President Trump Dissolves His Voter Fraud Commission." Time Magazine. http://time.com/5087064/donald-trump-voter-fraud-commission-dissolved/. January 4, 2018.

¹⁰ Proponents of these laws do, however, note that these laws can also serve to increase legitimacy in the electoral process by assuring the public of the integrity of the process. Recent research, however, shows little effect of these laws on the public's views about electoral integrity

By contrast, there is ample evidence that significant shares of American citizens do not possess valid photo identification. Results vary by state, ID restrictions, and study, but the literature estimates that anywhere from 2 to 17 percent of the public does not have valid identification (GAO 2014, Stewart 2013, Ansolabehere 2012, Pastor et al 2010, Barreto et al 2009, Brennan Center 2006). More importantly for critics of these laws, the lack of proper identification is not evenly distributed across the population. Studies show that a lack of identification is particularly pronounced among the racial and ethnic minority population, the poor, and both the elderly and the young (GAO 2014, Ansolabehere 2014, Pastor et al 2010, Barreto et al 2007 but see Alvarez et al 2011). These patterns suggest that the burden of these laws will fall disproportionately on minorities and other disadvantaged segments of the population.

There is also clear evidence of the uneven implementation of these laws. Studies have also found that poll workers disproportionately ask minorities for identification (White et al 2015, Rogowski and Cohen 2014, Atkeson et al 2014, Cobb et al 2012, Page and Pitts 2009, Ansolabehere 2009 but see Stewart 2013). Moreover, racial differences appear even after ballots have been cast. Research indicates that in a small set of cases provisional ballots that should have been counted have ultimately not been included in vote tallies (Pitts 2013).

Analysis of which states do and do not pass these laws implies that there are both political and racial motivations behind the passage of these laws. Strict photo ID laws are passed almost exclusively in states controlled by Republicans and they tend to emerge in states with

⁽Stewart et al 2016). Nevertheless, it is clear that these laws are popular with the public (Stewart et al 2016, Gronke et al 2015, Atkeson et al 2014).

larger minority populations and greater partisan competition (Biggers and Hanmer 2017; Bentele and O'Brien 2013, Hicks et al 2015, McKee 2015, but see Rocha and Matsubayashi 2014). All of this evidence points to potentially widespread racial consequences.

But when studies go one critical step further and focus on voter turnout and seek to directly assess whether these laws reduce participation and skew the electorate in favor of one racial group over another, the results have been decidedly more mixed. The first studies to address these two questions suggested that the effects of voter identification laws on overall turnout were trivial or even non-existent (Ansolabehere 2009, Erikson and Minnite 2009, Mycoff et al 2009, 2007). As Mycoff and his coauthors put it, "voter identification laws do not affect turnout" (2009:121).¹²

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¹¹ At the individual level, black legislators are the least likely to support these laws (Hicks et al 2016).

¹² Other studies have looked more deeply at the different mechanisms through which voter identification laws could impact turnout. Clearly, the additional cost that voter ID laws impose on citizens without valid identification – acquiring an ID - suggests that at least some of these non-ID holders will be deterred from voting. But as some have suggested, the deterrent effect could extend to racial and ethnic minorities who do have valid identification but who feel targeted, disempowered, or confused by the laws (Hajnal et al 2017, Hobby et al 2015). On other hand, it is possible that the imposition of ID laws angers and mobilizes voters (Valentino and Neuner 2016). Finally, some have suggested that campaigns, candidates, and parties may behave differently after voter ID laws are passed either by increasing or decreasing mobilization efforts (Citrin et al 2014, Bright and Lynch 2017, Hopkins et al 2017). While all of these

But again the key question for the courts is not whether overall turnout declines but rather whether racial and ethnic minorities are disproportionately disadvantaged by these laws. In other words, does the racial gap in turnout increase when these laws are implemented? Early studies on this critical question also generally found no effects or at most inconsistent effects (Hood and Bullock 2012, De Alth 2009, Alvarez et al 2008, Mycoff et al 2009, Alvarez et al 2008). More recent studies do, however, present a different picture of these laws. In particular, a study by Hajnal et al. (2017) finds that "strict identification laws have a differentially negative impact on the turnout of racial and ethnic minorities." (2017: 377). Likewise, a detailed study by the Governmental Accountability Office (2014) found that racial and ethnic minority turnout declined more than white turnout when strict ID laws were enacted. And an unpublished study by Dropp (2013) found inconsistent but significant declines in minority turnout.

