Demonstrating the (In)Effectiveness of Electoral Reforms

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Abstract

Have electoral reforms to reduce the incumbency advantage worked as intended? I articulate a theory wherein reforms may contribute to a weakening incumbency advantage, or may counterintuitively weaken challengers by changing party incentives. Combining causal inference techniques on a set of 70,000 U.S. state legislative elections, I estimate changes to the annual incumbency effect after the implementation of two popular reforms, term limits and staffing cuts. This test arbitrates between two competing expectations of how reforms should change the incumbency effect. My findings show that the reforms did not work as intended. The incumbency effect grew faster in term-limited states than in states without term limits, while staff cuts failed to slow the growth of the incumbency effect. I conclude that party incentives ought to be considered when citizens engage in future policy reforms regarding the incumbency advantage.

Keywords: Incumbency Advantage, Candidate Entry, Electoral Reforms

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Electoral competition is central to representative democracy. The contestation of ideas allows parties to represent the electorate's wishes. This system of governance relies on constituents' ability to replace their elected officials; without the possibility of replacement, parties and officeholders may ignore the will of the electorate. Yet lawmakers have seized on sizeable incumbency advantages to insulate themselves from threats to holding office. Public dissatisfaction with elected institutions is therefore palpable.[1] In response, citizens have innovated in an attempt to induce competition.

One mechanism for weakening entrenched officeholders is to change the electoral rules that give incumbents an advantage over challengers, thereby reducing the benefits of holding public office. Reformers thought they would encourage competition by removing these benefits. But do reforms work as intended? Removing perks from individual incumbents may shift the priorities of the incumbent lawmaker's party, resulting in strategic party actors diverting scarce resources from their party's promising challengers to defend the party's vulnerable incumbents elsewhere. Consequently, challengers may underperform, while incumbents defend their seats as easily as before.

I outline a theory of two competing expectations of reform. First, I argue that reforms should reduce the incumbency effect by reducing the capacity to compete in re-elections (Chen and Niou, 2005; Berry, Berkman, and Schneiderman, 2000). Reforms remove benefits of incumbency that weaken their re-election campaigns. Removal of these benefits allows challengers to compete on resources and wage equivalent campaigns. By contrast, I argue that challengers experience relative electoral deprivation due to reform, thereby maintaining the incumbency effect (Rogers, 2014; Levitt and Wolfram, 1997; Jacobson and Kernell, 1983). Reforms did not account for the priorities of risk-averse parties, who possess scarce resources and must prioritize which seats to contest. Incumbents turn to parties to compensate for the lost benefit of incumbency. Parties redirect resources from challengers to incumbents, weakening challengers. If reforms worked as intended, the incumbency effect should be smaller where the reform was in place. If reforms did not work as intended, the incumbency effect should be the same or larger where reforms were in place. The objective of this paper is to identify which expectation is correct.

[1] A 2017 Rasmussen survey found that 59 percent of American voters believe that local officials can be bribed for less than $10,000 (Rasmussen, 2017), while a 2017 YouGov poll found that only 13% of Britons trusted politicians over civil servants (YouGov, 2017).

The US context provides a useful case to test these competing expectations. Two popular policies – legislative term limits and reductions in legislative staffing – were implemented in American state legislatures during the 1990s and 2000s. Advocates cast the case for term limits explicitly as a mechanism to lessen the electoral potency of incumbency. According to Liedl: "The 1990 [U.S] congressional elections could not have demonstrated a more compelling case for term limits. With public outrage and disgust with Congress at all-time highs, voters reelected [incumbents] at a rate exceeding 96 percent" (Liedl, 1990). Another stated that term limits would "counterbalance incumbent advantages...which inevitably aid incumbents," while lowering legislative staff would reduce the time staffers "perform all sorts of jobs unrelated to legislation but closely tied to reelection" (Greenberg, 1994). A Cato Institute memo argued that term limits "would create more competitive elections...[and] also reestablish a citizen legislature" (Bandow, 1995).

Testing the effectiveness of these changes requires the right empirical tools to identify the cause of any reform. I combine two causal inference techniques – regression discontinuity and difference-in-differences – in a novel way to leverage over 70,000 elections (Klarner et al., 2011). This new approach overcomes selection bias and nonrandom assignment when studying the incumbency advantage under two electoral reforms – term limits and staffing cuts. This test provides a blueprint for applying causal inference techniques to identify the effects of reform – causal inference can demonstrate decisively if changes to the incumbency effect were caused by reform.

I find that the reforms did not work as intended. While incumbents may have been inconvenienced, the incumbency effect grew even in the presence of reform, and often grew larger in states that adopted reform. States that implemented term limits saw their incumbency effect grow 3.5 percentage points, compared to 1.6 percentage points in states that did not implement term limits. In states that cut staff, the incumbency effect grew, but grew at a rate 1.1 percentage points smaller than when states added staff. Difference-in-differences measures find little support for the expectation that reform harmed incumbents more than reform harmed challengers.

These findings imply that term limits and staffing cuts reduced challengers' capacity to wage competitive campaigns. It appears that changes to candidate capacity vis term limits and staffing cuts disproportionately impacted challengers, consistent with arguments on the unintended consequences of electoral reform (McGhee and Shor, 2017; Kousser, Phillips, and Shor, 2016; Rogers, 2014; Nalder, 2007; B. Cain, Hanley, and Kousser, 2006; Siavelis, 1997). While discussion of the incumbency advantage focuses on the benefits of holding office, I show that the obstacles faced by challengers may drive growing disparities between incumbents and challengers (Stone et al., 2010; Ashworth and Bueno de Mesquita, 2008; Maestas, Fulton, et al., 2006; Osborne and Slivinski, 1996; Carey and Shugart, 1995).

An additional 0.5-1 percentage point boost for vulnerable incumbents could deter hundreds of quality challengers from entering politics, making incumbents more willing to pursue the preferences of their activist base rather than those of the general electorate. Future work on incumbency would benefit from modeling both candidate entry and incumbency benefits. Without clearly articulating the sources of the incumbency effect, remedies will fail to adjust the underlying structural problems of polarization, corruption, or gridlock.

1 The Competing Expectations of Reform

The sources of the incumbency advantage – the increase in the incumbent party's vote share due to having an incumbent lawmaker in office – are up for debate, but its durability is not (Stone et al., 2010; Ansolabehere and Snyder, 2004; Abramowitz, 1991; Jacobson, 1987). Incumbents win more votes due to higher name recognition, franking privileges, and their ability to provide pork or conduct casework for their constituents (Lee, 2008; Levitt and Wolfram, 1997; Jewell and Breaux, 1988). Furthermore, incumbents have qualities other than their status as incumbents that make them attractive to voters (Carey, Niemi, and Powell, 2000); incumbents win when the economy is good (Uppal, 2009; Fiorina, 1981), when they offer clear partisan or ideological contrasts with their opponents (Erikson and Wright, 2013; Kim and LeVeck, 2013), and when they respond to constituents' policy concerns (Hogan, 2008). Recent scholarship finds a substantial general-election incumbency advantage in a variety of electoral contexts (Eggers, Fowler, et al., 2015; Uppal, 2010; Lee, 2008).

1.1 Weaker Incumbency Hypothesis

The resilience of the incumbency advantage spurs periodic calls for changes to electoral rules (Pilon, 1994; Greenberg, 1994; Bandow, 1995). These reforms can include term limits barring legislators from running for office in perpetuity, restricting campaign contribution totals, cutting access to legislative staff, alternative voting procedures, or allowing equal access on television. Advocates hail these changes as ways to promote fairness in elections, or to sever the ties between interest groups and politicians (Calvo and Micozzi, 2005; Greenberg, 1994). The eventual goal is to weaken incumbents, pave the way for more frequent alternations in power, and increase contestation between parties and ideologies (Bandow, 1995). In so doing, careerist-minded incumbents would leave, careerist-minded challengers would remain in the private sector, and lower-quality candidates would facilitate competition. These lower-quality candidates would ideally enter public service for one or two terms and leave once their goals were accomplished. I propose the *Weaker Incumbency* Hypothesis wherein reforms weaken incumbent vote share. Below, I articulate how reforms would work to weaken incumbents.

Reforms remove benefits of incumbency that provide important electoral advantages to incumbents (Caress and Kunioka, 2012; Carey, Niemi, and Powell, 2009; Pilon, 1994). For example, an incumbent legislator who can run for the same office forever will build a campaign infrastructure – maintaining campaign offices, a network of paid and volunteer canvassers, paid advertising and polling consultants – that permit the lawmaker to rapidly and efficiently restart campaign efforts. Lawmakers can leverage benefits into a more comprehensive re-election campaign, which should improve their vote share, and consequently the incumbency advantage. Removal of a benefit restructures legislator incentives toward other functions of legislating. An incumbent lawmaker who may no longer run for office will not maintain said campaign infrastructure, as it is not useful. Instead, incumbent legislators should shift attention toward policymaking (Carey, 1998).

