Does Leader Turnover Degrade Local Government Performance? Evidence from Local Election Officials*

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Abstract

How disruptive are leadership changes in local government? Three forces push in different directions. New officials may need time on the job to know how how elections work, leading to more mistakes early on. On the other hand, limited competition and information about official performance may insulate mediocre but experienced officials from accountability, resulting in better performance when an experienced official leaves. Alternatively, turnover may not disrupt performance much if experienced leaders are replaced by experienced deputies who have already trained for the role. In this paper, we study the effect of turnover by focusing on a widely discussed case: the recent departures of many local officials who conduct elections. We build an original, large-scale dataset containing the names and service tenures of chief local election officials in all 50 states from 2000 to 2024, encompassing more than 18,000 officials serving in over 6,000 jurisdictions. Using a variety of difference-in-differences analyses, we find that losing an election official prior to an election does not affect participation or other observable indicators of performance, with the possible exception of wait times at the polls. Our estimates are precise enough to reject effects on turnout greater than 0.36 percentage points across all of our main specifications. Despite the concern that increases in leader turnover will degrade the quality of local election administration, we find that election performance is remarkably resilient in the face of leadership changes.

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1 Introduction

A growing chorus of public officials, scholars, and journalists have sounded the alarm over high turnover among local election officials, the thousands of people across the United States charged with overseeing and administering our elections. In a recent interview, Emily Cook, the director of elections in Luzerne County, Pennsylvania, said "Just in the two years that I've been here, I find it difficult to believe when somebody states that they're going to be here for the long haul...I don't begrudge anybody that has left. It is a very difficult role to be in."[1] Reports from Reed College,[2] the Brennan Center,[3] Issue One,[4] the Boston Globe,[5] the Institute for Responsive Government[6], and the Bipartisan Policy Center [7] confirm that Cook's experience generalizes, finding high rates of observed or expected turnover among local election officials in recent years.

The main reason many are concerned about election official turnover is the fear that experienced officials will be replaced by inexperienced officials who will make more mistakes that will make it harder for citizens to vote, ultimately causing lower turnout and voter confidence. In a recent interview about administrative errors in Pennsylvania's local election offices, Secretary of the Commonwealth Al Schmidt captures these concerns, saying "These are all human errors that occurred. They occur most frequently, overwhelmingly, when you have new election administrators."[8] CSU Fresno political scientist and election expert Lisa Bryant expressed similar worries, saying "There are so many moving parts on Election Day, that if somebody doesn't have a lot of experience, it's easy to miss something

[1] https://apnews.com/article/election-workers-turnover-threats-trump-2024-8497130b5bbeae503d8f675e3b809d4f

[2] https://evic.reed.edu/codebooks_crosstabs_survey_instruments

[3] https://www.brennancenter.org/our-work/research-reports/local-election-officials-survey-april-2023

[4] https://issueone.org/articles/the-high-cost-of-high-turnover/

[5] https://apps.bostonglobe.com/nation/politics/2022/10/democracy-under-siege/turnover-data-hear-elections-officials/

[6] https://responsivegov.org/leo-report/

[7] https://bipartisanpolicy.org/report/election-official-turnover-rates-from-2000-2024/

[8] https://www.votebeat.org/pennsylvania/2023/12/19/pennsylvania-ballot-errors-2023-increase/

simple...sometimes it doesn't take that much to deter somebody from showing up [to vote]."[9] Further, government leaders with management skills and experience in office tend to produce better outcomes for their citizens (Alt, Bueno de Mesquita, and Rose 2011; Fouirnaies and Hall 2022), and voters prefer candidates with experience (Erikson and Titiunik 2015; Fowler and Hall 2014).

Yet, two forces push in the opposite direction, suggesting that local official turnover may not produce worse outcomes and may even improve outcomes. First, the people who take over local government positions often have experience as deputies in the office or in the same field prior to taking the role and elections or appointment processes may select for this experience resulting in similar performance before and after turnover (Ferrer, Geyn, and Thompson 2023; Thompson 2020). Second, officials may not have the incentive to develop expertise due to large incumbency advantages, limited competition, and lax oversight (Ferrer 2023*b*; Olson and Stone 2023; Marx, Pons, and Rollet 2022; Zoorob 2022). This may lead to fewer gains from experience and dampen the performance differences between experienced and new officials or even lead to better performance after turnover.

Do local governments perform worse immediately after a leadership transition on average? In this paper, we present findings from a new dataset on election official turnover. Our new data on chief local election officials is the largest collected to date, spanning more jurisdictions and a longer time-span than any previous effort. In total, our data encompasses 18,644 unique chief election officials across all 50 states, 6,290 election jurisdictions, and 13 election cycles between 2000 and 2024, yielding 81,000 jurisdiction-year observations of turnover. We pair this dataset with data on voter turnout, residual vote, and potential reporting errors at the county and municipal level back to 2004. We also collect an original auxiliary dataset of institutional details about these chief election offices and a new dataset of sheriff turnover that allows us to study the effects of turnover in another part of local government. This new

[9] https://thehill.com/homenews/campaign/4254685-alarms-sound-over-high-turnover-among-election-workers/

panel data allows us to credible measure the effect of turnover on election performance using a variety of difference-in-differences and panel matching analyses.

Despite widespread concern that turnover will degrade election performance, we find consistent evidence that performance is similar following a leadership transition. Among officials with authority to administer nearly all aspects of elections in their jurisdiction, we estimate that turnout does not increase or decrease by more than 0.10 percentage points, or 100 votes in a jurisdiction of 100,000 eligible voters. The 95% confidence interval from our least precise estimator implies that the effect of turnover on turnout is likely between -0.36 percentage points and 0.16 percentage points, and we have 80% power to detect effects as small as 0.38 percentage points. We find similar patterns of results when we estimate the effect of election official turnover on the rate of problems residents face when voting, the rate of election-related reporting errors, and the residual vote, a widely used measure of election administration issues (Kropf et al. 2020; Stewart et al. 2020), though we find suggestive evidence for a small increase in wait times at the polls after turnover. We estimate nearly identical effects of turnover in election offices with more and less authority, when the departing official had more or less experience, and across midterm and presidential years.

One explanation for these findings is that incoming officials have already developed sufficient experience before entering the local leadership position. We evaluate the plausibility of this explanation by linking the Reed College Survey of Local Election Officials with our data on turnover. We find that the average new local election official has substantial professional experience in the field prior to taking over the office. This may help to reduce any harmful effects of lost experience.

Another explanation for a limited effect of turnover is that office staff maintain institutional knowledge following leader departure and that new officials fear losing their job for poor performance and rise to the challenge. While we do not have direct evidence for these arguments, we note that they also apply to other local offices so turnover should have only

small effects in other settings if these explanations apply. Consistent with these mechanisms, we document that sheriff office outcomes are similar before and after leadership changes.

While we can rule out turnover systematically producing a substantial number of mistakes that degrade election performance on average, turnover may still increase the probability of rare but important administrative errors. We cannot observe minuscule increases in the probability of such an event, but events like those are still important negative outcomes that any full accounting of turnover should consider.

Beyond the main focus of this paper on turnover in local leadership, this paper also contributes to broader research on local election officials. A growing body of research studies how election official institutions (Burden et al. 2013; Ferrer 2023*b*), managerial capacity (Kropf et al. 2020), communication (Suttmann-Lea and Merivaki 2022, 2023), race and ethnicity (Ferrer 2023*a*), funding (Lal and Thompson 2023; Mohr et al. 2019), party (Ferrer, Geyn, and Thompson 2023; Kimball, Kropf, and Battles 2006; Porter and Rogowski 2018; White, Nathan, and Faller 2015), and implementation of state law (Atkeson et al. 2010; Bassi, Morton, and Trounstine 2009) contribute to election performance and trust at the local level. Our new findings in this paper suggest that there is not a strong relationship between tenure length and election administration quality.

The paper proceeds as follows. We discuss our reasoning about how turnover may affect performance in Section 2. We then describe our new data on election official turnover in Section 3 and document how turnover has changed over time. In Section 4, we estimate the effect of election official turnover on voter participation and other performance measures and validate our estimates. We evaluate explanations for our findings in Section 5 and discuss their implications in Section 6.

2 Turnover and Local Government Performance

How should we expect turnover to affect local government performance? Across a wide variety of domains, public officials become more effective with experience (see Alt, Bueno de Mesquita, and Rose 2011; Emeriau 2023; Fouirnaies and Hall 2022; Freier and Thomasius 2016; Harris and Sass 2011; but also see Carreri and Payson 2024; Ferraz and Finan 2011). Voters also favor experienced candidates, suggesting that these officials may offer better outcomes for their constituents (Erikson and Titiunik 2015; Ferrer 2023*a*; Fowler and Hall 2014). When these experienced officials leave, they take this experience with them and this may tend to result in worse performance. A change in leadership also tends to disrupt the positions of people working for the leader. This disruption can lead to temporary declines in performance as well (Akhtari, Moreira, and Trucco 2022).

On the other hand, turnover may improve performance or at least not degrade performance if government officials grow increasingly insulated from accountability the longer they stay in their role (Fiorina 1989). This may be especially true in low-salience offices where voters have less information about the performance of the official and appointing bodies may not feel as much pressure to monitor performance (Ferrer 2023*b*; Hessick and Morse 2019; Olson and Stone 2023; Marx, Pons, and Rollet 2022; Wright 2008; Zoorob 2022). In fact, leader quality has the greatest effect on government performance in autocratic regimes where officials are most insulated from public pressure (Jones and Olken 2005). If public officials are insulated from accountability, bringing in a new leader may improve government performance (Marx, Pons, and Rollet 2022).