Given the mixed findings to date and given the importance of hard empirical evidence for the courts to decide the future of voter identification laws in the states, it is clear that we need more research. Or put more accurately, we need a stronger test that will provide greater insight into the impact of these laws on the minority population and in so doing offer more compelling results for the courts and policy makers.

A Stronger Test

One reason for the difference in findings between earlier and later studies seems clear.

Almost all of the research published before 2013 focused almost exclusively on the impact of

mechanisms could be at play, the only way to determine the ultimate impact of these laws is to directly assess total voter turnout after these laws have been implemented.

non-strict voter identification laws. That is understandable since the strictest versions of the laws were not implemented until recently. Nevertheless, given that citizens are generally able to vote without identification in these non-strict states, it is not surprising that these early studies found that they did not have much effect. The rapid and recent proliferation of strict ID laws means that any research that examines the vote in anything but the last few election cycles will miss most of the effects of these laws. The fact that recent studies that single out the states with strict voter identification laws tend to find greater effects should also not be surprising.¹³

Another potentially problematic factor in analyzing the effect of these laws is the accuracy of the turnout data. Almost all of the early research focused on self-reported turnout from survey data – usually the Current Population Survey. The problem is that substantial shares of the electorate over-report turnout (Ansolabehere and Hersh 2012, Silver et al 1986). Even more critically, those who over-report turnout differ by race and class from those who do not over-report turnout. Racial minorities, in particular, are particularly prone to over-report their participation in elections (Shaw et al 2000, Abramson and Clagget 1991). All of this makes it extremely difficult to assess the racial and class effects of voter ID laws using self-reported turnout. Again, it is perhaps not surprising that the few recent studies that do focus on the validated vote do find racial effects (Hajnal et al 2017, Dropp 2014).

Another concern with much of the research to date is methodological. As Highton (2017) and others have noted, most studies use cross-sectional data when assessing the impact of ID

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¹³ Rocha and Matsubayashi (2014) focus on more recent elections but like most early studies they do not single out strict ID laws and test for their effects. Instead, they lump together strict photo and non-strict photo states and find no effect.

laws but since states that pass these laws so clearly differ from states that do not, causal inference is difficult. The solution according to Highton (2017) and Erikson and Minnite (2009) is to focus on over time changes through a difference-in-difference approach.¹⁴

These lessons from existing literature suggest a path forward toward a more telling assessment of strict photo ID laws. That path forward includes new data on the most recent elections, official data on turnout that is not marred by over-reporting, and a more rigorous design that incorporates longitudinal data and a difference-in-difference test.

That is exactly what we seek to do in this article. Specifically, our analysis uses a difference-in-difference approach to compare turnout changes in states that recently implemented strict photo ID laws with turnout changes in states not implementing strict ID laws over the same time period. The main test focuses on turnout changes across the two most recent presidential elections in 2012 and 2016. Alabama, Mississippi, Virginia, and Wisconsin all implemented strict photo ID laws over this period. As a supplementary test we also examine turnout across two midterm elections between 2010 and 2014. During this earlier time period, Alabama, Kansas, Mississippi, Tennessee, Texas, and Virginia all switched to strict photo ID. We define a strict voter identification law as any electoral law that requires voters to present identification before their ballot will be officially counted. ¹⁵

¹⁴ A difference in difference design is not, however, the equivalent of an experimental design and cannot definitively demonstrate a causal relationship.

¹⁵ Alabama's law offers an alternative to a photo ID - having two election officials sign a sworn statement saying that they know the voter. But that alternative is so burdensome and likely to be so rarely available that it does not represent a viable alternative for most citizens in the state.

The core data are official county-level aggregate vote totals for all 3142 counties in the United States. Specifically, we compile voting age population turnout figures for each county in each election. To get at race, we merge county turnout data with 2010 Census data on the racial and ethnic makeup of each county. We assume that the greater the share of racial and ethnic minorities in a county, the more voter turnout is driven by racial and ethnic minority turnout. The test at its heart is direct and straightforward. To determine if the implementation of strict photo ID laws has a racially disparate impact, we look to see if turnout in racially diverse counties declines relative to turnout in predominantly white counties after a strict voter ID law is implemented. More critically, we assess whether the relative decline in diverse counties is more pronounced in states implementing strict photo ID laws than in similar states that do not enact a new law.

We perform that basic test in several different ways to ensure the robustness of our findings. First we single out and focus on relatively racially homogenous counties to see how turnout changes in these relatively extreme cases (both inside and outside of states moving to strict photo ID laws). Here we generally compare changes in states implementing strict photo ID laws to all

Thus, we code Alabama as a strict ID state. Coding for all other states matches the determinations of the National Conference of State Legislatures.