New cohorts of lawmakers' incentives should reorient from careerism to a citizen-legislator model of candidacy. Careerists see re-election and advancement as primary goals; as such, their priorities include maximizing vote share. By contrast, citizen-legislators see office as a vehicle for implementing policy change before returning to their former lives. They do not maximize the benefits of incumbency, as lawmakers cannot, nor intend to, win re-election once they achieve their goals. Reformers believe that newly-elected lawmakers pass policies their constituents want and subsequently retire from public office. Passing reforms to weaken incumbents should incapacitate remaining careerists while simultaneously reducing the number of careerists outright.

Legislators who do not use the benefits of incumbency – or retire after one or two terms due to the new incentive structure – should see their incumbency advantage decline. Running less efficient and less comprehensive campaigns, incumbents will be weaker than before. Their challengers will be relatively better off, reducing the incumbency advantage.

1.2 Stronger Incumbency Hypothesis

Yet these same reforms may produce counterintuitive outcomes by changing the relationship between incumbent lawmakers and their party. Parties act as coordinating mechanisms for candidates (Johnston and Pattie, 2007; Aldrich, 1995). One major electoral goal of a party is to maximize its number of seats in the legislature (Snyder, 1989). Party leaders, when deciding how to allocate campaign resources, choose between protecting vulnerable incumbents, or boosting quality candidates challenging other seats. Parties prioritize holding existing seats over winning new seats, all else equal; incumbents have already shown they can win elections, making them a "safer bet." The loss of incumbent benefits forces parties to divert resources from challengers to incumbents, diminishing the resources available for winning new seats. I propose the *Stronger Incumbency* Hypothesis wherein reforms strengthens incumbent vote share. Below, I articulate how reforms might work against the goals of reformers.

Reform may deter challengers, due to the way reforms restructure the incentives and priorities of parties. Parties coordinate with their incumbent and challenger candidates to maximize seats, but have limited resources. Parties' behavior should change in two ways: the timing of challenger entry and diverting resources to incumbents. Both result in the deprivation of resources to challengers.

First, parties adapt by focusing when candidates challenge incumbents. Running for office is costly. Campaigns require investments of time, as candidates solicit donations, meet and persuade voters, host rallies, create advertisements, and speak with journalists. Campaigns require substantial investments in resources as candidates often spend their own money in the campaign or forego private-sector economic opportunities to run for public office. Candidates can ill-afford to run for an office and lose (Osborne and Slivinski, 1996; Kazee, 1980).[2] Parties must time the candidacy of promising challengers, or risk tarnishing that candidate's brand in future runs for office (Maestas and Rugeley, 2008; Erikson and Wright, 1997; Jacobson and Kernell, 1983). When challengers time their candidacies without the support of the party, the party withholds resources in favor of conserving them for a future date (Rogers, 2014).

Second, parties intervene to aid struggling incumbents, often at the expense of their own party's challengers (Johnston and Pattie, 2007). When a reform is implemented, incumbents lose the benefits of incumbency associated with that reform. Incumbents anticipate that their re-election campaigns will be more competitive as a consequence. They turn to the party to compensate them for the loss of resources.[3] Parties oblige, for two reasons. First, parties prioritize the proven electability of incumbents; in their prior re-election campaigns and their first electoral victory, incumbents have shown they can win. Second, parties want to deploy their most promising challengers only in the most risk-averse environments, and as such will pursue strategies that maintain their own incumbents until conditions are appropriate to challenge the other party's incumbents effectively.

The consequences of party adaptation to reform is a relative deprivation of resources to challengers. Challengers need party resources and support in order to unseat the other party's incumbents. If incumbents are self-sufficient in their re-election campaigns – aided by the perks of incumbency – parties can allocate scarce resources to challengers, helping challengers build a campaign infrastructure, and providing advertising and polling assistance. If reforms threaten the incumbency advantage, some of those resources are diverted to incumbents, and therefore denied to challengers. For example, an incumbent lawmaker whose staff have been cut will lose her ability to maintain communication with constituents and conduct casework on her behalf. She turns to her party for party staffers to conduct outreach to the constituency. Challengers in the party lose those resources, and must campaign in the absence of party aid.

Lacking resources, challengers may see their vote share decline, retaining the incumbency

[2] Osborne & Slivinski (1996) formally demonstrate substantial costs of running to candidates who lose, while Kazee (1980) analyzes interviews with challengers, including one who could not run in an open-seat race due to campaign debts accrued in the previous electoral cycle.

[3] Incumbents could also turn to lobbyists and interest groups for resources, who seem natural stand-ins for staff and build working relationships with legislators (Bawn et al., 2012; R. L. Hall and Deardorff, 2006). However, these organizations have different goals and are not as powerful as parties.

effect. In interviews with congressional challengers, Kazee (pp.87-88) highlighted how both competitive and noncompetitive challengers believed that parties allocated resources toward "winnable" districts at their expense (Kazee, 1980). Without party support, challengers run less efficient campaigns, pay fewer canvassers and consultants, and run less-effective advertising campaigns. While some challengers may overcome those obstacles, most will not, and their vote share on Election Day will drop. This drop will increase the incumbency advantage, not because incumbents possess any additional benefits, but because parties deprive new candidates of the resources needed to compete with incumbents.

The ramifications extend beyond challengers who do decide to enter. High-quality candidates might forego running against incumbents altogether until the incumbents leave office – the unintended consequences of reforms like term limits may cheapen potential candidates' evaluations of holding office, such that only low-quality candidates enter politics against incumbents (Caselli and Morelli, 2004). These low-quality challengers will receive even less support from resource-constrained, risk-averse parties. In these situations, the vote margin between victorious incumbents and low-quality challengers will be much larger than before, and therefore the incumbency advantage would increase. Incumbents will be stronger.

2 American State Legislatures

U.S. state legislatures provide a useful context in which to analyse the impact of citizen reforms to electoral rules. First, within a broadly consistent institutional framework, states are given discretion to tweak election rules, leading to experimentation with electoral institutions, including reforms to reduce the incumbency advantage.[4] This experimentation allows scholars to compare subnational institutions that differ on few salient electoral rules.

Second, subnational parties are resource-limited and must choose between incumbents and challengers. A national party list has the resources to aid all of its candidates, whereas a subnational party may have to defend many incumbent seats while contesting open seats on a budget only a fraction of the size of the national party. As an added benefit, U.S. subnational

[4]Direct democracy in many U.S. states allows citizens to coerce constitutions into weakening legislators. This is true with term limits, where legislators sued successfully in several states to overturn them. Staffing cuts may have been more palatable to lawmakers, but this reform was certainly not legislature-driven. In other countries, reforms are often used by elites to consolidate their own power (Calvo, 2009; Langston, 2006; DePalma, 1994).

legislative candidates can raise large sums of money to compensate for the decline in party resources – other systems with more rigid campaign-finance laws will see challengers at a greater disadvantage. If the incumbency effect remains high here in the presence of reform, it is likely to remain higher in other systems.

Third, the American case provides two reforms broadly applied to address the perks of incumbency: term limits and legislative staffing cuts. These two reforms proliferated in the 1990s as citizens tried to curb the incumbency advantage (Squire, 2007). According to reform advocates, term limits and legislative staffing reductions would reduce incumbent re-election prospects (Chen and Niou, 2005; Berry, Berkman, and Schneiderman, 2000). Term limits allow legislators to serve only a fixed number of terms, shortening incumbents' time horizons and forcing re-prioritization of their legislative goals. Reducing legislative staff prevents lawmakers from both engaging with their constituents to identify and resolve policy incongruence, and effectively handling casework. Legislative term limits are currently in place in fifteen U.S. state legislatures, while budget cuts and freezes have lowered average staff size in many states.[5] By 2009 there were 1,700 fewer permanent and session staff across all 50 state legislatures than in 1996.

These two reforms were advocated by the same supporters at the same time, who claimed they would both result in weakening the stranglehold of incumbents on their offices. There are now sufficient numbers of legislators working in term-limited and reduced-staffing states to permit an analysis adjudicating my two competing hypotheses. Below, I briefly outline the mechanisms through which each reform ought to influence the incumbency effect.

2.1 Term Limits

Some evidence shows that term limits increase competition in legislative races (Kuhlmann and Lewis, 2017), even when the incumbent is not "termed out" (Daniel and Lott Jr, 1997; Engstrom and Monroe, 2006). Term limits should incentivize legislators to prefer personal over constituent priorities (Smart and Sturm, 2013). Often, these personal priorities involve returning to the private sector after leaving public office tol parlay their office into lucrative

[5]States may have opted to cut legislative staff due to large budget deficits as part of spending reductions. For example, Michigan's state legislature retained 1,359 permanent staff in 1996 but hired only 973 in 2009, despite the state reporting 200,000 population growth. Staff declines were not universal; some states, such as Texas, have quadrupled the size of their staff since 1979.

private-sector employment (Palmer and Schneer, 2016; Eggers and Hainmueller, 2009).[6] They will not build a significant campaign infrastructure or engage in constituent outreach and casework.