Finally, two more forces suggest that leader turnover will tend to have a neutral effect on government performance. First, elections tend to select candidates with relevant experience for the role and good past performance (see DeLuca 2024; Jacobson 1989; but also see Porter and Treul 2023), and appointment processes likely select leaders based on similar characteristics as well (Rehmert 2022). This may be especially true in local politics where partisan differences in policy between candidates tend to be smaller and the roles involve

more implementation (Kirkland and Coppock 2018). If experienced officials are typically replaced with another relatively experienced official, turnover will not normally result in worse performance unless experienced officials are more insulated from accountability. Further, if institutional knowledge is held by a wide variety of people, lower-level officials stay in place, and street-level officials have independent authority, there is no reason to expect that changing the leader will substantially change performance (Brehm and Gates 1999; Lipsky 1980; Wilson 1968).

There are plausible arguments for any of these mechanisms to be at work in local government and in election offices in particular. Running elections is a complex, fast-paced job with tight deadlines. It is reasonable to expect that it takes time to learn how to juggle many roles during short, stressful periods. Given the high-stress environment, it is also reasonable to expect that it could take time to adjust to roles that shift after a leadership change. Large incumbency advantages and limited information about performance may also make insulate local election officers from accountability. Given the preference voters and appointing bodies have for candidates with experience in local office including in election administration (Ferrer 2023*a*) and the less partisan nature of voting in local races (see Kuriwaki 2024; Thompson 2020; Ferrer, Geyn, and Thompson 2023; but also see de Benedictis-Kessner and Warshaw 2016), it is also likely that election and appointment processes will tend to select experienced officials. Finally, election officials oversee diverse teams of hired and volunteer staff, and these teams are likely to hold institutional knowledge and maintain some independence.

3 New Data on Local Official Turnover

In this section, we describe our new data on election official and sheriff turnover as well as the performance measures we study. We then describe the rise in election official turnover, documenting that turnover has increased steadily from 2004 to 2022 with a faster increase in 2022.

3.1 New Data on Local Election Official Turnover

We collect a large-scale panel dataset of chief local election officials across 50 states and 24 years. Our data captures the official who administered each even-year general election between 2000 and 2024 in each of the relevant local election jurisdictions.

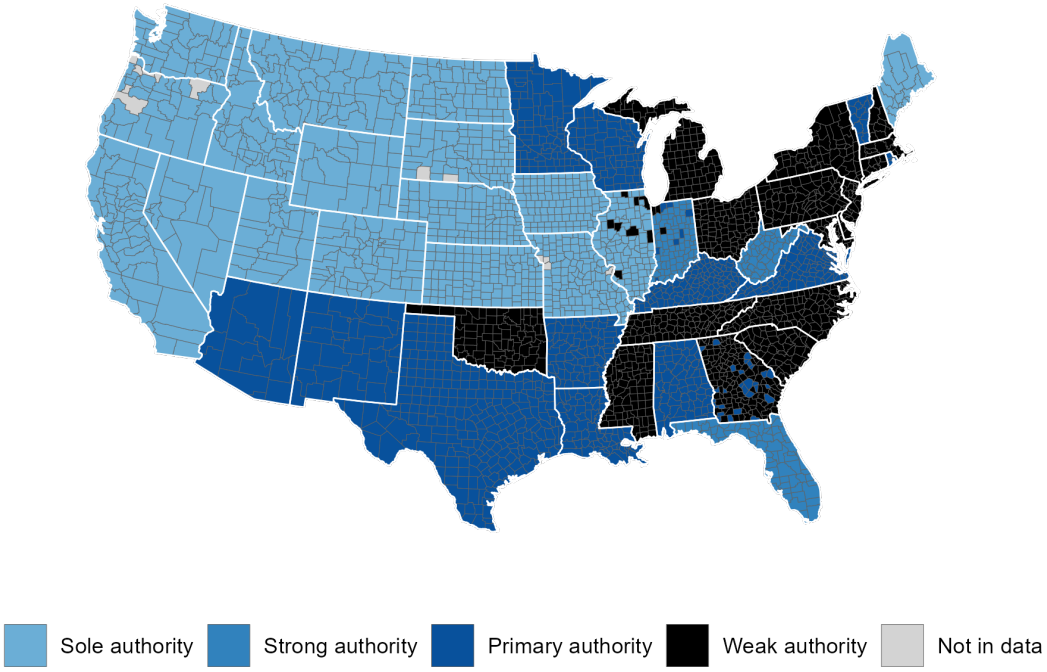
The institutions governing elections vary a lot from one state to the next and even across jurisdictions within some states. Elections can be run by a single elected official, elected boards, appointed boards, appointed individuals, or some combination. We limit our data to one office that we understand to have the most responsibility for running the election on Election Day. This means that, for states with multiple individual election authorities at the local level, we capture the individual with primary responsibility for administering elections on Election Day, as defined by Ferrer and Geyn (2022).[10] For states with election boards, we code the statutorily defined individual who handles the day-to-day responsibilities of running elections, which is typically an official appointed by the board or occasionally the chairperson of the board.[11] Table A.1 in the online appendix provides a summary of every official included in our data, as well as their selection method and their degree of election administration authority in that state.

Figure 1 visualizes our data collection, classifying jurisdictions by the amount of authority the individual captured in out data wields. In light blue jurisdictions the captured election official has complete authority over election administration, in medium blue jurisdictions the captured official is in charge of most election duties, in dark blue jurisdictions the captured official undertakes the majority of election responsibilities but is not responsible for at least some substantial duties, and in black jurisdictions the captured official is not the primary election authority.

[10] There are two exceptions to this due to data constraints. In Michigan, we code the county clerk instead of the municipal clerk. In New Hampshire, we code the municipal clerk instead of the moderator.

[11] We could not identify a single individual in each election jurisdiction in New York who is in charge of running elections. Instead, we code both the Democratic and Republican co-chairs of each county's election board and weight New York observations by half in our analysis to account for the duplicate entries.

Figure 1: **Map of Original Data Collection of Local Election Officials**. This map displays the extent of our data collection of local election officials across the U.S. Jurisdictions are categorized by the authority of the election official captured. "Sole authority" means the election official has complete statutory election authority. "Strong authority" means that the election official captured is in charge of virtually all voter and registration administration duties. "Primary authority" means that the official captured is in charge of the majority of election administration duties. Finally, "Weak authority" means that the official captured is in charge of some election duties but is not the primary authority in their jurisdiction.



We collect the majority of our data from state government websites either through election results for elected officials—building on Ferrer, Geyn, and Thompson (2023)—or from official directories of these officials. We acquire the lists from a mix of archived websites, state election publications, and public information requests. Where state-level data is not available, we search one jurisdiction at a time, collecting data from past election results, archived website pages, or via direct communication with county offices.[12] Our data comes from diverse places and often records different variations on an official's name. Most notably, some election officials change their name during their service tenure. These variations in the same name create a problem for accurately identifying when one official leaves and another

[12]The only exception is Massachusetts. The nonprofit Verified Voting provided their list of election officials in Massachusetts to complete our dataset.

takes their place. Therefore, we extensively clean the dataset to minimize false positive cases of turnover. When two officials serving in the same jurisdiction share a last name or a first name, we investigate whether this is the same official with multiple names or two different officials. We also examine rare first and last names in our dataset and conduct character string distance matching within jurisdictions to identify spelling errors. We then create a single standardized version of the each official's name to use for the purpose of tracing their service tenure.

Throughout most of the paper, we define turnover as a change in a jurisdiction's chief election official since the November election held two years prior. This ensures that we focus on the periods when we expect the most disruption from turnover—the first general federal election that the new official is responsible for running during this period of their service. When reporting changes in turnover over time, we define turnover as a change in a jurisdiction's chief election official since the November election held four years prior. We use this definition to address the fact that election officials are often elected on a four-year cycle in midterm years. This institutional feature adds a cyclical pattern to the trend in two-year turnover that makes it more difficult to interpret. By defining turnover as a change in leadership over the past four years, we remove this cyclical pattern and can interpret any changes in turnover as arising from factors other than the normal election cycle.

In total, our data encompasses more than 18,000 unique chief election officials across 6,290 counties and municipalities. We have complete lists of names in these counties across 13 election cycles, allowing us to compute turnover rates in the 11 elections from 2004 to 2024 and leaving us with over 80,000 jurisdiction-year observations of turnover.[13]

[13]Our snapshot of 2024 election officials was captured in the last week of January 2024. As such, it likely understimates the amount of turnover that will occur between 2020 and Election Day 2024. Therefore, we are cautious about drawing conclusions from this snapshot of data.

3.2 New Data on Sheriff Turnover

We build a comparable dataset of sheriffs over time using the National Directory of Law Enforcement Administrators. These directories report the names of each county's sheriff annually. We digitize all even-year directories from 1996 to 2022. We then clean the names to ensure that we do not mistake a name change or misspelling for a leadership change. Put together, this data covers 11,094 sheriffs leading 3,038 county sheriff offices.