 $\underline{http://www.ncsl.org/research/elections-and-campaigns/voter-id.aspx}$

¹⁶ Data for the county level vote totals are from the Atlas of US Elections and the Congressional Ouarterly Voting and Election website.

¹⁷ To address migration into or out of the county, we also control for change in the county voting age population.

other states not implementing these laws, but in some cases we also match strict ID states with other states in the same region and compare turnout changes within the region.

We then undertake a more rigorous state fixed effects regression analysis that includes all counties in all states while controlling for a range of additional factors that could impact turnout. Specifically we look to see if the effect of racial diversity on turnout grows significantly more pronounced over time in states enacting strict ID laws than elsewhere. The control variables that we include in this regression analysis are detailed below.

There is one potentially important caveat related to the county-level data to consider. With aggregate data on turnout one cannot know for certain how individual members of different racial and ethnic groups are acting within each county. This is at the heart of the ecological fallacy problem. We cannot fully address this concern but later in the paper we begin to allay concerns about the ecological inference problem with two series of tests. First, we compare our results to individual turnout patterns by race in states that report turnout by race. Second, we compare our results to individual turnout patterns by race using national survey data. Both tests (included in the online appendix) suggest that we can study turnout by race by using aggregate county turnout in different kinds of counties.

Difference-in Difference Tests

The simplest and most intuitive test of the racial impact of strict ID laws is to look to see if turnout in racially diverse counties drops significantly more in states that implement a new strict photo ID law than it does in other states over the same time period. We begin with that test. We focus on change across the two most recent presidential elections. Between 2012 and

2016 four states -- Alabama, Mississippi, Virginia, and Wisconsin -- implemented strict photo ID laws. 18

To gauge changes in racial and ethnic minority turnout, we begin by focusing on two relatively racially homogenous sets of counties. As a first cut, we single out majority-minority counties. Then, we focus on counties where racial and ethnic minorities make up at least 75 percent of the population to isolate racial and ethnic minority turnout even more. We call these overwhelmingly minority counties.

The results of our analysis of minority turnout which are displayed in Table 1 are clear. ²⁰ Turnout in majority-minorities counties declined significantly more in states that enacted strict ID laws than it did elsewhere over the same time. Between 2012 and 2016, turnout declined 5.3 percentage points in majority-minority counties in Alabama, Mississippi, Virginia, and Wisconsin after those states enacted strict photo ID laws. Turnout in majority-minority counties

¹⁸ We examine change across Presidential election years to help rule out differences between presidential and midterm elections that could shape turnout

¹⁹ On average racial and ethnic minorities make up 65 percent of the population in majority-minority counties.

²⁰ One can also conduct a basic difference-in-differences test by running regressions where county turnout in each year is the dependent variable and the regression includes a triple-interaction between the year of the election, whether a state implemented a strict ID law, and whether the county is racially diverse. The results of this alternate difference-in-differences test are detailed in the online appendix. It shows once again that implementing strict ID laws has a disproportionately negative effect on turnout in diverse counties.

declined in other states over the same time period but the decline was not nearly as robust (0.6 percentage points). The 4.7 percentage points difference-in-difference is both substantively important and highly significant (p<.001).

Table 1. Comparing Turnout Changes in Majority-Minority Counties in States Enacting New Strict ID Laws to Changes in States with No Strict ID Law (2012-2016) **Turnout Differential** Change Change **Majority-Minority Counties States Implementing Strict ID Laws** -5.3% **States Without Strict ID Laws** -0.6 **Difference** 4.7%** **Overwhelmingly Minority Counties (>75% minority) States Implementing Strict ID Laws** -7.8% **States Without Strict ID Laws** -0.2Difference 7.7%**

Moreover, it does not matter how we single out racially diverse counties. In fact, the more racially homogenous the county, the greater the difference between newly strict ID states and other states. Specifically, when we focus on counties where 75 percent or more of the population is non-white, we find that turnout drops 7.7 points more in newly strict ID states from 2012 to 2016 than it does elsewhere. Again that difference-in-difference is both substantively large and statistically significant (p<.001).

^{**} Indicates difference is significant at the .01 level (99 percent confidence)

^{*} Indicates difference is significant at the .05 level (95 percent confidence)

²¹ Similarly, it does not matter whether we include or exclude states that already have strict photo ID laws in place. Adding states that enacted strict ID laws before 2012 does not alter the pattern of results.