Term limits may cause deleterious, unintended consequences.[7] Lawmakers faced with term limits see little incentive to build campaign infrastructure, and rely on their party to provide those resources. Reforms upended traditional candidate-entry dynamics in the legislature and created predictable incumbent retirement for challengers to anticipate and parties to manipulate.

Without term limits, quality candidates face uncertainty regarding when to challenge the incumbent (Ashworth and Bueno de Mesquita, 2008; Maestas and Rugeley, 2008; Maestas, Fulton, et al., 2006). When uncertainty predominates, candidates use heuristics or consult party leaders to determine when they should run. Thus, candidates challenge incumbents with regularity in the hopes of a retirement, a sagging economy, or a scandal (Jacobson and Kernell, 1983). Conversely, there is stability and predictability to electoral cycles in states with term limits. Incumbents are guaranteed to exit office within a handful of election cycles because term limits force them out. Challengers know when incumbents will be "termed out" and plan to run for the open seat (Rogers, 2014; Cox and Katz, 2002). Parties encourage challengers to wait until the open-seat election, preferring to conserve election resources for maximum impact. Quality candidates transition from myopic to farsighted (DePalo, 2015; Schraufnagel and Halperin, 2006). If credible challengers wait until incumbents are termed out, only minor-party candidates and low-quality challengers run against incumbents in most election cycles.[8] The party withholds resources from these low-quality challengers, waiting for the open-seat election, and the incumbency advantage remains large.

[6]The legislator might spend her energies toward pursuing higher office. This entails developing a "brand" – name recognition among constituents, passing policies to obtain media attention, and building campaign infrastructure. Most legislators will not hold higher office and must prepare to return to private life.

[7]The research on term limits has already found many unintended consequences of the institution (Wright, 2007; Mooney et al., 2007; B. E. Cain and Kousser, 2004; Carey, Niemi, and Powell, 1998). Term limits did little to change the composition and function of state legislatures and have reduced the bargaining power of the legislature (Carey, Niemi, Powell, and Moncrief, 2006; B. E. Cain and Kousser, 2004; Carey, Niemi, and Powell, 1998).

[8]Another consequence of mandatory departure is faster depletion of the pool of high-quality candidates each party can recruit. If a legislature must be re-stocked with candidates every eight or twelve years, parties must accelerate candidate recruitment and development, or lower standards for candidate recruitment.

2.2 Staffing Cuts

Staffing cuts should harm incumbents by taking away their ability to engage with constituents. Staff help lawmakers pass effective policy; doing so increases the chances of re-election (Aldrich and Rohde, 1998; Krebs, 1998; Levitt and Wolfram, 1997; Mayhew, 1974; Fenno, 1973). Fewer aides reduce a legislator's capacity to write legislation, which decreases that incumbent's ability to provide services and policy changes (Mooney, 1994). Larger staffs let legislators handle constituent requests, engage in constituent outreach, and obtain free media from franking privileges (Squire, 2007; Berry, Berkman, and Schneiderman, 2000; Levitt and Wolfram, 1997). Legislative professionalism "insulates" incumbents from external threats to their re-election bids (Berry, Berkman, and Schneiderman, 2000).[9] Even minor decreases in the capacity of staff will strain remaining staffers' capabilities to aid the legislator, harming her re-election prospects. These changes make incumbents vulnerable to challengers.

Yet staffing cuts may counterintuitively cause parties to divert resources away from challengers and maintain the incumbency advantage. Incumbents turn to the party to compensate for the loss in electoral resources that their staff formerly provided. Party-funded staff will provide outreach to the incumbent's constituency, or increased advertising financing can highlight the legislation the incumbent supported. Party resources are more election-focused than policy-oriented legislative staff, which may even boost the incumbency effect. Challengers who would have received those resources must go without, or find less efficient means of competing with incumbents. Challengers underperform at the ballot box, and the incumbency advantage remains large.

3 Adjudication of Expectations: A Critical Test

Adjudicating between these competing expectations requires the correct technique to estimate the desired quantity of interest, the incumbency advantage. OLS estimates of the incumbency advantage suffer from bias due to the selection effects of incumbency and the non-random assignment of reform. I combine two causal-inference strategies to provide the most

[9]Legislative professionalism also incentivizes lawmakers to exert effort to maintain their office by creating a positive work environment. More staffers contribute to effective policymaking and constituent outreach, both of which improve re-election rates.

appropriate test of these competing hyotheses regarding the effect of reform. This combination overcomes the problems of selection bias and nonrandom assignment of each reform.

First, I employ a regression discontinuity (RD) design to estimate the party incumbency effect. I then use those estimated incumbency effects in a difference-in-differences (DID) analysis of changes to the incumbency rate over time.[10] This novel estimation strategy provides causal estimates for each subgroup of incumbents, from which I can discern whether the reforms worked as intended.

RD is critical for this study as it overcomes the selection effect bias of OLS. RD designs identify a "jump" around a threshold, explained by a treatment effect such as re-election vote shares from elections with bare winners (Lee, 2008; Thistlethwaite and Campbell, 1960). RD designs are applied broadly in social science (Fisman, Schulz, and Vig, 2012; Dell, 2010; Eggers and Hainmueller, 2009), and are the gold standard of studying the legislative incumbency advantage across a wide variety of electoral systems (Erikson and Rader, 2017; Eggers, Fowler, et al., 2015; Uppal, 2010; Hainmueller and Kern, 2008; Lee, 2008; D. Butler and M. J. Butler, 2006; Lee, Moretti, and M. J. Butler, 2004). The RD design provides causal incumbency advantage estimates for nonrandom sub-samples of incumbents (D. Butler, 2009). An examination of 40,000 close races in myriad electoral systems finds evidence for the validity of RD in estimating the incumbency advantage (Eggers, Fowler, et al., 2015).[11]

Second, I employ a Difference-in-Differences (DID) design for the second stage of my estimation strategy (A. B. Hall, 2016; Burden and Wichowsky, 2014; Bechtel and Hainmueller, 2011; Angrist and Pischke, 2009; Card and Krueger, 1993); these designs overcome the nonrandom assignment of reforms to states. While identifying discontinuities in data, an RD has nothing to say about growth in the discontinuity over time. Moreover, the cause of the RD may be nonrandomly assigned to subgroups; even if the RD is correctly identified within sub-

[10]The party incumbency effect, unlike the individual incumbency effect, does not violate assumptions about sorting around the threshold and selection bias. See the Appendix, Sections 2 & 3, for additional discussion of the RD and DID techniques used in this paper.

[11]Many researchers employing RD designs rely on the local randomization treatment assumption, which holds that units assigned to treatment or control just around the threshold are there as-if random (Lee and Lemieuxa, 2010; Lee, 2008; Lee, Moretti, and M. J. Butler, 2004). Other researchers caution against assuming local randomization, instead arguing for required continuity assumption (Cuesta and Imai, 2016; Eggers, Fowler, et al., 2015). Local continuity assumes the conditional expectation function of the potential outcome has no discontinuity at a given threshold (Cuesta and Imai, 2016). Any observed jump in estimated outcomes at the threshold - in this case, winning or losing an election - indicates a violation of that assumption and therefore a regression discontinuity. Either assumption permits me to identify precise estimates of the magnitude of the incumbency effect as electoral reforms are adopted.

groups, estimates across groups should not be compared. For example, term limits were largely adopted through the citizen initiative, whiche may be the cause of a lower incumbency effect. DID eliminates that plausible alternative, demonstrating that the effects of the initiative were uncorrelated to the incumbency effect before adoption of term limits.[12] DID can rule out such alternative explanations by identifying a period of parallel trends – during which the trends of two subgroups move at the same slope – before the reform, and then estimating the change in those trends after reform adoption/implementation. The estimated divergence or convergence in trends is the effect of the reform.

I employ a straightforward process to arbitrate between the competing expectations of the theory. First, I estimate RD effects for all observations in each subgroup ("reform" and "no reform"), with heteroskedastic-robust standard errors. With these estimates, we can determine whether there are meaningful differences between elections with and without reform. I compare the two estimates – if the subset with the reform has a lower average treatment effect than the subset without the reform, then the data support the *Weaker Incumbency Hypothesis.* If the incumbency effect is larger or unchanged after reform among states that adopted the reform, then the *Stronger Incumbency Hypothesis* is supported by evidence. The estimation equation is:

$$\tau_{\frac{RDD}{SubGroup}} = Y_{i,w} - Y_{i,l}|X_i$$

Where $Y_{i,w}$ is the estimated vote share for candidates in subgroup i just barely on the *winning* side of the forcing threshold X_i, and $Y_{i,l}$ is the estimated vote share for candidates just barely on the *losing side.*

Second, I calculate the DID using the RD estimate for each two-year electoral cycle period for each subgroup, comparing states with and without the reform. RD estimates for each subgroup for each election cycle are nevertheless in the thousands, providing sufficient information to identify the RD in each election cycle. I identify in each subgroup a period of "parallel trends," during which the estimated incumbency effect for both subgroups moves at the same rate, any divergence or convergence is the treatment effect of reform.[13]

[12]Any variable that drives higher incumbency effects would be accounted for thanks to parallel trends. See the Appendix, Section 2.2, for a discussion on parallel trends.