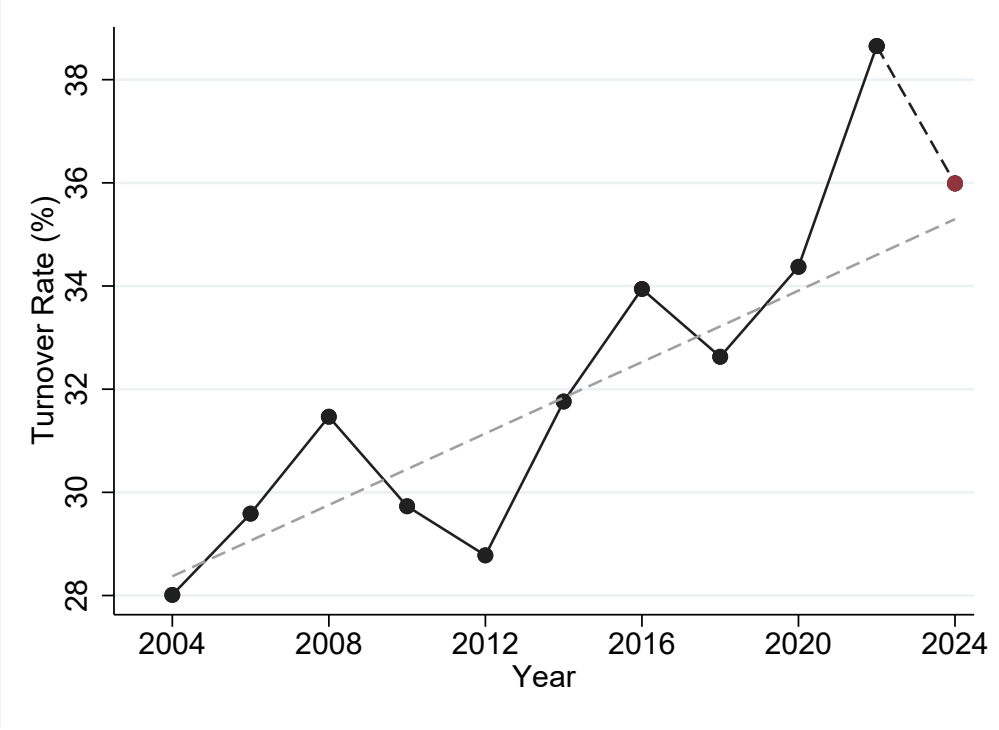
As with election officials, we measure sheriff turnover as a change in leadership since the last directory we recorded two years prior.

3.3 Measuring Local Government Performance

We link our dataset of local election officials with federal and statewide election results as well as adult population estimates. We obtain county- and municipal-level ballots cast and total presidential and gubernatorial vote data from David Leip's U.S. Election Atlas.[14] We use county- and jurisdiction-level Census data on population by age to compute voting-age population over time. Putting together the Census and Leip data, we compute turnout as the total number of votes cast in the presidential or gubernatorial election divided by the voting-age population. We also compute residual vote as the number of ballots cast in a jurisdiction minus the number of votes cast in the race at the top of the ticket, either the presidential or gubernatorial election. As a measure of reporting errors, we construct a flag for cases where a jurisdiction reports more votes than ballots cast. We also construct an additional measure of reporting errors based on erroneous reporting of the number of polling places to the Election Assistance Commission in the Election Administration and Voting Survey. Finally, we measure disruptions to the voting process using the Survey of the Performance of American Elections. We construct two measures of performance from this

[14] Leip's atlas does not contain municipal-level election results for Wisconsin. We fill this gap using data from the Wisconsin state legislature.

Figure 2: **Increasing Local Election Official Turnover Rates, 2004-2024**. The share of counties with a new chief election official since the election held four years prior has increased steadily from 2004 to 2020 with a modest additional increase in 2022. The dashed line comes from a linear regression of turnover rate on year holding out 2022 and 2024. This plot includes data from 6,290 jurisdictions in the 50 states in which elections are primarily administered at the county-level. Only jurisdictions with complete data for every even election year appear in this plot. The 2024 dot is red to indicate that this data was updated in January 2024 and does not reflect all turnover prior to the November 2024 election.



survey—the share of respondents saying they had a problem while trying to register or vote and the wait times voters reported.

For our analysis of the effects of sheriff turnover, we link our dataset of sheriffs with the FBI's Uniform Crime Report which collects crime data from local law enforcement agencies. We compute the index crime rate as the number of index crimes per capita. As a measure of reporting errors, we also construct a flag for years during which a jurisdiction failed to report complete data to the FBI.

3.4 Election Official Turnover Increased from 2004 to the Present

The main concern motivating the recent attention to local election official turnover is that officials are leaving the job in large numbers after 2020. Figure 2 provides the data necessary to evaluate the scale of the problem, capturing how turnover has changed over time. Each point represents the average turnover rate across all jurisdictions in the 49 states we study from 2004 to 2024.[15] The dotted gray line plots the fitted line from a regression of turnover on time. The regression line is fit only using data from 2004 to 2020 as a tool for predicting turnover in these years if the existing trend had continued into 2022.

Local election official turnover gradually increased from 28% in 2004 to 34% in 2020. Every two years between 2004 and 2020, the turnover rate increased by four-fifths of a percentage point. From 2020 to 2022, turnover increased by over 4 percentage points to 39%. This is the largest single-cycle increase in turnover among the 11 cycles in our data, but only by a modest margin. Turnover increased by almost 3 percentage points between 2012 and 2014.

4 Election Official Turnover Does Not Noticeably Degrade Performance

In this section we study the effect of local election official turnover on election performance. We begin by describing our empirical approach including a brief discussion of our choice to highlight turnout as a measure of election performance. Next, we present graphical evidence that election official turnover does not reduce participation. We then report formal estimates of the effect of election official turnover on participation and we show that the effect is not larger in midterm elections, when a more experienced official leaves, or when we exclude cases where officials are forced out of office. Finally, we present evidence that turnover does

[15] Massachusetts is excluded because we lack a full panel of data for this state.

not noticeably increase the rate of problems at the polls and does not make election offices more error prone but may modestly increase wait times.

4.1 Studying the Effect of Election Official Turnover on Election Performance

The main empirical challenge in studying the effect of election official turnover on participation is that the jurisdictions that experience turnover may have different levels of turnout and are possibly on different turnout trajectories. To overcome these challenges, we adopt two approaches for estimating the effect of election official turnover on election performance.

First, we estimate fixed effects regressions of the form

$$Y_{it} = \beta Turnover_{it} + \alpha_{ic} + \gamma_{st} + \varepsilon_{it}$$

where Y_{it} is turnout in jurisdiction i in year t, $Turnover_{it}$ is a binary variable indicating whether the election official has changed since the election held two years earlier, β is our estimate of the effect of turnover on turnout, α_{ic} is a jurisdiction-by-election-type fixed effect,[16] γ_{st} is a state-by-year fixed effect, and ε_{it} is the residual. Under the assumption that turnout is on the same trend in counties that experience turnover and those that do not (Angrist and Pischke 2008) and that turnover does not have effects on turnout beyond the first election cycle (Goodman-Bacon 2021), β is an unbiased estimator of the causal effect of turnover on election performance.

While this approach produces precise estimates of the effect, both assumptions necessary to ensure the effect estimates are unbiased seem unlikely to hold in this case ex ante. Local election officials may be more likely to leave after a bad or great performance and the effect of turnover could persist due to election officials learning on the job. We overcome the weaknesses in this approach using a matched difference-in-differences design akin to

[16] We have two election types in our analyses: presidential elections held in November every four years and midterm elections held in November in every even year not divisible by four.

Imai, Kim, and Wang (2023) and closely related to recent developments in synthetic control (Arkhangelsky et al. 2021; Hazlett and Xu 2018). This approach demands more out of the data and produces less precise estimates, but it is also relies on the weaker assumption that jurisdictions with turnover would have, in the absence of turnover, seen the same change in performance as other jurisdictions in their state with similar performance and turnover patterns in previous cycles.

In our matching approach, we focus on even-year general elections from 2012 to 2022 one by one. For each of the six elections between 2012 and 2022, the analysis proceeds in three steps. First, for each county where the election official leaves office before the given election, we identify all jurisdictions in the same state that have the exact same turnover history but did not change their election official immediately before the election. We then compute the Euclidean distance between pre-election turnout for each jurisdiction experiencing turnover and their control pool and select as the matched control the control jurisdiction that is closest to the treated unit. Formally, we select match

$$j_i^* = \text{argmin}_{j_i \in J_i} \sum_{t=1}^{T_{pre}} (Y_{it} - Y_{j_i t})^2$$

where j_i^* is the index for the selected matched control, j_i indexes the set of allowable matches J_i for treated unit i, t indexes elections in the pre-treatment period ending at T_{pre}, and Y_{kt} is turnout in jurisdiction k and election t. Finally, we estimate regressions nearly identical to those above but replacing state-by-year fixed effects with matched-pair-by-year fixed effects.[17]

Throughout this section, we focus on turnout as our primary measure of election performance. We do so for three reasons. First, more than 60% of local election officials say in

[17] While the regression appears similar, one important distinction is that β is now an estimate of the effect of turnover from 2012 and 2022, not in any other period. If the average effect of turnover is changing over time, estimates from these two strategies may differ for reasons other than random noise and bias from unmet identification assumptions.

surveys that increasing participation is one of their objectives.[18] Second, ultimately reducing participation through misadministration of an election is among the most important plausible consequences of election official turnover. Third, turnout is widely available and reliably estimated. Put together, studying turnout offers a reliable, important, and convenient way to assess the effects of turnover on election performance.

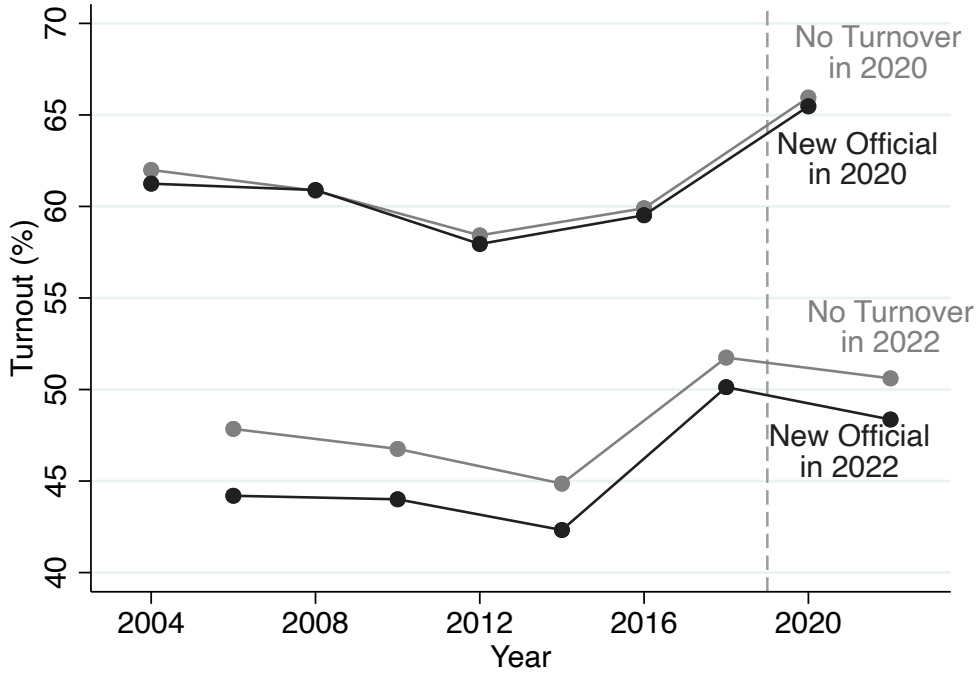
We also use residual vote as an outcome. Residual vote has been widely used as a measure of election quality (Brady et al. 2001; Kropf et al. 2020; Stewart 2020). While it has important drawbacks—for example, residual vote may reflect dissatisfaction with the candidates running at the top of the ticket rather than administrative error—it should tend to correlate with bad ballot design and poor voter assistance among other failures of election administration. We follow Stewart et al. (2020) in adjusting for jurisdiction and year fixed effects in our analysis of residual vote to ensure we are not simply picking up on a widespread increase in abstention or longstanding cross-jurisdiction patterns of abstention.