While it is helpful to look at majority-minority counties in isolation, we also compare turnout in diverse counties to turnout in predominantly white counties to get more directly at the question of whether strict ID laws have a racially disparate impact. We do so in Table 2. The table assesses change over the same time period from 2012 to 2016 but this time it shows the *relative* change in turnout in majority-minority and in majority-white counties. The question here is: are racial and ethnic minorities falling further behind whites in states that enact strict ID laws than they are in states that do not enact those laws over the same time period?

To assess white turnout, we single out two sets of counties. First, to parallel the majority-minority counties we examined earlier, we focus on turnout in majority-white counties.²² Second, we couple the overwhelmingly minority counties where the cut-off is over 75 percent non-white with overwhelmingly white counties where the cut-off is over 75 percent white.

As Table 2 reveals, turnout in racially diverse counties fell relative to turnout in white counties in a more pronounced way in states enacting strict ID laws than it did in other states without strict ID laws over the same time period. Looking first at just the four states implementing strict photo ID laws between 2012 and 2016, we see that turnout in majority-minority counties fell 4.2 points more than turnout in majority-white counties. In other words, when strict ID laws were introduced racial and ethnic minority turnout dropped significantly more than white turnout.²³

²² In these majority white counties whites make up on average 83.8 percent of the population.

²³ The 4.2 point difference between change in majority-minority and change in majority-white counties in states enacting strict ID laws is significant (p<.001). So too is the 7.6 point

Table 2. Comparing Relative Turnout Changes in More and Less Racially Diverse Counties in States with New Strict ID laws to Relative Changes in Other States (2012-2016) Differential Turnout Change Change Majority-Minority vs Majority White Counties **States Implementing Strict ID Laws** -4.2% **States Without Strict ID Laws** -1.9% -2.3%** **Difference** Overwhelmingly Minority vs Overwhelmingly White Counties **States Implementing Strict ID Laws** -7.6% **States Without Strict ID Laws** -1.7% **Difference** -5.9%**

But what is even more critical is that the gap between majority-minority and majority white counties grew more in states that adopted strict ID laws than it did in other states. Turnout in majority-minority counties also fell relative to turnout in majority-white counties in states that did not enact strict ID laws but the relative drop was much less pronounced – a 4.2 point increase in the racial gap in newly strict states vs a 1.9 point increase in the gap in non-strict states. ²⁴ The net result is that turnout in racially diverse counties fell further behind that of white districts

difference between overwhelmingly minority and overwhelmingly white counties in those same states (see bottom of Table 2).

^{**} Indicates difference is significant at the .01 level (99 percent confidence)

^{*} Indicates difference is significant at the .05 level (95 percent confidence)

²⁴ It is important to remember that changes at the national level also cannot explain the especially pronounced racial shifts in strict ID states over this time period. Yes, Barack Obama was no longer on the ballot after 2012, and that fact may have depressed minority turnout. And yes, Donald Trump was on the ballot in 2016, and that fact may have energized white voters. But both of these things were occurring in all states.

more in newly strict ID states than in other states. The 2.3 point difference-in-difference is substantively meaningful and statistically significant (p<.001). This is clear evidence of a racially disparate impact.

Focusing on the bottom half of Table 2 we see that the decline in minority turnout (relative to white turnout) in strict ID states is even more pronounced when we limit the analysis to overwhelmingly minority and overwhelmingly white counties. In strict ID states, turnout in overwhelmingly minority counties drops 7.6 points more on average than it does in overwhelmingly white counties. This difference is once again substantively important and significant (p<.001). Even more critically, the gap between minority and white counties grew 5.9 points more in strict ID states than it did in states that did not adopt strict ID laws over the same time period. This difference-in-difference again points clearly to a racially discriminatory law.

It is worth adding that we can conduct these difference-in-difference tests in a more formal way through a series of regressions which include interaction terms which explicitly compare turnout changes in racially diverse inside vs. outside of states with newly implemented strict ID laws. Those tests, which are displayed in the Online Appendix, confirm that minorities were falling significantly faster behind whites in states adopting strict ID laws than elsewhere.

Testing the Impact of ID Laws Controlling for Other Factors

The bivariate difference-in-difference results provide compelling evidence of strict voter identification laws' racially disparate impact. But they may not be convincing to all. Critics can claim that we have not controlled for all of the different factors that are known to drive turnout. If there are events in states that enact strict ID laws that occur simultaneously with the

implementation of the strict ID laws or if there are events over the same time period in states that do not enact strict ID laws and if these events lead to racially disparate racial shifts in turnout for either subset of states, then it is at least conceivable that the patterns we have seen so far are driven not by strict ID laws but instead by these other 'events.' It is hard to imagine what these events are but we can begin to eliminate this potential concern by incorporating into our analysis the main range of factors that drive turnout. In this next section we do exactly that.