[13]Fortunately, I do not assume parallel trends, but will demonstrate them with three decades of pre-treatment data, much like multiple time series analysis (Campbell and Stanley, 1963). By demonstrating parallel trends

3.1 Data

My unit of analysis is the Democratic Party's candidate in every lower-chamber U.S. state legislative election, 1967-2010, for a total of 71,494 observations (Klarner et al., 2011).[14] The outcome measure is the candidate's two-party vote share. The measures of term limits and staffing changes were taken from the National Conference of State Legislatures database.[15] Staffing changes are rescaled to be population-adjusted (per 100,000 persons); a population-adjusted change of zero is treated as positive.

I subset these data into "reform" and "no reform" groups. The term limits variable is coded "1" if the state had legislative term limits as either statutory law or in the state's constitution that year, and "0" if the state had never enacted term limits, or if term limits had been repealed. My measure of staffing size is the directional change – positive annual population-adjusted changes are recoded as "1" while negative or static annual changes are coded as "0" – for both permanent and session-only staff.[16]

The term limits adoption period for DID is 1992-2000, when twenty-one states adopted term limits (six states repealed term limits before implementation). Most of these states provided incumbents time to prepare via an implementation window of four to eight years. Term-limits momentum existed in all fifty states to a certain extent; even when not adopted, term limits bills were proposed or called for in every state legislature and Congress. Although staff changes varied before the term limits reform, advocates in the 1990s successfully reduced legislative staff sizes in most U.S. states.

4 Results

The maps in Figures 1,2 show the status of reform during the adoption and implementation periods. Fifteen state legislatures implemented term limits, six adopted but repealed term

before the imposition of term limits and reductions in legislative staffing, unequal variations in the incumbency advantage permit arbitration between my competing theories. To validate parallel trends and test differences between the reform and non-reform groups for the DID, I rely on difference-of-means and difference-of-slope tests.

[14]The use of a single party is typical of many RD analyses. See the Appendix, Section 1, for a thorough discussion of my case selection.

[15]Missing staffing data are imputed with linear interpolation; see the Appendix, Section 1.1, for further discussion of this issue.

[16]There may be other ways to operationalize the threshold between staffing increases and staffing cuts. See the Appendix, Section 4, for my exploration of alternate specifications of term limits and staffing cuts.

limits before adoption, and many states that saw staffing increases during the 1970s and 1980s saw declines in the 1990s. While most staff changes were less than 1 staffer per 100,000 population, 7,043 of 44,240 observations reported an increase or decrease of more than 1 staffer per 100,000 population. Two-thirds of the changes occurred after 1990, and 1,557 observations reported a major decline (a decrease of at least 1 staffer per 100,000 population) between 1990 and 2000.

[Figure 1 about here.]

[Figure 2 about here.]

4.1 Term Limits: Adoption and Implementation

After states began adopting legislative term limits in 1990, the incumbency advantage among both groups of states rose. States that adopted term limits saw the average incumbency advantage grow from 6.4% to 7.7%, an increase of 1.3 percentage points. In those states that did not adopt term limits, the incumbency advantage increased from 6.9% to 8.7%, an increase of 1.8 percentage points. It is therefore a larger incumbency effect, as well as slightly larger growth, in those states that did not adopt term limits. Figure 3 reports the estimated incumbency effect for states with and without term limits after 1990. Figure 4 reports estimated the incumbency effect for 1988 and before, subset into states that eventually adopted term limits and those that did not. Yet the differences between these two groups may not be statistically significant. Robust standard errors reported in parentheses.

[Figure 3 about here.]

[Figure 4 about here.]

I estimate the DID of the incumbency effect for each election cycle for each subgroup from 1968-2010. Remember that the DID focuses on the trend; if the reforms worked, there will be a change in the trend for the treated and control groups. The annual incumbency effect forms the basis for a DID approach, shown in Figure 5. Fitted loess lines represent trends in the incumbency effect for state legislatures with and without term limits. The vertical lines delineating the 1980s demonstrates a period of parallel trends, across 1982-1988; in 1990 the two groups diverge.

[Figure 5 about here.]

During the 1980s, the trend in the incumbency effect was approximately the same for both subgroups of states. This provides evidence for a period of parallel trends (Angrist and Pischke, 2009) – electoral trends in both sets of states rose and fell at the same rate. Difference of means tests demonstrate that before 1990, there is not a meaningful difference between the two groups, in either the absolute incumbency effect or the difference in the incumbency effect from year to year. In 1990, the push for electoral reforms had begun in earnest. This ends the period of parallel trends; during this time states without term limits saw an increase in the incumbency effect. After 2000, when adoption of term limits ceased, an upward trend for states with term limits coincided with a decline in the incumbency effect for states without term limits.

Formal tests of the DID are inconclusive. Difference-of-means tests of the whole sample show a statistically-significant difference between states with term limits and those without. Differences before 1990 are not meaningful ($t = -0.77$), but after 1990 differences are meaningful ($t = -3.0$). This does not hold when examining difference-of-slopes tests, according to which there is little difference in the trends before ($t = 0.035$) and after ($t = -0.38$) adoption of reform. These findings possibly indicate that both mechanisms to weaken and strengthen incumbents existed; while the incumbency effect grew under term limits, the growth was greater without term limits; yet the difference in that growth was not statistically significant.

Next I examine those states that fully implemented term limits – where the reforms were passed and were not repealed by judicial or legislative action. I estimate the RD incumbency effect for subsets of data with and without term limits implementation, before and after 1990. I express pre-1990 the incumbency advantage in Figures 6,7.

[Figure 6 about here.]

[Figure 7 about here.]

Growth in the incumbency advantage is quite large among states that successfully implemented term limits. States that implemented term limits saw the average incumbency advantage grow from 5.0% to 8.5%, an increase of 3.5 percentage points. In states that did not implement term limits, the incumbency advantage increased from 6.7% to 8.3%, or

1.6 percentage points. The difference in growth for term limits implementation is 1.9 percentage points; or, the incumbency effect grew twice as fast when term limits were successfully implemented. The DID reported in Figure 10 displays a post-implementation difference in the trend between the two groups. This change is not statistically significant overall ($t = -1.6$), before 1990($t = -1.6$), demonstrating parallel trends. Yet it is statistically significant ($t = -3.6, \bar{TL} = (0.0824), N\bar{TL} = (0.1506)$) in the reform period, followed by no meaningful difference in the incumbency effect in the post-reform (post-2000) period.

[Figure 8 about here.]

The evidence does not indicate that reforms had their intended effects, nor does it wholly reject the premise that term limits reduced the incumbency effect. While the incumbency effect increased rapidly in states that did not adopt or implement term limits, the incumbency effect in states with term limits also rose, and by the late 2000s the difference between the two groups was negligible. Perhaps the competing mechanisms by those on each side of the reform debate had the effect of counteracting each other. While term limits may have cheapened the view of the office, the incumbency effect continued to grow and did so even during "wave" elections such as 2006, 2008, and 2010 that reduced the incumbency effect in other states. These results are consistent with an expectation of declining challenger entry in response to predictable incumbent retirement cycles, and that parties intervene to prioritize seat retention over winning new seats.

4.2 Legislative Staffing

Advocates of the return to citizen-legislatures pushed for staffing cuts at the same time as term limits. With the support of legislators (who preferred staffing cuts over term limits), staffing levels dropped in the vast majority of state legislatures in the 1990s. While staffing changes varied before the 1990s reform movement, Figure 2 clearly shows declines in staffing during the 1990s. As with term limits, there is not clear evidence that reforms worked as intended.

The difference between the two groups is minimal. In elections where staffing *increased*, the electoral incumbency advantage was 8.5%. When staffing *decreased*, the incumbency effect was 7.4%. Figure 9 reports the results of regression discontinuity designs that estimate the average treatment effect of shifts in population-adjusted legislative staff. When examining only states where lawmakers have access to personal staff, the same pattern holds – when staff sizes increase, the incumbency effect is 8.9%. When staff sizes decrease, the incumbency effect is 8.0% (See the Appendix, Section 9 for the results on personal staff).

[Figure 9 about here.]

Because legislative staffing changes occurred to a smaller extent before the 1990s reform period, DID is necessary for identifying parallel trends before the implementation of major staffing cuts in the 1990s reform period. Figure 10 shows the annual average incumbency effect among subsets of states from 1980-2010. There is a pre-reform period of parallel trends in the late 1980s. There is no evidence of a statistically-significant difference ($t = -1.7, Incr\bar{e}ases = 0.125, Decr\bar{e}ases = 0.145$) between states with staffing cuts and states with staffing increases during and after the 1990s. Indeed, there are hardly periods to distinguish parallel trends from post-reform divergence or convergence.