In some analyses, we subset to the states and jurisdictions where the local election official captured in our dataset is in charge of all ("sole authority"), virtually all ("strong authority"), or the majority ("primary authority") of voter and registration administration duties (see Ferrer, Geyn, and Thompson (2023) and Ferrer and Geyn (2022) for a discussion of a similar categorization). In these analyses, we exclude jurisdictions where election duties are divided between multiple officials and where the chief election official is the chair of an elections board. If higher local election official turnover causes lower voter participation, we would be most likely to observe this effect in these jurisdictions with a strong individual local election official.

To validate our matching approach, we present three complementary analyses in Section A.3 in the online appendix. First, we show that the matching procedure successfully balances the average turnout rate across treatment and control jurisdictions in all pre-treatment periods. We then show that the distribution of pre-treatment turnout is similar in treated

[18] 2023 EVIC/Reed College Survey of Local Election Officials. Available at `https://evic.reed.edu/wp-content/uploads/2023/11/crosstabs.html`

Figure 3: **Election Official Turnover Does Not Noticeably Reduce Turnout**. The black line near the top of the plot represents turnout rates over time in jurisdictions that experience turnover between 2018 and 2020, and the grey line near the top of the plot represents the turnout rate for jurisdictions that did not experience turnover in this period. The black line near the bottom of the plot represents turnout rates in jurisdictions that experienced turnover between 2020 and 2022, and the grey line near the bottom of the plot represents the turnout rate for jurisdictions that did not experience turnover between 2020 and 2022. The dotted vertical line in 2019 splits the pre-treatment and post-treatment periods. The plot only uses jurisdictions where the local election official oversees nearly all or all election administration duties.



and matched control jurisdictions. Finally, we present a placebo analysis where we hold the election immediately preceding treatment out of the matching procedure then evaluate balance in that pre-treatment period. We find that treated and control jurisdictions have similar changes in turnout in the held out election prior to the treatment period. This supports the sequential ignorability assumption that justifies our matching approach.

4.2 Graphical Evidence that Election Official Turnover Does Not Reduce Participation

Figure 3 presents simple averages from our raw data that mimics our analysis of the effect of election official turnover on voter participation. The plot has four lines: the two lines at the top of the plot correspond to our analysis of the effect of turnover between the 2018 and 2020 presidential elections on turnout in the 2020 presidential election. The black line reports the turnout rate for jurisdictions where the election official left office between 2018 and 2020. The grey line reports the turnout rate over time for jurisdictions where the election official serving in 2018 also served in 2020. The bottom two lines report the same analysis but using gubernatorial elections on midterm cycles where the jurisdictions experiencing turnover are those where the election official changed between 2020 and 2022.

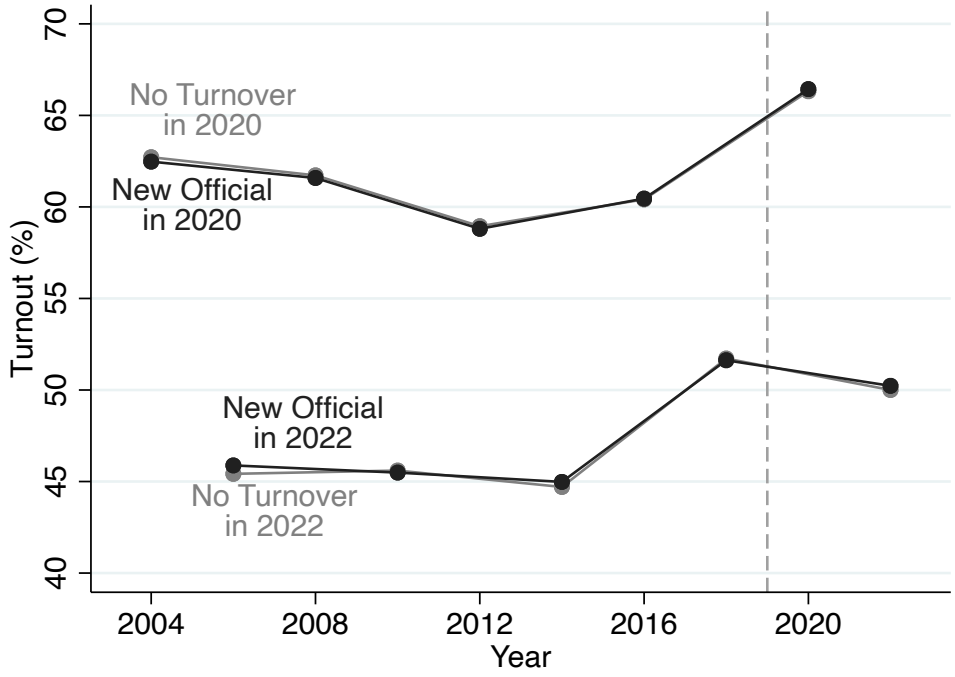
The plot suggests that election official turnover did not substantially affect participation. We can see this by focusing our attention on the gap between each black line and its nearest grey line. The differences are relatively stable before and after 2018, implying in both cases that election official turnover did not noticeably alter turnout.

Figure 3 has two main weaknesses: First, it does not account for the expectation that turnover in 2020 or 2022 may be associated with a particular historical pattern of turnover that could have affected voter turnout in previous periods. Second, places with turnover in 2020 and 2022 tend to have lower voter turnout than places without turnover in those years. While this is not a violation of the difference-in-differences identifying assumption per se, it is easier to believe that two groups that are similar on average in the past will continue to be more similar in the future than to believe that two different groups will continue changing in the exact same manner.

We address these concerns by matching each jurisdiction with turnover in 2020 or 2022 to a jurisdiction in the same state without turnover in 2020 or 2022 but with an identical turnover history and the most similar voter turnout history available.[19] Figure 4 graphically

[19]We discuss this strategy at length in Section 4.1.

Figure 4: **Election Official Turnover Does Not Noticeably Reduce Turnout, Matched Analysis**. The black line near the top of the plot represents turnout rates over time in jurisdictions that experience turnover between 2018 and 2020, and the grey line near the top of the plot represents the turnout rate for their matched controls. The black line near the bottom of the plot represents turnout rates in jurisdictions that experienced turnover between 2020 and 2022, and the grey line near the bottom of the plot represents the turnout rate for their matched controls. The dotted vertical line in 2019 splits the pre-treatment and post-treatment periods. The plot only uses jurisdictions where the local election official oversees nearly all or all election administration duties.



captures this analysis. The plot has four lines: the top two lines correspond to our analysis of the effect of turnover between the 2018 and 2020 presidential elections on turnout in the 2020 presidential election. The black line reports the turnout rate for jurisdictions where the election official left office between 2018 and 2020, and the grey line reports the average matched control unit. The two lines at the bottom of the plot report the same analysis but using gubernatorial elections on midterm cycles where the jurisdictions experiencing turnover are those where the election official changed between 2020 and 2022. Here again, the black line reports average turnout over time in jurisdictions with an election official change between 2020 and 2022, and the grey line reports its average matched control.

Table 1: **Effect of Election Official Turnover on Turnout and Residual Vote.**

	Turnout (%)				Residual Vote (%)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Turnover	-0.08	-0.12	0.01	-0.10	0.01	0.04	0.05	0.01
	(0.06)	(0.09)	(0.07)	(0.13)	(0.04)	(0.04)	(0.03)	(0.06)
# Jurisdictions	4,060	3,200	1,179	981	1,834	1,596	966	871
# Obs	28,250	22,584	9,675	6,996	15,030	11,230	8,095	5,978
Outcome Mean	59.45	59.85	56.05	56.76	1.38	1.37	1.66	1.63
Min Detectable Effect	0.16	0.27	0.19	0.38	0.10	0.13	0.08	0.16
Strong Official Only	No	No	Yes	Yes	No	No	Yes	Yes
Matched Sample	No	Yes	No	Yes	No	Yes	No	Yes
Juris-by-Elec Type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	No	Yes	No	Yes	No	Yes	No
Pair-by-Year FE	No	Yes	No	Yes	No	Yes	No	Yes

Robust standard errors clustered by jurisdiction reported in parentheses. Data is limited to jurisdictions with one primary official. Strong official only indicates jurisdictions where only one official is responsible for directing all aspects of election administration. Matched sample limits data to jurisdictions that experienced turnover between 2012 and 2022 and a set of matched control jurisdictions from the same state with the same history of turnover and the most similar levels of the outcome in all prior elections using 1-to-1 matching with replacement. Turnover refers to a change in the election official since the election two years prior. Turnout is measured as share of voting age residents who cast a vote in the presidential race for presidential years and the governor race for midterm years. Residual vote is measured as the the share of ballots cast without a vote in the presidential race in presidential years and governor race in midterm years. Regressions on unmatched data include jurisdiction-by-election cycle (presidential vs midterm) fixed effects and state-by-year fixed effects. Regressions on matched data include jurisdiction-by-election cycle fixed effects and matched pair-by-year fixed effects. Min detectable effect refers to the minimum effect that a two-sided test with a 0.05 alpha would have 80% power to detect.