The test is straightforward. We look to see what predicts *changes* in turnout in each county in the United States between 2012 and 2016. The key variable here is the interaction between the racial demographics of a given county and the implementation of a new strict ID law in the state. In essence, we test whether turnout declines significantly more in racially diverse counties relative to less diverse counties in states that enact strict ID laws over this period than it does in other states. In other words, does the effect of racial diversity on turnout grow significantly more pronounced over time in states enacting strict ID laws than elsewhere?

In order to try to ensure that any changes in the impact of race in strict photo ID states over this time period are, in fact, driven by the implementation of the law itself, we control for three different sets of factors that could impact turnout. These are state-level electoral conditions, state electoral laws, and demographic characteristics.

To account for state level electoral conditions we incorporate controls for the share of the state's population that identifies as Democratic, the amount of campaign spending in the state in the federal election, the margin of victory in the state in the most recent presidential election, partisan control of the state Senate, House, and Governor's office, whether or not statewide contests are being contested, whether or not statewide contests are open seats, and candidate vote

shares in statewide contests. ²⁵ To control for the fact that state electoral laws beyond voter ID might impact turnout, we also control for the registration deadline and whether or not the state has early voting, vote-by-mail, no excuse absentee ballots, and same day registration. ²⁶ In terms of county-level demographics, we control for educational makeup (percent of adults with a bachelor's degrees), income (median income), age distribution (median age), gender (percent female), economic conditions (unemployment rate), family structure (share of households with

(Cooperative Congressional Election Study), the amount of campaign spending in the state in the

federal election (Federal Election Commission).

²⁵ Data on partisan and electoral competition come from the following sources: the presence of a

Senatorial contest on the ballot in the state, the presence of Gubernatorial election on the ballot in the state, whether the Senatorial contest is uncontested, and whether the Gubernatorial election is uncontested (David Leip's Atlas of U.S. Elections); whether the Senatorial election has an incumbent running, whether the Gubernatorial election has an incumbent running (Cooperative Congressional Election Study); which party is the majority in the state Senate, which party is the majority in state House, which party controls the Governor's office, the Democratic share of seats in the state Senate, and the Democratic share of seats in the state House (National Conference of State Legislators); the margin of victory in the state in the most recent presidential election (Ballotopedia.org); the share of the state's population that identifies as Democratic

²⁶ Data on state electoral laws come from the following sources: early voting, vote-by-mail, no excuse absentee ballots, the deadline for registering for the election (National Conference of State Legislators); registration deadline (mytimetovote.com). All of these variables measure change from the first year of the analysis to the last.

children), and religion (percent Protestant, percent Catholic, and percent Jewish) of each county.²⁷

If these political, electoral, or demographic factors were driving the racially disparate shifts in turnout in strict ID states, controlling for them would eliminate the difference between strict ID states and other states. But as Table 3 shows that difference does not disappear. The table presents the results of a series of regressions which control for different sets of factors. The first model contains only the race and strict ID state interactions and incorporates no controls. The second model controls for county demographics. The third controls for state electoral context and state electoral laws in both 2012 and 2016. The fourth controls for *changes* in state electoral context and *changes* in state electoral laws between 2012 and 2016 and adds state fixed effects to account for any factors that are constant in each state.²⁸ The last model has county turnout in 2016 as the dependent variable and includes county turnout in 2012 as a lagged independent variable. For brevity purposes only the key interaction terms are included in Table 3. The full

²⁷ County demographic data are from the 2010 Census except the unemployment rate (American Community Survey 2010, 5 year estimate), and religion (2010 Religious Congregations and Membership Study).

²⁸ If a state was more Republican or more hostile to minority voting rights in ways that we did not measure, or in ways that are not measurable at all, that difference would be accounted for in the fixed effects model. In the end, the fixed effects model should tell us how turnout differs from the norm in each individual state when voter ID laws are enacted. In that way, the model should get us closer to an estimate of the change that is attributable specifically to the implementation of strict voter ID laws.

regressions are included in the Online Appendix. Regressions include standard errors clustered at the state level and are weighted by county population size.²⁹

As can be seen in Table 3, no matter what factors we control for, the racially differential effect of strict photo ID laws remains robust. After incorporating the entire range of factors that are known to shape turnout, the analysis shows that the key interaction term between the racial and ethnic minority share of a county and the implementation of a strict ID law in that state is negative and significant for all of the models. Substantively, this means that after Alabama, Mississippi, Virginia, and Wisconsin instituted their strict photo ID laws, the turnout of minorities – relative to the turnout of whites – declined in a significantly more pronounced way in those states between 2012 and 2016 than it did in other states. In other words, the implementation of strict ID laws had a particularly negative impact on racial and ethnic minorities.