[Figure 10 about here.]

There is little evidence of divergence in electoral outcomes between states that chose to increase staff, and those that chose to decrease staff before 1990. Pre-1990 states that cut staff appear to have a stable lower incumbency advantage. Yet after approximately 2000 the change in the incumbency effect among both groups trends together. While the incumbency effect for states with staffing cuts rose by about one percentage point from 1990-2000, stagnation in the incumbency effect trend after 2000 is consistent with an argument that parties divert resources to prop up incumbents at the expense of challengers.[17]

4.3 Evidence for Party Intervention

The evidence shows that these reforms did not work as intended, but what of evidence of party intervention to defend their party's incumbents at the expense of the party's challengers?

[17]Since most staffing data are imputed, I create a subset of data that restricts the analysis only to the even-numbered years on or after the five NCSL reports: 1979, 1988, 1996, and 2003. The analysis therefore examines 1980, 1988, 1996, and 2004. The RD incumbency effect at the optimal bandwidth is 7.3% for lawmakers in states with staffing increases, compared to 9.0% for states with staffing cuts. There is not sufficient information to evaluate pre- and post- 1990 subsets of these data, nor to estimate a DID approach, yet they signal minimal differences between the two subgroups.

I provide some evidence that parties boosted their incumbents and not their challengers when reforms were implemented. If the parties' incentives were changed after reform, we would expect two things. First, open-seat races would see a decline in the incumbency effect under reform – the so-called "Senior Slump" (Titiunik, 2009). Reform-constrained incumbents do not build an effective permanent campaign apparatus, outsourcing those duties to parties. Instead, the party maintains that campaign infrastructure after the incumbent retires. When the incumbent does build a campaign apparatus, they rarely pass it on to their successor.

Second, campaign contributions for incumbents would be higher than campaign contributions for challengers. These would indicate that candidate quality declined in the presence of reform.[18] If parties run campaign operations when reforms remove benefits of incumbency, then challengers should see larger contribution totals. Campaigning for local office in most democracies requires more retail politicking as candidates do not raise a national profile or raise large sums of money from wealthy donors. If reforms worked as intended, candidate quality should be lower and challengers would raise little money. If reforms did not work as intended, challengers and incumbents would outsource campaigns to parties, which could attract more financial support.

In Table 1, I report RD estimates of all open-seat races following an incumbent retirement. The evidence that term limits changed party dynamics, rather than weakening individual incumbents, is apparent. The incumbency effect after term limits adoption is 6% higher than before, whereas it does not change under states without term limits. With regards to staffing changes, the incumbency effect for staffing cuts and staffing increases in the post-1990 period are approximately equivalent. The large incumbency effect associated with staffing cuts before 1990 may be attributable to the small sample size, more evidence that staffing cuts accelerated after 1990.

[Table 1 about here.]

As a second measure of candidate quality, I leverage data of corporate campaign contributions to state legislative candidates (Fouirnaies, 2018). The mean corporate campaign contribution for incumbents is lower than for challengers in both groups, but higher under term

[18] Rogers (2014) provides an excellent discussion of the challenges of measuring challenger quality at the state legislative level. That study uses campaign fundraising totals and the presence of challengers to identify the party's strategic decision to withhold resources to candidates, and finds that incumbents face poor-quality challengers in their re-election campaigns.

limits. The average challenger in a term-limited state raised \$138,825 and the average incumbent raised \$112,655. In states without term limits, challengers raised \$101,123 and incumbents raised \$85,367. The gap between challengers and incumbents is approximately ten thousand dollars greater when term limits was adopted. With regard to staffing cuts, we see a similar pattern. Challengers raised \$162,602 when staff were cut; incumbents raised \$114,061 when staff were cut. When staff were increased, challengers raised \$59,837 and incumbents raised \$62,849. When states adopted reforms, candidate quality did not decline; instead, candidates raised more money – ostensibly with the aid of the party.

Broadly, these findings indicate that reforms to reduce the power of state legislative incumbents did not accomplish their stated objectives. Additional evidence suggests that parties intervene to prop up incumbents. The presence of absence of reform differed little, as the incumbency effect trended similarly . I find little evidence for the *Weaker Incumbency Hypothesis* and some evidence for the *Stronger Incumbency Hypothesis*. That reforms were unsuccessful should not be surprising; even in weak-party systems, parties still act as coordinating mechanisms and service providers to candidates. Parties, as risk-averse agents, prioritize defending seats they hold over the prospect of obtaining new seats. Challengers feel the brunt of this prioritization, are deprived of resources to run effective campaigns, and underperform in terms of their vote share relative to incumbents. Trends in the incumbency effect remain unchanged. While incumbents may be weaker against self-funded challengers, their position as incumbents makes them more valuable to the party.

5 Discussion

The lack of evidence for the Weaker Incumbent Hypothesis suggests that tampering with electoral institutions shifted the priorities of potential challengers in a manner that did not weaken the electoral prospects of incumbents. When legislators are discouraged from running for office, or limited in their constituent outreach capabilities, the outcome is detrimental to voters. The evidence found in this paper is consistent with an argument that these reforms discouraged quality challengers and shifted party resources from challengers to incumbents. As a consequence, constituents are denied quality candidate choices and competitive elections, each of which is detrimental to democratic governance.

The inability of reforms to reduce the incumbency advantage has serious consequences for challengers. Legislatures with these reforms may see the consolidation of incumbent power. An increased incumbency advantage will deter quality challengers from running in all but the most vulnerable seats. In safer districts, voters have fewer choices and less competition for their votes. If elections are the distillation of a marketplace of political ideas, these reforms may have institutionalized even more monopolistic power. The durability of interest in curbing the power of incumbents indicate that momentum for these reforms is untethered to any real evidence of these reforms' success.

This paper can serve as a template by which we may test reforms to electoral rules. Using RD and DID designs permits estimating precise causal effects and allows us to rule out alternative explanations and choose an empirically-informed position in a debate. Furthermore, we can use these techniques to observe the implications of individual legislative behaviors. As data become more accessible and thorough, empirical evaluations of "common sense" reforms may help shape future institutional tinkering. Indeed, Mexico has repealed its strict one-term policy for lawmakers, acknowledging the failure of term limits to end corruption in politics. What policy alternatives are available to express displeasure with careerism?

My analysis of these reforms underlies a more fundamental concern with contemporary political debates. Voters fail to account for the incentives of political elites when redesigning institutions. By projecting their own beliefs regarding the behavior of elites, citizens may end up exacerbating the very problems they set out to solve. It is imperative for future reformers to take these lessons to heart, and anticipate how elites will respond to new incentives.