The fact that the black and grey lines in the top and bottom of the plot are nearly identical before 2020 implies that the average matched control jurisdiction closely resembles the average turnover jurisdiction. Turning to the post-treatment period, we see that in 2020 and 2022 the grey and black lines continue to look similar, meaning that local election official turnover did not lead to substantially lower citizen participation on average. We report formal estimates of this effect in the remaining subsections of Section 4.

4.3 Formal Evidence that Election Official Turnover Does Not Degrade Performance

Table 1 presents formal estimates of the effect of turnover on turnout and residual vote. The first column presents our two-way fixed effect estimate of the effect of turnover using all instances of turnover from 2004 to 2022 and all jurisdictions with a single election official who oversees at least a majority of election administration tasks. The second column presents our matching-based estimate of the effect on turnout still including all jurisdictions with a single election official overseeing a majority of election administration tasks. The third and fourth columns repeat the first and second columns but limit data to jurisdictions with election officials who are responsible for all or nearly all election administration in the jurisdiction.[20] Columns 5 through 8 repeat columns 1 through 4 but study residual vote as the outcome.

The two-way fixed effect analyses reported in odd-numbered columns are more precise but are more likely to be biased. The matching analyses reported in even-numbered columns overcome the main potential threats to the two-way fixed effects analyses but are less precise. Similarly, our estimates in columns three, four, seven, and eight, using only jurisdictions with a single individual responsible for overseeing all aspects of election administration, are noisier, but these analyses may be more likely to detect effects if they exist given the greater authority of election officials in this subset.

Across all eight estimates, we find consistent evidence that local election official turnover does not meaningfully affect citizen participation or residual vote. Our point estimates imply that turnover did not decrease voter turnout by more than an eighth of a percentage point and did not increase voter turnout by more than one one-hundredth of a percentage point. Our point estimates also imply that turnover did not increase residual vote by more than one tenth of a percentage point and did not decrease residual vote. Across all eight columns, we cannot reject the null hypothesis that turnover has no effect on turnout or residual vote. Focussing on our preferred approach which uses matching and zooms in on jurisdictions

[20] We include "strong authority" and "sole authority" officials.

where the chief election official has all or nearly all authority over election administration (presented in column 4), the bottom end of our 95% confidence interval is still less than two fifths of a percentage point effect on turnout. Our analysis is powered to detect very small effects on voter turnout. We have 80% power to detect effects as small as the effect of adding a day and a half of early voting (Kaplan and Yuan 2020), one eighth the effect of a get-out-the-vote ad campaign for young people Green and Vavreck (2008), one eighth the effect of switching to universal vote-by-mail (Gerber, Huber, and Hill 2013; Thompson et al. 2020), and one half of the effect of sending a single postcard to everyone encouraging them to vote (Gerber et al. 2017). The effects we estimate on residual vote using our matching approach are similarly small.

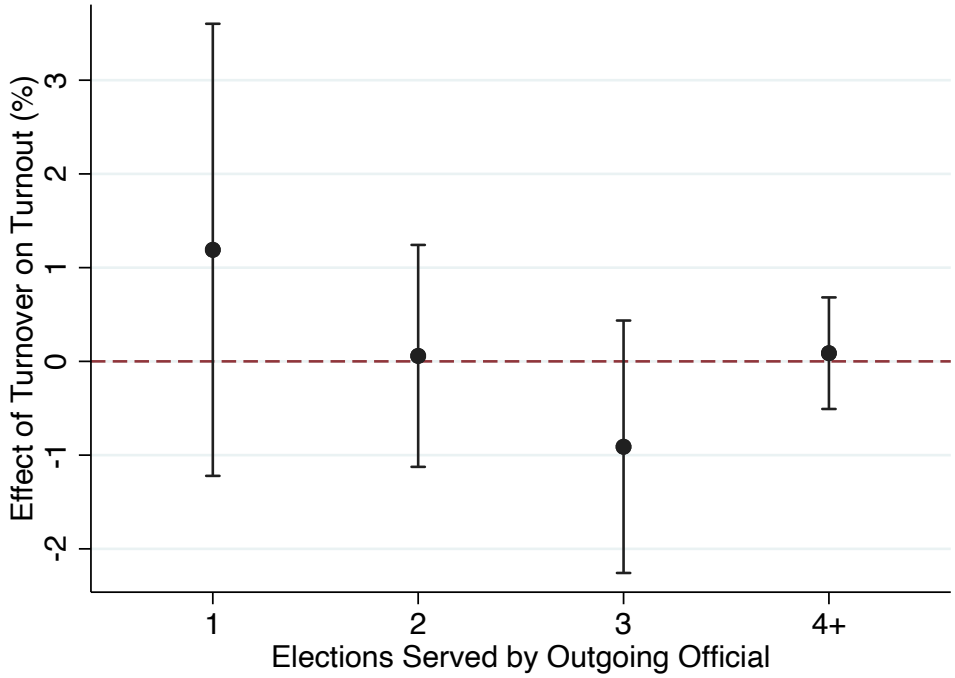
Put together, Table 1 suggests that local election official turnover does not substantially decrease turnout or increase residual vote.

4.4 Similar Effects of Turnover in Presidential and Gubernatorial Elections

One challenge with focusing on presidential elections is that citizens may be especially motivated to participate and find ways to vote even if the election official makes mistakes or erects needless barriers. Might our pooled results mask an effect in midterm elections when citizens often feel less motivated to vote? To investigate whether this explains our small estimates of the effect of turnover on turnout, we conduct separate analyses of presidential cycle and gubernatorial cycle election years. We focus our analysis on jurisdictions where the chief election official has sole authority over election administration.

Table A.3 in the online appendix presents our results. While our matching estimates are noisy given the much smaller sample, we find that turnover has a similar modest effect in midterm years as in presidential years. Our confidence intervals from our two-way fixed effects regressions of the effect on turnout do not contain effects larger than 0.30 percentage

Figure 5: **Similarly Small Effect of Turnover When Exiting Official Had Longer Tenure**. Each point represents a point estimate based on the matched analysis data, limiting to jurisdictions where the election official is responsible for all or nearly all election administration and those that had turnover after a given number of terms without turnover. The bars represent 95% confidence intervals.



points in either midterm or presidential elections, and our largest point estimate is a noisy decrease in turnout of 0.25 percentage points.

4.5 Similar Effects of Turnover When Exiting Official Had More vs Less Experience

If turnover is common in some offices and uncommon in others, many new officials will replace individuals who had yet to accrue significant experience. Might this mean our estimates understate the disruption when experienced officials exit? To investigate this, we extend the analysis we presented in column 4 of Table 1. We estimate the effect of turnover on turnout using our matched data with only jurisdictions where the election official has sole authority.

We then limit our data to cases where the previous election official had a given number of November elections.

We find that, regardless of whether the previous official served only briefly or for a long time, election official turnover does not noticeably decrease turnout. While these estimates are noisy, we take this as suggestive evidence that our main finding is not masking a much larger effect when a veteran election official leaves.

4.6 Similar Effects of Turnover When Exiting Official Left Voluntarily

Occasionally, appointed election officials are removed from their post and directly elected officials are voted out of office. In other cases, the jurisdiction changes which office is responsible for conducting elections, thereby generating turnover by removing the duties from one office and giving them to another. We categorize all of these changes in election leadership as turnover. But, if these are cases where existing election officials are performing especially poorly, turnout may increase when these officials leave office, and these positive effects of turnover may mask negative effects of turnover when average- or above-average-quality officials leave.

To evaluate these claims, we collect data on all election official departures between 2018 and 2022 where a local election official is responsible for all or nearly all election administration duties. As we document in Figure A.4 in the online appendix, out of 373 cases where we can identify a reason for departure, 86% are voluntary, meaning the official retired or left for a new position. In Table A.4, we rerun our main analyses limiting the data to cases where the official left voluntarily. Our estimates of the effect of turnover on turnout are noisier in these analyses because we only have turnover leading into the 2020 and 2022 elections. Still, we find that the effect of turnover on voter turnout is similar whether we include or exclude involuntary departures. This implies that our main results are not understating the effects

of typical cases of turnover by combining turnover that improves performance on average with turnover that degrades performance on average.

Negative effects of turnover could also be understated in our main analysis if local governments change the office running elections to improve the performance of elections. In this case, turnover due to institutional change would tend to increase turnout and could cut against a negative effect of turnover on turnout in typical cases. To evaluate this claim, we rerun our analysis limiting our data to jurisdictions with a single elected official responsible for all or nearly all election administration duties throughout our study period. Table A.5 in the online appendix presents our results. Broadly, we find that the effects are quite similar to the effects we presented as our main analysis in Table 1. Our estimates of the effect on turnout are slightly less negative and our estimates of the effect on residual vote are slightly more positive. This suggests that positive effects of turnover produced by jurisdictions that change electoral institutions is not masking a substantial negative effect of typical turnover.

4.7 Turnover Does Not Make Residents Noticeably More Likely to Report Voting Issues but May Modestly Increase Wait Times

Might new officials perform worse than their predecessor without decreasing turnout or increasing residual vote? While unnecessarily preventing an eligible person from voting is among the most important mistakes an election official can make, it may be hard to see this kind of mistake if voters find ways to vote despite the barrier placed in their path.