Table 3. Testing the Racial Disparate of Strict Photo ID Laws: 2012-2016								
	C	2016 Turnout (w/ lagged 2012 turnout)						
Percent Minority * New Strict States	058 (.021)**	039 (.017)*	049 (.019)**	060 (.020)**	0314 (.015)*			
Percent Minority	009 (.009)	006 (.012)	015 (.014)	037 (.013)**	056 (.008)**			
New Strict States	018 (.014)	020 (.013)	018 (.006)**	044 (.006)**	026 (.005)**			
R Squared	.16	.27	.47	.66	.98			

²⁹ Since we want to assess the impact of the switch to strict ID laws, we drop all states that had already implemented strict photo ID laws by 2012. If, however, we include states that already have strict photo ID laws in 2012, our core results do not change.

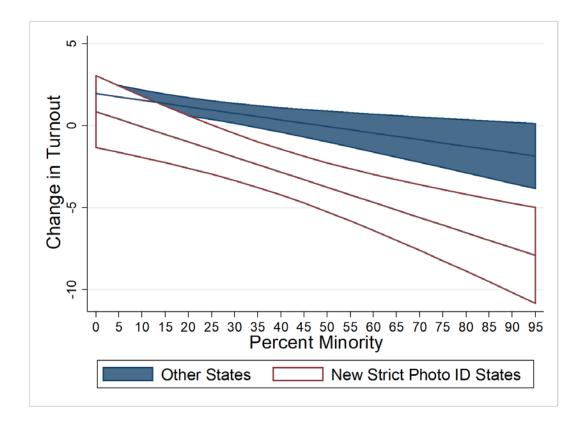
Number of Observations	2653	2652	2599	2599	2599
Controlling for County Demographics	N	Y	Y	Y	Y
Controlling for State Political Context and State Electoral Laws in Both Years	N	N	Y	N	N
Controlling for Changes in State Political Context and State Electoral Laws (with State Fixed Effects)	N	N	N	Y	Y
Dropping States With Existing Strict ID Laws	N	N	N	Υ	Y
2016 Turnout as DV with 2012 Turnout as IV	N	N	N	Y	Y

Figures are the regression coefficient and the standard error in parantheses.

That negative impact is illustrated in Figure 1. The figure shows the predicted change in turnout for counties at different levels of racial diversity. It contrasts the effect of racial diversity in states with new implemented strict photo ID laws with the effect of racial diversity in other states. The solid lines illustrate the predicted effect of increasing racial diversity on changes in county turnout. The red line represents the effect of racial diversity on changes in turnout in newly strict states net of all controls. The blue line represents the effect of racial diversity on changes in turnout in other states net of all controls. The colored region around each line represent the 95% confidence intervals.

^{**} Indicates difference is significant at the .01 level (99 percent confidence)

Figure 1. The Effect of Strict Photo ID Laws on Relative Changes in Minority and White Turnout—Comparing Changes in Newly Strict ID States to Changes in Other States (2012-2016)



Starting first with newly enacted strict ID states (the red line), we see that—all else equal—after those states implemented their strict voter ID law, turnout in those states' most racially diverse counties declined by almost 8 percentage points, while turnout in the least diverse counties actually increased by over 1 percentage point. In contrast, in other states without strict ID laws (the blue line) racial and ethnic diversity played a much more minor role in predicting changes in turnout. In non-strict states, turnout dropped only about 2 percentage

points more in the most racially diverse counties than it did in the whitest counties.³⁰ Critically, all of these effects are evident after controlling for other factors—partisan competition, electoral laws, and core demographics—that could have driven turnout either inside or outside of the state. All of this indicates that the implementation of the strict photo identification laws had a disparately negative impact on minority turnout in the state.

Robustness Checks

Both as a check on the robustness of these results and to investigate a little more deeply which individual states and groups were most impacted by strict ID laws, we engaged in a series of different tests that more deeply examined the relationship between the implementation of strict ID laws and turnout..