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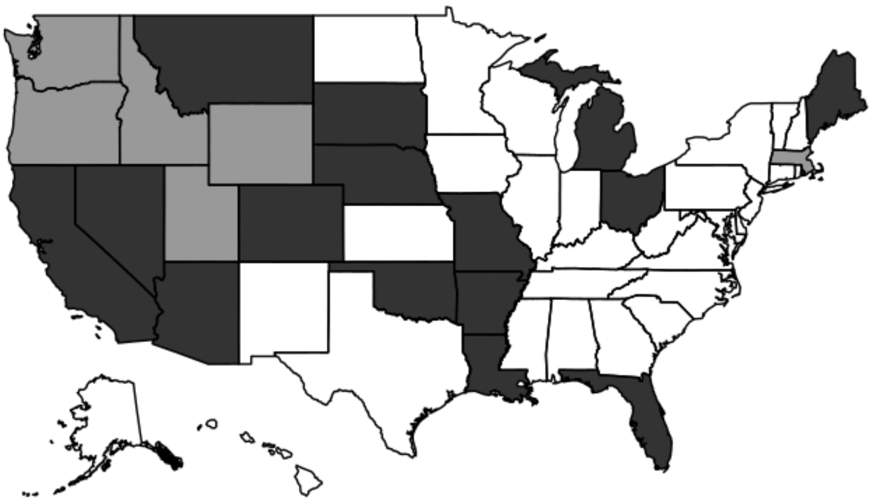
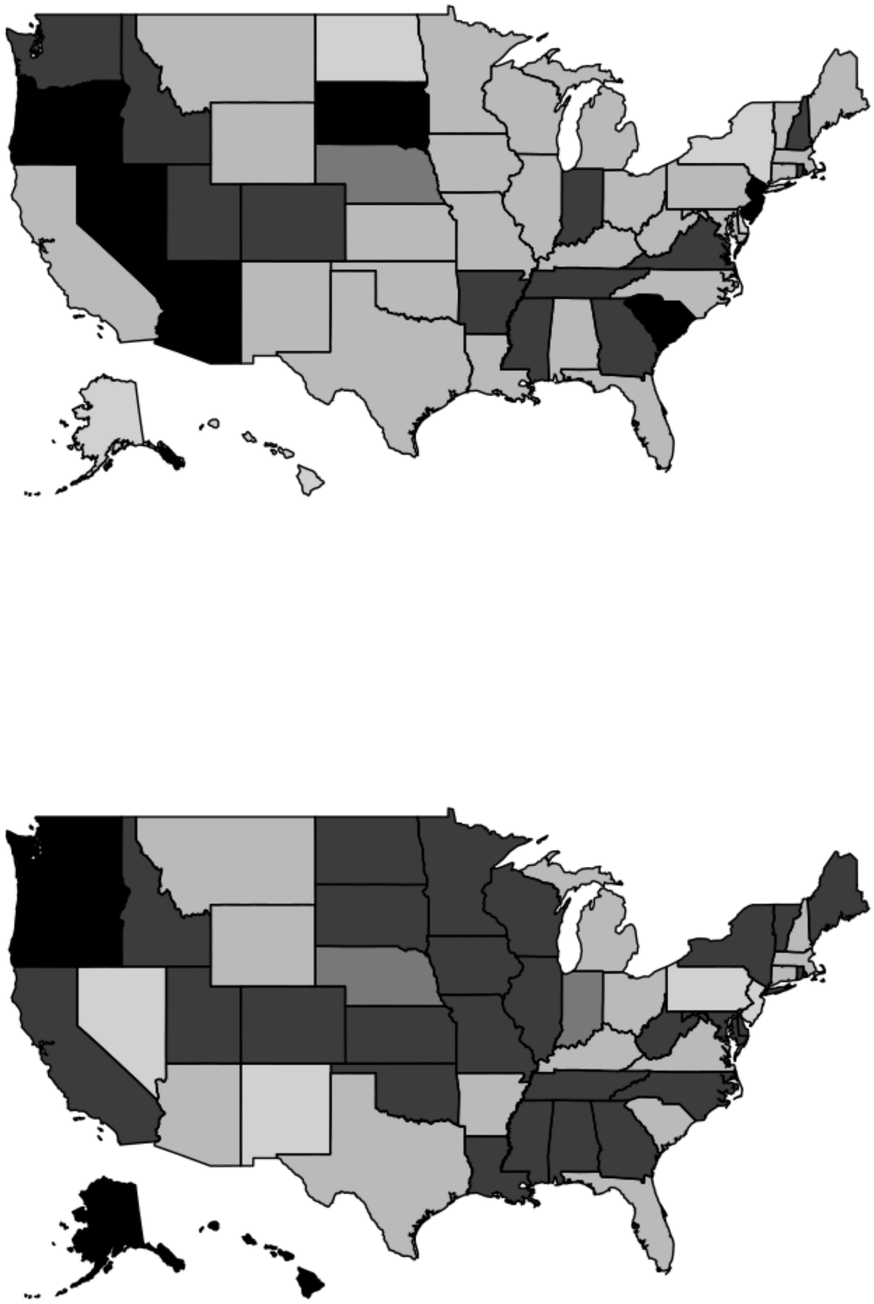
Figure 1: The Status of Legislative Term Limits, 2018

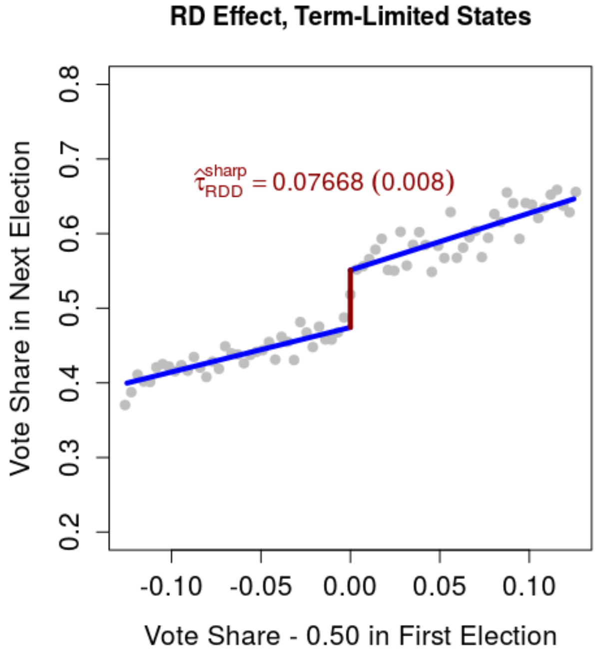


Note: Dark grey indicates states that successfully implemented term limits, while light grey indicates states that adopted, but did not implement, term limits.

Figure 2: Legislative Staffing Changes, 1979-1988 and 1988-1996



Note: darker shades of grey indicate larger declines in staff relative to population, while lighter shades of grey indicate larger increases in staff.



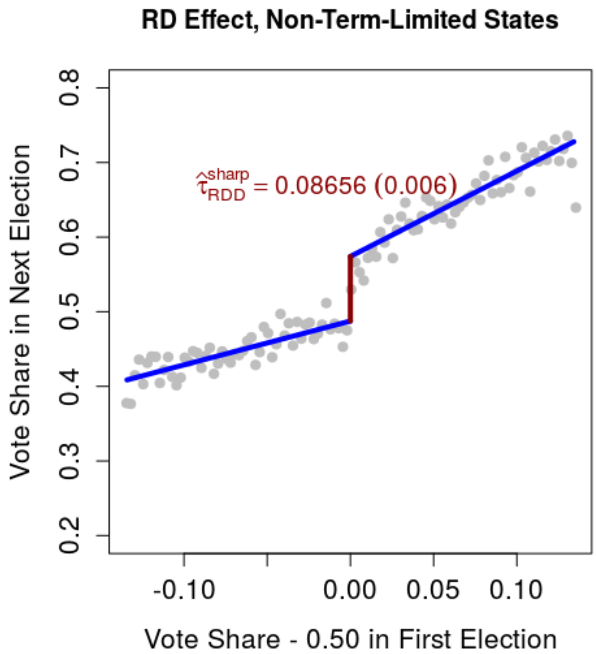
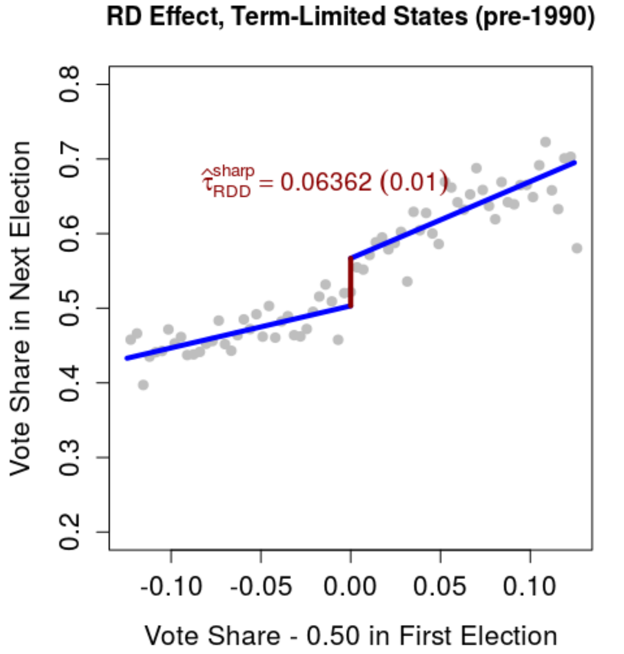


Figure 3: Regression Discontinuity Design: The Effect of Term Limits Adoption on the Electoral Incumbency Advantage, U.S. State Legislatures, 1990-2010. Each dot represents a "binned" average party incumbency effect.



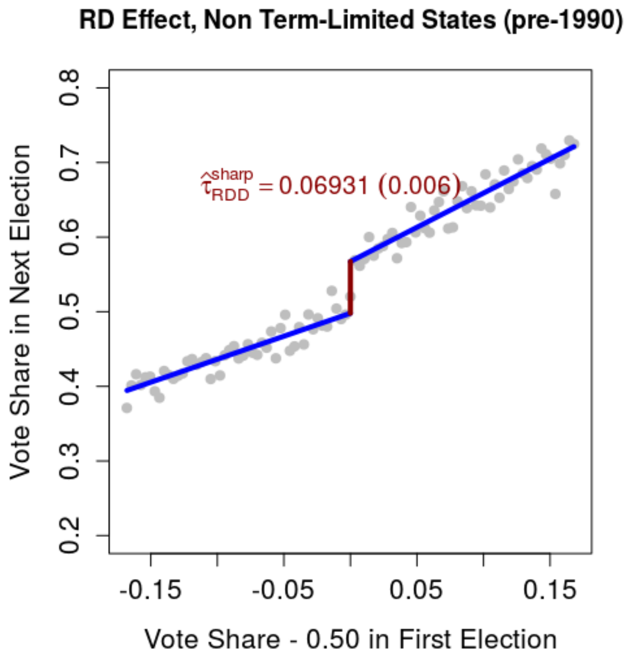


Figure 4: Regression Discontinuity Design: The Effect of Term Limits Adoption on the Electoral Incumbency Advantage, U.S. State Legislatures, 1967-1989. Each dot represents a "binned" average party incumbency effect.