To evaluate whether turnover makes it harder for people to vote without affecting turnout, we turn to the Survey of the Performance of American Elections (Stewart 2023). The survey interviewed 200 or more residents of every US state following every even-year general election between 2008 and 2022, with the exception of 2010 and 2018. We measure someone as having had a problem voting if they report that they had a problem with their voter registration, a problem with voting equipment, a problem getting a mail ballot, a problem marking their mail ballot, or difficulty finding their polling place. We then match respondents to the

Table 2: **Effect of Election Official Turnover on Share of Voters Reporting Problems Voting.**

	Reported Problem Voting {0,1}			
	(1)	(2)	(3)	(4)
Turnover	0.002	0.002	0.002	0.001
	(0.005)	(0.004)	(0.004)	(0.004)
# Counties	1,030	1,030	1,029	905
# Respondents	24,737	24,737	24,650	24,526
Outcome Mean	0.041	0.041	0.041	0.041
Min Detectable Effect	0.013	0.012	0.012	0.012
Strong Official Only	Yes	Yes	Yes	Yes
State-by-Year FE	No	Yes	Yes	Yes
Individual Controls	No	No	Yes	Yes
County Controls	No	No	Yes	No
County FE	No	No	No	Yes

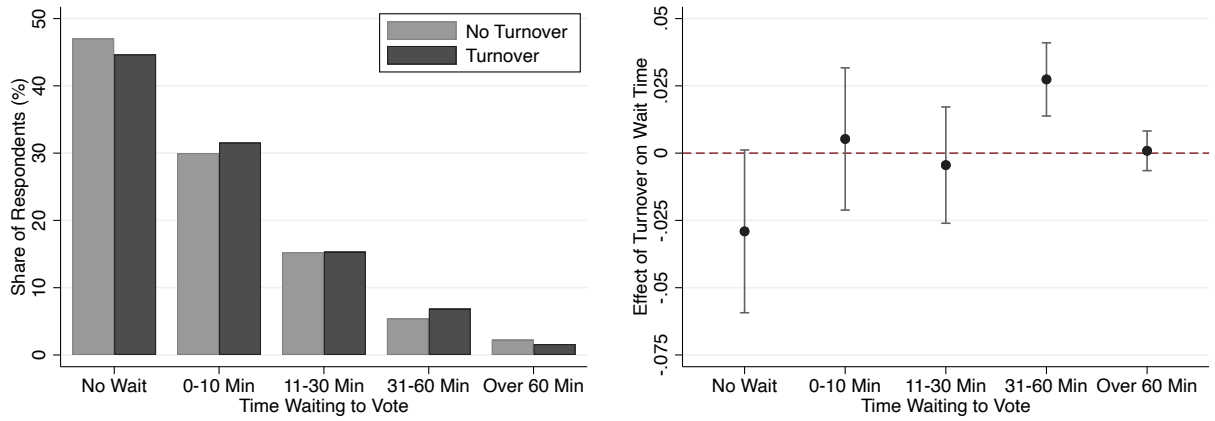
Robust standard errors clustered by county reported in parentheses. Data is limited to counties where only one official is responsible for directing all or nearly all aspects of election administration. Each observation is one respondent to the Survey of the Performance of American Elections who reported voting. Observations are weighted according to the weights provided by the survey team. Turnover refers to a change in the election official since the election two years prior. The outcome is a dummy variable with value 1 for respondents reporting a problem with the registration or the voting equipment, an issue obtaining or completing their mail ballot, or difficulty finding the polling place. Individual controls are gender, race, years of education, and party ID fixed effects as well as age included as a single covariate. County controls are the natural logarithm of voting age population and Democratic presidential vote share in 2020. Min detectable effect refers to the minimum effect that a two-sided test with a 0.05 alpha would have 80% power to detect.

counties where they live and run repeated cross-sectional regressions to isolate the effect of election official turnover on reported problems voting.[21]

We find that turnover does not substantially increase the share of voters who say they had a problem while trying to vote. Table 2 presents our results. Colum 1 presents the simple difference in the share of people who had an issue voting in counties with turnover vs those without turnover, finding that people living in counties with turnover were 0.2 percentage points more likely to report a problem. In columns 2, 3, and 4, we adjust for factors that

[21]In all analyses, we weight our regressions by the survey weights provided by the survey team.

Figure 6: **Election Official Turnover May Modestly Increase Wait Times**. The left panel presents the distribution of wait times in jurisdictions and years with chief election official turnover compared to those without turnover. The right panel presents estimates of the effect of turnover on the share of probability a resident experiences a given wait time. The estimates in the right panel come from separate regressions of a dummy variable for each category of wait time on a dummy for turnover, state-year dummies, county-level control variables, and individual-level control variables. Both plots rely on data from the Survey of the Performance of American Elections and are weighted using the weights constructed by the survey team.



may be different in jurisdictions with turnover from those without and that may affect the tendancy of a respondent to experience or report a problem. Across all four columns, we find consistent evidence that turnover does not substantially increase the share of people reporting a problem trying to vote.

In a complementary analysis, we evaluate whether turnover leads to longer wait times at the polls. A significant part of the job for election officials is overseeing a logistically complex event, and having run a prior election may help officials carry it out more effectively and reduce wait times. Figure 6 presents our results. In the left panel, we present the distribution of wait times in jursidictions and years with election official turnover next to the distribution of wait times in jurisdictions and years without turnover. While the distributions are similar, there is a modest shift towards longer wait times in jurisdictions experiencing turnover. Fewer people experience no wait and more people experience wait times between 30 minutes and an hour in jurisdictions and years that the election office changed hands.

Election official turnover is more common in certain types of jurisdictions and years than others. For example, turnover is much more common before presidential elections than midterms and more common in densely populated places than in suburbs. If wait times are systematically worse in these types of counties and periods, we may incorrectly conclude that wait times are higher because of turnover when it is simply a coincidence about the timing and location of turnover. To assess this possibility, we estimate the effect of turnover on the probability a resident falls in each wait time category adjusting for state-year fixed effects, county-level covariates, and respondent-level covariates. We present our effect estimates in the right panel of Figure 6. We find that turnover increases the share of residents experiencing a wait time between 30 minutes and an hour by about 2.5 percentage points and reduces the share experiencing no wait time by a similar amount. In Section A.7 in the online appendix, we document that this finding is robust to other plausible regression specifications.

We take this as suggestive evidence that turnover leads to a modest increase in the time people spend at the polls. We reach that conclusion for two reasons. First, we describe this effect as suggestive because, given the large number of analyses we run, we should expect to occasionally find statistically significant effects even if turnover does not have an effect. Second, we describe this effect as modest based on how it affects citizen behavior. Pettigrew (2021)documents that waiting for 30 minutes to one hour reduces participation by approximately one percentage point. If turnover leads to a 2.5-percentage-point increase in the number of voters who wait 30 to 60 minutes to vote, this would lead to a minimal 0.03 percentage point effect on turnout, so small as to be easily counteracted by limited campaign activity. Second, we take this effect as

Put together, we read our survey-based results as evidence that election official turnover may modestly increase wait times but it does not increase the number of respondents reporting problems voting and it is not enough to prevent many people from casting a ballot.

4.8 Turnover Does Not Make Election Offices Noticeably More Error Prone

Beyond ensuring access to the ballot, election officials also have a responsibility to report election results accurately. Administrative errors matter because they can sow doubt in accuracy of the vote counts. Some public officials and academics argue that experienced officials are less likely to make these administrative errors.[22] To determine whether new officials are more likely to make administrative errors, we collect data on cases where a jurisdiction misreported the number of polling places it opened or reported having more votes than ballots cast. While these are all likely legitimate cases of misunderstanding or typographical mistakes, these are exactly the kind of reporting errors that receive attention from citizens inclined to disbelieve election results.

Table A.7 in the online appendix captures the results of our analysis. Using the same research design as above, we find noisy but consistent evidence that turnover does not increase administrative errors, at least for the errors we can observe.

5 Why Does Turnover Not Degrade Performance?

We have established that, across a wide variety of outcomes, leadership turnover is not generally associated with substantially lower performance. This runs contrary to the conventional wisdom that, since leaders gain experience over time, replacing them with a new official will result in worse performance. This also runs contrary to recent findings in other offices that long-tenured officials perform poorly because they are insulated from accountability implying that turnover will lead to better performance. Why might this logic not hold? As discussed in Section 2, we see two reasons: election officials are typically replaced by people

[22] https://www.votebeat.org/pennsylvania/2023/12/19/pennsylvania-ballot-errors-2023-increase/

with sufficient experience to manage the election without making consequential mistakes and lower-level staff continue to carry out needed election duties without issue.

In this section, we offer two pieces of evidence as a partial step toward understanding why turnover does not degrade performance. First, we document that election officials are typically replaced by people with prior paid experience in the office. Given the limited time period over which we have data and the fact that it is relatively uncommon for inexperienced leaders to take over, we cannot directly test whether performance declines when inexperienced people step in.

Since we cannot directly test our two main mechanisms, we ask whether our results generalize in a way that is consistent with the mechanisms we propose. To that end, we replicate our main analyses for county sheriff. County sheriffs share many of the features of election officials—they run a local office with significant authority in a narrow domain where experience may matter for performance, where deputies often assume the role of departing leaders, and where many junior officials are needed to conduct the agency's business. We find a similar pattern for sheriffs as we did for election officials—when experienced sheriffs leave office, crime and crime reporting do not get much worse or much better.

While these analyses do not rule out other explanations for why turnover might have a minimal impact on performance or no impact at all, they suggest that new election officials may not produce worse outcomes because a large majority have on-the-job practice doing the work and many other workers continue doing their work as before.

5.1 New Election Leaders Typically Have Paid Election Administration Experience

Do elections and appointments select for experienced replacement election officials? To answer this question, we pair our turnover data with the Reed College Survey of Local Election Officials. Each election official who responded to the 2023 survey was asked "How many years have you worked in a paid capacity in the elections field?" We use our linked

turnover data to identify people who started new roles in 2021 or 2022 then determine how many years of paid experience the average new election official had by the time they conduct their first federal general election. We find that the average new official has 8.5 years of experience prior to their first federal general election, and the median official has 5.5 years of experience. Approximately 68% of officials surveyed had at least two years of paid experience prior to conducting their first federal general election.