A different way to assess the impact of strict ID laws on the states that pass them is to compare counties in those states to other comparable counties outside those states. The most systematic way to do so is propensity score matching - a tool that essentially tries to create a sample of non-treated units (in this case counties without new strict ID laws) that are comparable to the treated counties on key covariates. We undertook three different versions of propensity score matching analysis each of which matched on different factors at either the county or state

intervals do not overlap for more diverse counties).

³⁰ Also worth noting in the figure is that while we do not know if changes in white turnout in strict ID states were different than changes in white turnout in non-strict ID states (the two confidence intervals overlap when diversity is low), it is clear that turnout among racial and ethnic minorities dropped much more in strict ID states than in other states (the two confidence

levels. That propensity score matching analysis (which is displayed and described in more detail in the online appendix) confirms our original analysis and shows that the implementation of strict photo ID laws has a disproportionate impact on racially diverse counties even when counties are matched on key demographic and electoral variables.

One underlying assumption in our basic difference-in-differences test is that before the passage of strict ID laws states that implemented strict ID laws experienced similar trends in turnout to states that did not implement these laws. We addressed this parallel trends assumption by appending county turnout data from 2000 to 2008. We then created a matched data set and re-ran the difference-in-differences test on that matched data. That analysis not only shows that there are parallel trends pre-treatment but also demonstrates a robust effect of strict ID laws on racially diverse counties. That analysis is displayed and detailed in the online appendix.

Also, because our analysis incorporates data from different units of analysis (counties are nested within states), we might want to explicitly account for variation at both levels. Thus, we re-ran the core empirical tests with a hierarchical linear model. As the online appendix shows, that alternative modeling leads to exactly the same results – passing strict ID laws has a disproportionately negative impact on more diverse areas.

Given that strict photo ID laws are passed almost exclusively by Republican dominated states, we explore whether states implementing strict ID laws stood out even from their Republican counterparts in states without voter ID laws. The answer is yes. Even when we include only Republican controlled states in the regression analysis (states where Republicans control the state legislature and the governor's office), we still find that states enacting strict ID laws experienced a particularly pronounced racial shift in turnout. Racial and ethnic minority

voters' turnout declined in all Republican dominated states over this period, but fell even more in Republican controlled states that enacted strict ID laws (see the Online Appendix).³¹

We have, to this point, looked at the average effect of strict ID laws across all states that implemented them recently. We might, however, want to see if the impact of these laws varies greatly from state to state or if instead we see a fairly robust, consistent impact across all four of the states that implemented a new ID law. When we repeated the analysis, state-by-state, we find closer to a consistent effect (analysis displayed in the online appendix). Alabama, Mississippi, Wisconsin, and Virginia all experienced exceptionally high declines in turnout in racial diverse counties (relative to largely white counties) after those states instituted strict photo ID laws and that racial difference was significantly greater in those states than in other states that did not pass a strict ID law. The magnitude of the effect was slightly smaller in Virginia but that makes sense given that Virginia shifted only shifted from a strict non-photo law to a strict photo law while the other states experienced more dramatic shifts from non-strict to strict ID laws.

As an additional robustness check, we looked outside of our main data set and time period to see if the transition to strict ID laws over a second time period between 2010 and 2014 led to a similar pattern of results. The answer is largely yes. The pattern is not as stark nor as consistently robust, but we do find that states that put in place strict ID laws between 2010 and 2014 tended to experience sharper declines in turnout in racially diverse counties than did states that did not enact strict ID laws over this earlier period. As the Online Appendix details, most of our tests show that the implementation of strict photo ID laws in Alabama, Kansas, Mississippi,

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³¹ Another way to limit the analysis is to match states within each region. Specifically, we compare Wisconsin to other Midwestern states and Alabama, Mississippi, and Virginia to other southern states. Those results generally confirmed our overall story. See online appendix.

Tennessee, Texas, and Virginia led to especially pronounced declines in turnout in racially diverse counties relative to other non-strict ID states.

Interestingly, the magnitude of the effect was smaller in the 2010 to 2014 time period than it was in the 2012 to 2016 period. We do not know why that is the case. It is certainly possible that counter-mobilization efforts within the racial and ethnic minority population were greater in the earlier time period (Valentino et al 2015; Citrin et al 2014). It could also be that the presence of strict ID laws interacted with a depressing minority electoral context in 2016 (the end of the Obama era and the rise of Trump) to heighten the effect of these laws. Yet another possibility is that the four strict ID laws implemented before 2016 were more effective at weeding out minority voters than were the six laws that were implemented before 2014.