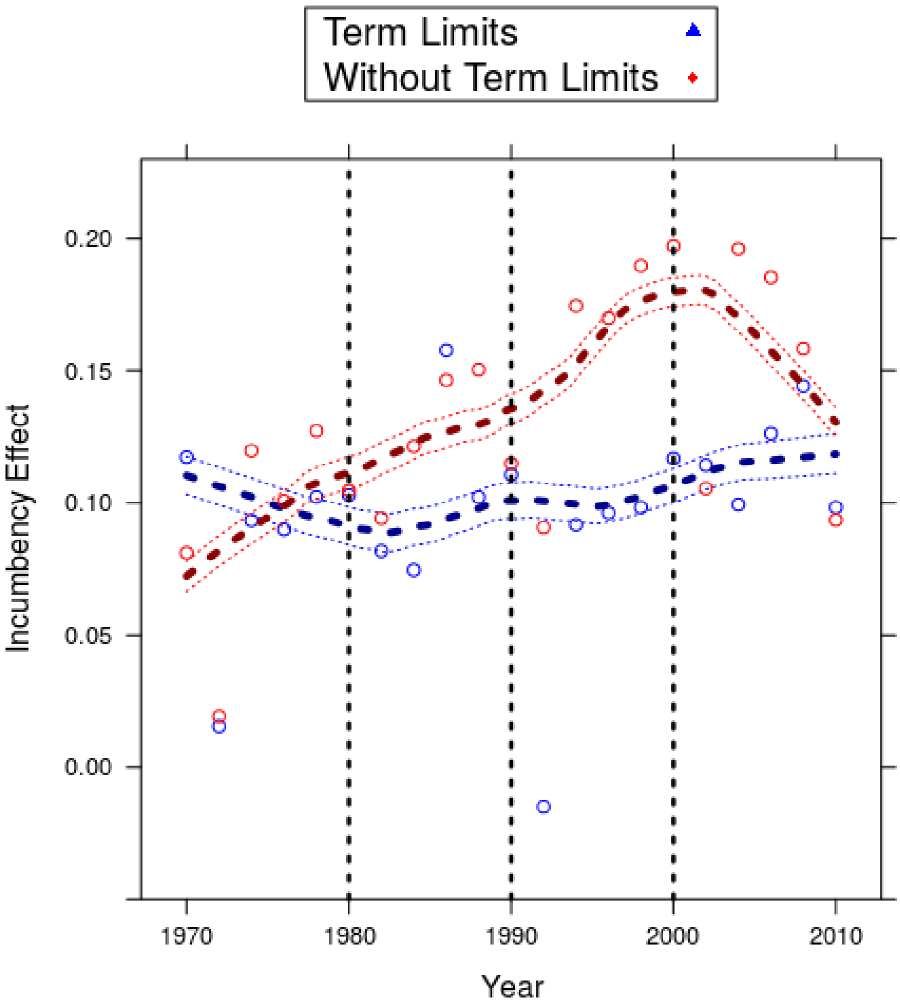
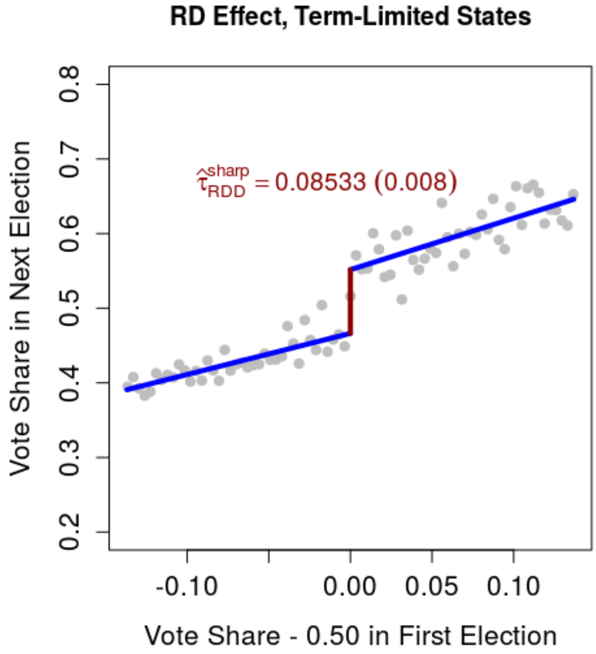


Figure 5: Differences – in – Differences: The Effect of Term Limits Adoption on the Electoral Incumbency Advantage, U.S. State Legislatures, 1975-2010. Vertical Lines in 1990 and 2000 refer to the term limits adoption and implementation period, demonstrating one period of parallel trends. Post-2000 trends show statistically-significant differences between groups.



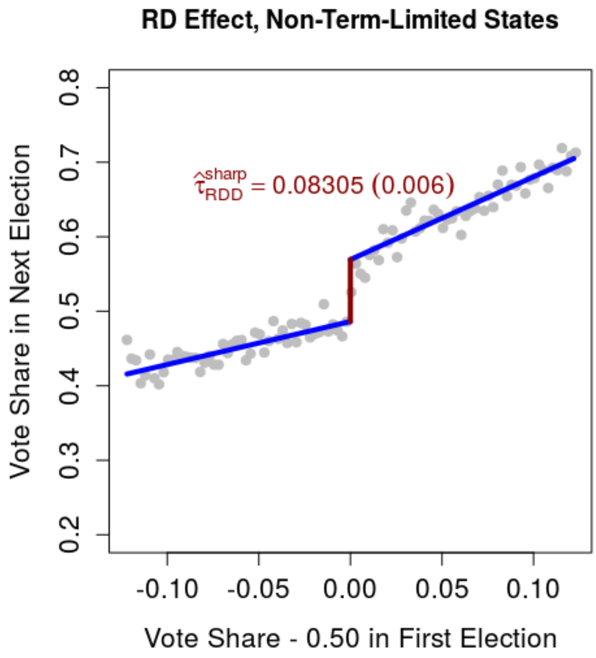
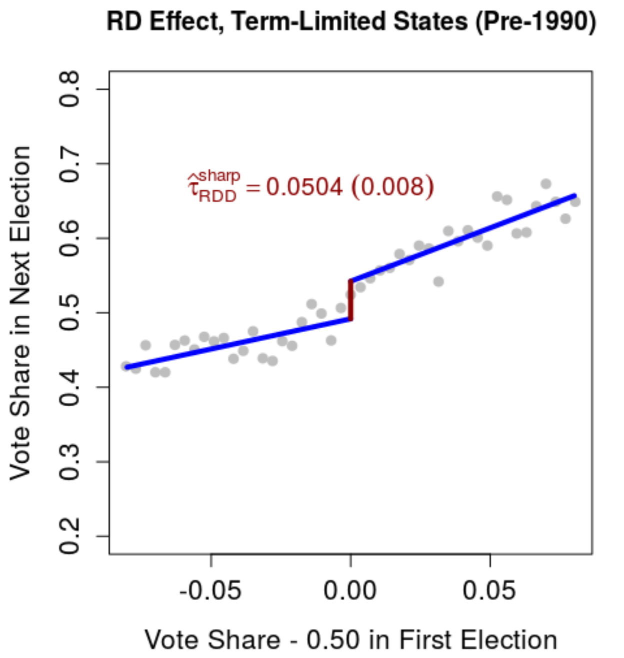


Figure 6: Regression Discontinuity Design: The Effect of Term Limits Implementation on the Electoral Incumbency Advantage, U.S. State Legislatures, 1970-2010. Each dot represents a "binned" average party incumbency effect.



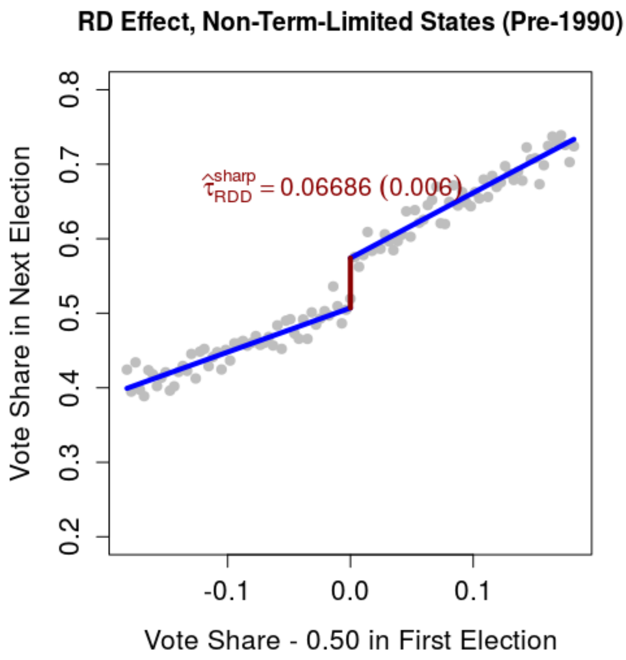


Figure 7: Regression Discontinuity Design: The Effect of Term Limits Implementation on the Electoral Incumbency Advantage, U.S. State Legislatures, 1970-2010. Each dot represents a “binned” average party incumbency effect.