5.2 The Limited Effect of Turnover Extends Beyond Election Officials

Does local official turnover have a small effect specifically and only in the area of elections, perhaps due to legal protections for voters, limited effects of election administration on participation and voter experiences, widespread election official training programs, or the fact that many of the officials spend most of their time in a different area and do not develop extensive expertise? Or is election official turnover not harmful for reasons that are shared across local government offices, such as the tendency of elections and appointment processes to select for experienced, qualified individuals to run the office?

To answer these questions, we study the effect of sheriff turnover on performance. We focus our analysis on FBI index crime rates and a flag for failure to report complete crime data to the FBI's Uniform Crime Report. We follow our earlier analyses in estimating the effect of turnover using a regression with county and state-by-year fixed effects. This tells us how different performance is in the first period of a sheriff's tenure relative to all other periods in that county after netting out statewide crime and data reporting trends.

Table 3 presents our results. Columns 1 through 3 present our estimates of the effect of sheriff turnover on crime. We find that sheriff turnover does not result in noticeably higher crime rates, either for total crime or crime broken out by violent and property crime. All three of our estimates are substantively small, with our point estimates implying an increase in crime of one-percent of the average rate or less in that category. In column 1, the top

Table 3: **Effect of Sheriff Turnover on Crime and Crime Reporting.**

	Crimes per 1k Residents			Missing Crime
	Total	Property	Violent	Data {0,100}
Turnover	0.12	0.10	0.02	0.25
	(0.12)	(0.10)	(0.03)	(0.39)
Outcome Mean	15.80	13.91	1.89	22.13
# Counties	2,852	2,852	2,853	3,018
# Obs	30,826	30,827	30,839	39,234
County FE	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes

Robust standard errors clustered by county reported in parentheses. Crime rates report annual rates of crime per 1,000 residents in the FBI's Uniform Crime Report. Missing Crime Data is coded as 0 if the sheriff reported crime data to the FBI for every month of that year and coded as 100 otherwise so estimates can be interpretted as percentage point effects.

end of our 95% confidence interval is less than 2.5% of the average crime rate, suggesting further that, if sheriff turnover increases crime, it does so only by a tiny amount. Column 4 of Table 3 presents our estimate of the effect on reporting missing data. Approximately 22% of jurisdictions report incomplete data to the FBI in the average year. We find that sheriff turnover does not substantially increase the probability that a sheriff's office will fail to report—our point estimate implies that turnover increases by 0.25% the probability that a sheriff's office will fail to submit complete records, and the top end of our 95% confidence interval implies that we could reject a null hypothesis of an increase of 1.1 percentage points in the rate of incomplete or non reporting.

Put together, these estimates suggest that elections is not the only domain of local politics in which turnover does not substantially degrade office performance.

6 Conclusion

More election officials are leaving office than in the past, and this turnover rate has been rising for two decades. This has led a chorus of commentators, academics, and public officials

to worry that high turnover means that elections will be poorly run. In this paper, we present a large new dataset on election official and sheriff turnover over two decades. We find that local official turnover does not noticeably degrade performance. This finding holds true across the many outcomes we measure, with the possible exception of wait times at the polls, and for the many subsets of the data we study. We also present suggestive evidence that turnover does not affect performance because incoming leaders are typically selected for their experience and skill, and lower-level bureaucrats also often have experience in their role. Our evidence suggests that we are unlikely to see major disruptions to local government performance in the short run despite higher turnover in some offices.

Two words of caution are warranted when interpreting our findings. First, while we can rule out turnover systematically producing mistakes that degrade performance on average, turnover may still increase the probability of rare but important negative events. For example, a new official in an important county in an important swing state who fails to identify a ballot design error could create a crisis of trust or send an election to the courts, as happened in Florida in the 2000 presidential election. We cannot observe minuscule increases in the probability of such an event, but events like those are still important negative outcomes that any full accounting of turnover must consider.

Second, our explanation for a small effect of turnover—that incoming officials often bring significant experience—may not provide the full picture. In addition to the experience of the incoming official, turnover may also have a limited effect on performance because our local officials all perform equally poorly and do not learn from experience. Our current research designs and data do not allow us to answer this question, but we recommend scholars take this on in future research.

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Online Appendix

Intended for online publication only.

Contents

A.1 Local Election Officials Included in Dataset

Table A.1 displays data on the selected local election officials for each state, as well as the number of jurisdictions in the state, the number of jurisdictions with a full panel of data, the levle of geography captured, the selection method of the officials, whether the modal official captured in each state is the sole and/or primary election authority, the data sources used, and the start and end year of the data collected.

Table A.1: **Local Election Officals Captured in the Dataset**

State	Jurisdictions	Jurisdctions Used	Geography	Election Official	Selection Method	Sole Authority	Primary Authority	Data Source	Data Start	Data End
Alabama	67	67	County	Probate Judge	Elected	No	Yes	Elections and State	1996	2024
Alaska	5	4	Region	Regional Election Supervisor	Appointed	Yes	Yes	State	2000	2024
Arizona	15	15	County	County Election Administrator / County Recorder	Mixed	No	Yes	State	2000	2024
Arkansas	75	75	County	Clerk	Elected	No	Yes	State	2000	2024
California	58	58	County	Clerk / Registrar of Voters / Auditor / Director of Elections	Mixed	Yes	Yes	State	1996	2024
Colorado	64	63	County	Clerk and Recorder	Mixed	Yes	Yes	Elections and State	1998	2024
Connecticut	178	171	Municipal	Clerk	Mixed	No	No	State	2000	2024
Delaware	3	3	County	Director of Elections	Appointed	No	No	State	1996	2024
Florida	67	67	County	Supervisor of Elections	Mixed	No	Yes	Elections and State	1998	2024
Georgia	159	159	County	Elections Director / Probate Judge	Mixed	No	No	Elections and State	1996	2024
Hawaii	5	4	County	Clerk	Appointed	Yes	Yes	State	2000	2024
Idaho	44	44	County	Clerk	Elected	Yes	Yes	Elections	2000	2024
Illinois	102	102	County	Clerk / Executive Director	Mixed	Yes	Yes	Elections and State	2000	2024
Indiana	92	92	County	Clerk	Elected	No	Yes	Elections and State	1998	2024
Iowa	99	99	County	Auditor	Elected	Yes	Yes	Elections and State	2000	2024
Kansas	105	105	County	Clerk	Mixed	Yes	Yes	State	2000	2024
Kentucky	120	120	County	Clerk	Elected	No	Yes	Elections and State	1998	2024
Louisiana	64	64	Parish	Clerk of Court	Elected	No	Yes	State	1998	2024
Maine	504	502	Municipal	Clerk	Mixed	No	Yes	State	2000	2024
Maryland	24	24	County	Election Director	Appointed	No	No	State	2000	2024
Massachusetts	351	0	Municipal	Clerk / Elections Commissioner	Mixed	No	Yes	Verified Voting	2012	2024
Michigan	83	83	County	Clerk	Elected	No	No	State and NGO	2000	2024
Minnesota	87	87	County	Auditor / Election Director	Mixed	No	Yes	State	2000	2024
Mississippi	82	82	County	Circuit Clerk	Elected	No	No	State	2000	2024
Missouri	115	110	County	Clerk / Director of Elections	Elected	Yes	Yes	State	2000	2024
Montana	56	56	County	Clerk and Recorder / Election Administrator	Mixed	Yes	Yes	Elections and State	1996	2024
Nebraska	93	93	County	Clerk / Election Commissioner	Mixed	Yes	Yes	Elections and State	2000	2024
Nevada	17	17	County	Clerk / Registrar of Voters	Mixed	Yes	Yes	Elections and State	2000	2024
New Hampshire	234	234	Municipal	Clerk	Mixed	No	No	State and NGO	2000	2024
New Jersey	21	21	County	Clerk	Elected	No	No	State	2000	2024
New Mexico	33	33	County	Clerk	Elected	No	Yes	Elections and State	2000	2024
New York	62	58	County	Election Commissioner	Appointed	No	No	State	2000	2024
North Carolina	100	100	County	Election Director	Appointed	No	No	State	2000	2024
North Dakota	53	53	County	Auditor	Elected	Yes	Yes	State	2000	2024
Ohio	88	88	County	County Election Director	Appointed	No	No	State and Local	2000	2024
Oklahoma	77	77	County	Election Board Secretary	Appointed	No	No	State	1996	2024
Oregon	36	36	County	Clerk / Elections Director	Mixed	Yes	Yes	State	2000	2024
Pennsylvania	67	67	County	Director of Elections	Appointed	No	Yes	State	2000	2024
Rhode Island	39	39	Municipal	Clerk / Registrar / Election Director	Mixed	No	Yes	State and Local	2000	2024
South Carolina	46	46	County	Director of Voter Registration and Elections	Appointed	No	No	State	2000	2024
South Dakota	66	64	County	Auditor	Mixed	Yes	Yes	Elections and State	2000	2024
Tennessee	95	95	County	Administrator of Elections	Appointed	No	No	State	2000	2024
Texas	254	254	County	Elections Administrator / Clerk / Tax Assessor	Mixed	No	Yes	State	2000	2024
Utah	29	29	County	Clerk	Elected	Yes	Yes	Elections and State	1998	2024
Vermont	246	246	Municipal	Clerk	Mixed	No	Yes	State	2000	2024
Virginia	133	133	County	General Registrar	Appointed	No	Yes	State and Local	1998	2024
Washington	39	39	County	Auditor / Elections Director	Elected	Yes	Yes	Elections, State, and NGO	2000	2024
West Virginia	55	55	County	Clerk / Elections Coordinator	Mixed	No	Yes	Elections and State	2000	2024
Wisconsin	1851	1779	Municipal	Clerk	Mixed	No	Yes	State	2000	2024
Wyoming	23	23	County	Clerk	Elected	Yes	Yes	Elections and State	1998	2024