We also attempted to drill down further to see if strict ID laws had particularly negative implications for either African Americans or Latinos. Those tests -which are detailed in the online appendix – do not point clearly to one minority group or the other. Combining all of the states that switched to strict ID laws together, we found that the implementation of strict photo ID laws appears to have to have had the greatest impact on turnout in heavily Latino counties – a finding that mirrors the results in Hajnal et al (2017).³² But looking at each state individually, there are signs of a negative impact both for heavily African American counties as well as for heavily Latino counties. Unfortunately, because there are relatively few majority Black counties and relatively few majority Latino counties within each state, distinguishing the impact of strict ID laws within the minority population is more difficult and clear conclusions are less evident.

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³² By contrast, when we performed similar tests with the 2010-2014 time period, there were signs that heavily African American counties were more negatively impacted than heavily Latino counties in states enacting strict ID laws.

We are less confident about which minority group is most impacted than we are that racial and ethnic minorities in general are hurt by these laws.

Ecological Inference Concerns

One last concern relates to the aggregate nature of our data. As we noted earlier in the paper, in using aggregate data on turnout by county we cannot know for certain how individual members of different racial and ethnic groups are acting within each county. We cannot definitively solve this ecological inference problem but we can begin to allay concerns about ecological inference two ways. First, we compared turnout patterns using individual turnout data by race in states that report turnout by race with our county level turnout patterns. Specifically, focusing on North Carolina, we find that aggregate turnout in relatively racially homogenous counties accurately reflects the individual behavior of the dominant racial/ethnic groups in those counties. In particular, aggregate turnout in majority-minority counties closely approximates minority turnout in those counties and aggregate turnout in overwhelmingly white counties closely approximates white turnout in those counties (see the online appendix for more detailed results). This suggests that we can study turnout by race by using aggregate county turnout in different kinds of counties.

Secondly, we gathered individual survey data so that we could compare our current aggregate county turnout patterns to results using individual level data. Specifically, using data on the validated vote from the 2012 and 2016 Cooperative Congressional Election Surveys, we analyzed the impact of strict voter identification laws on turnout of different racial and ethnic groups. The effect of the implementation of strict voter ID laws in Alabama, Mississippi, Virginia, and Wisconsin using individual survey data mirrored the pattern we found here (see

online appendix). In particular, the gap between white and non-white turnout increased more in states enacting new strict ID laws than it did in other states. Specifically, the analysis indicates that all else equal, the probability of a racial and ethnic minority registered voter turning out to vote declined by eleven percent more in states enacting a new strict ID state in 2016 than it did elsewhere. This pattern also held up when we controlled for other individual demographic factors. (see the online appendix for more detailed results).

Ultimately, we cannot know for certain what individual behavior looks like based solely on the county level data that we have examined for most of this article but there are very strong signs that the racially disproportionate impact we see here is repeated when we examine individual turnout data by race. By all available measures, strict ID laws appear to discriminate.

Implications

Voter ID laws are becoming more common and more strict. In 2013 alone, legislators in six states moved to strengthen their voter ID laws. Today, eleven states have a strict voter ID requirement in place. Moreover, the fate of these laws is far from certain. Almost every strict ID requirement has been challenged in the courts and many of these cases remain outstanding. More challenges to these laws are likely to emerge in the future. And despite all of the legal proceedings, the constitutionality of these laws remains in question. The stakes for American democracy are high and growing higher by the year.

The answer to that constitutionality question may well be tipped one way or the other by the weight of the empirical evidence about the burden these laws pose on minorities. All of this means that there is a desperate need for hard evidence. Clear, objective, and empirical answers to the core voter identification debates could actually sway outcomes.

In this article, we have attempted to provide some of those hard empirical answers. By focusing on data from recent elections after strict photo ID laws have been widely implemented, by using official turnout data to eliminate concerns over inflated and biased turnout patterns from self-reported survey data, and by employing a research design that incorporates longitudinal data and a difference-in-difference tests, our analysis overcomes many of the core problems faced by previous studies. As such, our study offers a more definitive test of these laws.

The findings presented here strongly suggest that these laws do, in fact, represent a major burden that disproportionately affects minorities and significantly alters the makeup of the voting population. Where these laws are enacted, turnout in racially diverse counties declines, it declines more than in less diverse areas, and it declines more sharply than it does in other states. As a result of these laws, the voices of Latinos, African Americans, Asian Americans, and other minorities become more muted and the relative influence of white America grows. An already significant racial skew in American democracy becomes all the more pronounced. If courts are indeed trying to gauge the burden these laws impose on minorities and others, then this new data should help the courts with their deliberations.

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