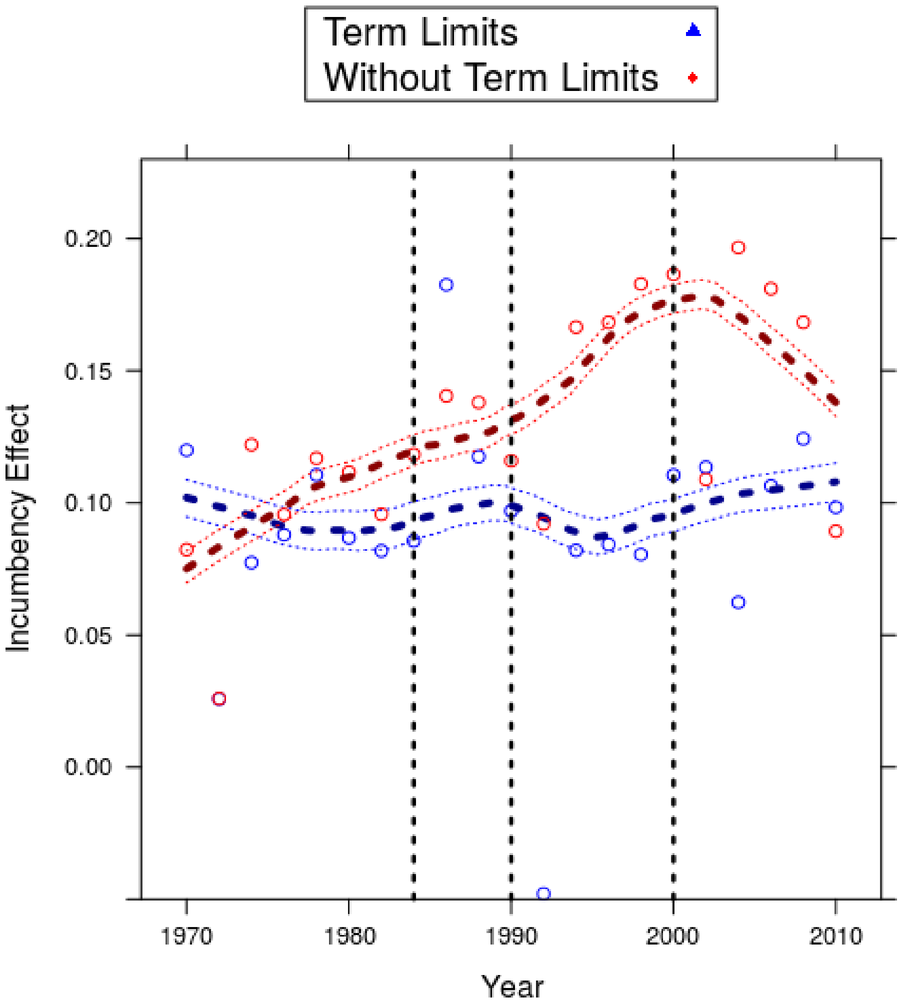


Figure 8: Differences – in – Differences: The Effect of Term Limits Implementation on the Electoral Incumbency Advantage, U.S. State Legislatures, 1980-2010. Vertical Lines in 1990 and 2000 refer to the term limits adoption and implementation period, demonstrating one period of parallel trends. Loess lines reveal post-2000 divergence.

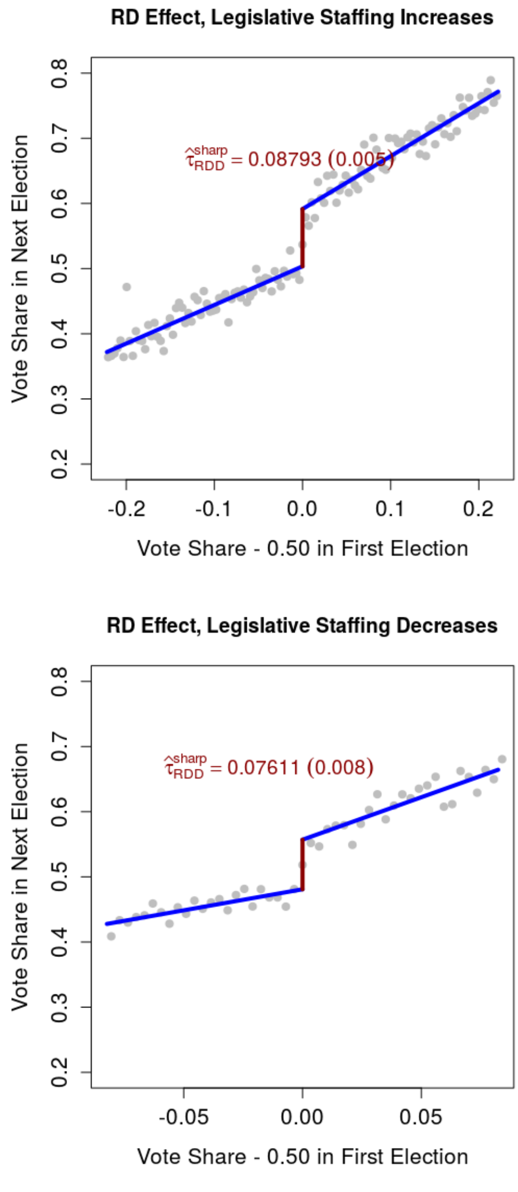


Figure 9: Regression Discontinuity Design: The Effect of Legislative Staffing Cuts on the Electoral Incumbency Advantage, U.S. State Legislatures, 1970-2010. Each dot represents a "binned" average party incumbency effect.

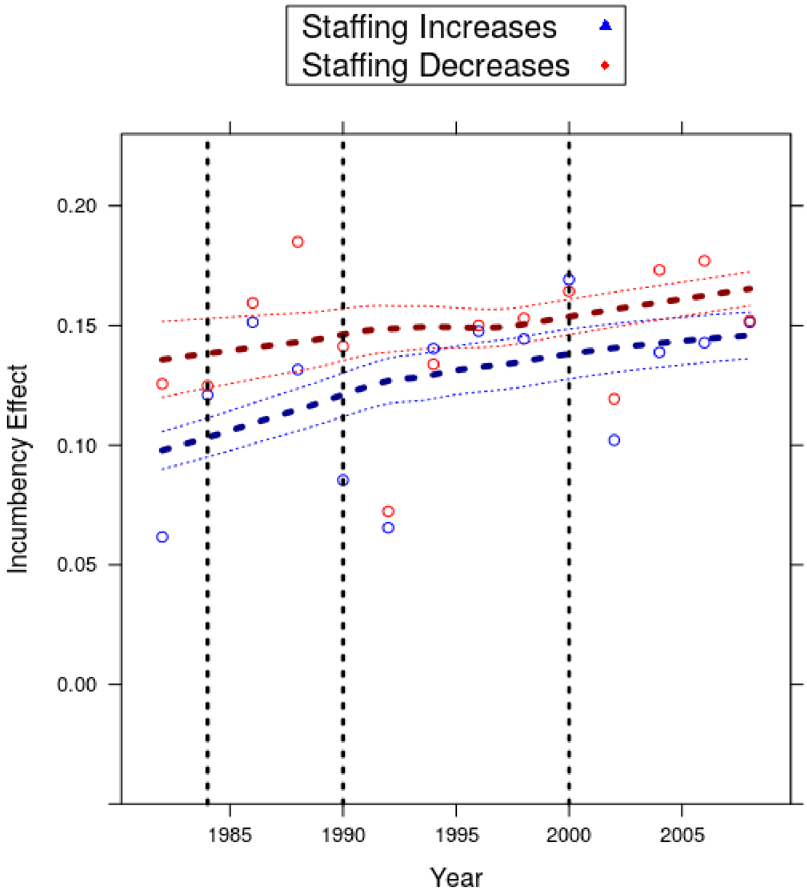


Figure 10: Differences – in – Differences: The Effect of Term Limits on the Electoral Incumbency Advantage, U.S. State Legislatures, 1975-2010. Vertical Lines in 1990 and 2000 refer to the term limits adoption and implementation period, demonstrating one period of parallel trends. Loess lines reveal only mild post-2000 convergence, and there are not statistically-significant differences between groups.

Table 1: RD Design: Incumbency Effects, "Senior Slump" In State Legislative Elections, 1967-2010

	Presence of Reform			*Absence of Reform*		
	Est	SE	Obs	Est	SE	Obs
Post-1990, Term Limits	0.065	0.017	646	0.042	0.013	1569
Pre-1990, Term Limits	0.0038	0.022	620	0.043	0.017	1118
Post-1990, Staffing Changes	0.039	0.016	805	0.048	0.015	1100
Pre-1990, Staffing Changes	0.093	0.046	190	-0.002	0.019	570