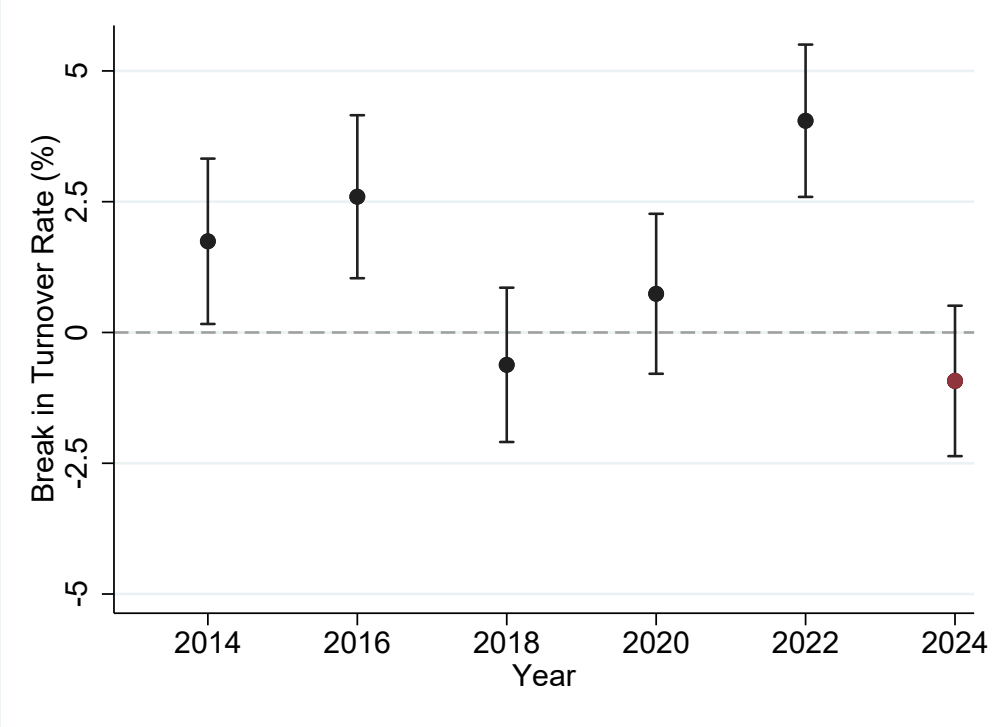
Number of jurisdictions are total number of jurisidictions in that state. Jurisdictions Used are the number of jurisdctions with a full panel of data between 2000 and 2024 and used in the main analysis. In states where multiple officials are coded, a '/' separates each distinct official and they are listed in order by frequency. We aim to code the official in each jurisdiction with primary authority to administer elections, especially those who oversee voting administration on Election Day. In jurisdictions with boards, we identify the single official with the most responsibility in running elections. In New York, no single individual could be identified so we code the two election commissioners in each jurisdiction. We exclude jurisdictions in other states where no single invdividual could be identified. We were unable to collect municipal-level data in Michigan, so we code the most important county-level official. We are unable to collect data on the municipal moderators in New Hampshire, so we code the municipal clerk. Selection method indicates whether all officials coded in each state are elected, appointed, or a mix of both. Sole authority designates whether the official is the only election authority in that jurisdiction, excepting local legislative bodies that determine election administration budgets and appointing bodies whose sole purpose is to select a chief election official. Primary authority indicates whether the official coded is in charge of the majority of election administration responsibilities in the jurisdiction. For both columns, the modal coded official in the state is classified. For election source, 'State' indicates the data derives from the state election authority, 'Elections' indicates the data derives from election results, and 'NGO' indicates the data derives from a state-level independent organization, typically a state association of election officials. The date ranges indicate the maximal amount of data captured for each state, although only data from 2000 onwards is used in the analysis.

A.2 Characterizing the Magnitude of the Post-2020 Increase in Turnover

To assess whether the trend break we observe in 2022 is out of the ordinary, we conduct two analyses. First, we use a simple linear regression to predict the turnover rate in 2022 using data from 2004 to 2020 and ask whether observed turnover in 2022 is statistically distinguishable from the turnover rate predicted by the observed trend. Second, we extend this analysis back in time, asking whether observed turnover in 2014, 2016, 2018, and 2020 is noticeably higher or lower than the trend in turnover prior to that year would predict.

Figure A.1 presents the results of our analysis of trend breaks. We find that, among the last six election cycles from 2014 to 2024, 2022 is the largest break in election official turnover, and it is statistically distinguishable from the existing trend. However, it is only modestly larger than other recent breaks in the trend. For example, while turnover was 4 percentage points higher in 2022 than expected, turnover was also 2.6 percentage points higher than expected in 2016 based on existing trends, and the observed turnover in both 2014 and 2016 is also statistically distinguishable from the trend.

Figure A.1: **Breaks in Election Official Turnover Trends Over Time**. Each point reports a break in the turnover rate in a given election from the pre-existing trend estimated using linear regression. The lines extending from the points are 95% confidence intervals based on standard errors clustered by jurisdiction.



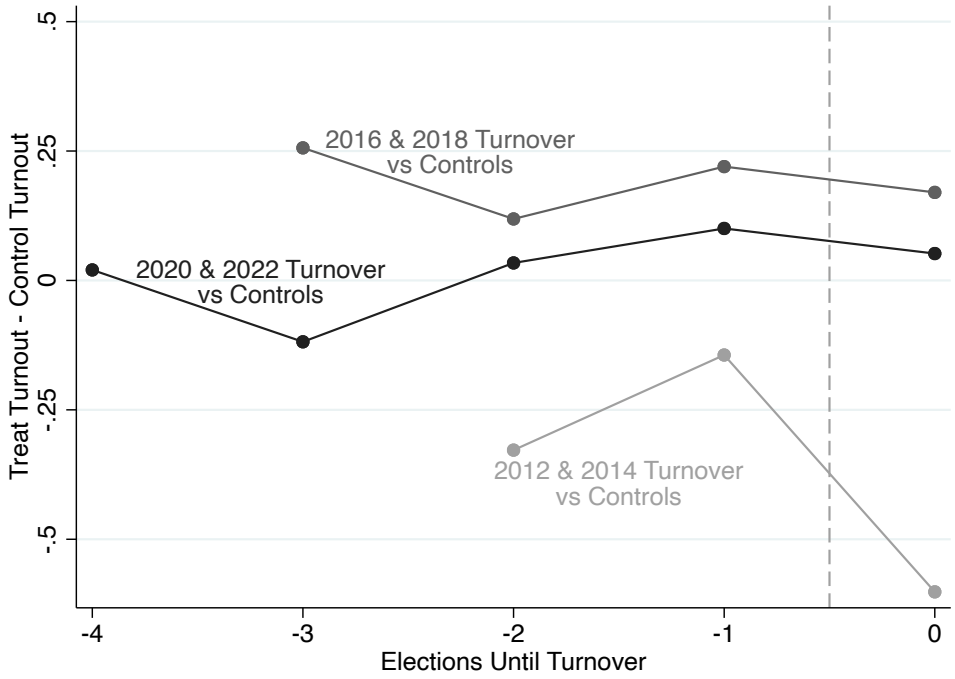
A.3 Validating the Matched Turnover Analysis

As we discuss in Section 4.1, we use matching to ensure that jurisdictions that experience turnover and those that do not are on similar turnout and residual vote trajectories prior to the turnover. We conduct a number of complementary anlayses to validate that the matching worked as expected. First, Figure A.2 presents an event study plot that captures the average differences between the jurisdictions with turnover and their matched controls prior to the turnover. Since our data starts in 2004, our matching for turnover prior to the 2012 election relies only on turnout in 2004 and 2008 whereas our matching for turnover prior to the 2020 election relies on turnout in 2004, 2008, 2012, and 2016. To capture these differences, we display one line for each analysis based on the number of pre-treatment periods available. We find that the average differences between treatment and control within each analysis are small ranging from -.31 percentage points and .25 percentage points. These differences also roughly cancel out, resulting in average pre-treatment difference of -0.01 percentage points between the treated and control jurisdictions. Finally, the event study plot also reveals that the differences between the treated and control jurisdictions are approximately flat over the pre-treatment period, implying that the match is balancing the average turnout trajectory of the treatment and control jurisdictions as well.

Figure A.3 presents a histogram of turnout in the jurisdictions with turnover and their matched controls prior to the turnover being studied. The matching produces similar distributions.

Finally, in Table A.2 we present a placebo analysis that evaluates whether the matching approach. In this analysis, we exclude from matching the cycle prior to the turnover we are studying. By holding it out, we can check whether the juridictions with turnover and their matched controls have similar turnout and residual vote in the election prior to turnover under study. This need not be the case—the matching could be doing a bad job of adjusting for latent differences in turnout rates between the treated and control jurisdictions, or, if election officials are selected based on performance, turnover may be preceded by an

Figure A.2: **Event Study Plot Comparing Turnout in Jurisdictions with Turnover to their Matched Controls in Pre-Treatment Period**. The plot presents average turnout in every period prior to treatment for jurisdictions with turnover against their matched controls. The three lines capture whether the turnover happened late enough to enable matching on two (2012 and 2014), three (2016 and 2018), or four (2020 and 2022) pre-treatment elections. The plot only includes officials in jurisdictions where the election official has authority over all or nearly all election-related matters.



unexpected drop in turnout. Instead, we find across all of our analysis that our estimates are similar in magnitude to the estimates we present in our main analyses, suggesting that the matching is working properly and election officials are not typically leaving immediately following poor performance.

Figure A.3: **Comparing Turnout in Jurisdictions with Turnover to their Matched Controls in Pre-Treatment Period**. The plot presents histograms of turnout in the pre-turnover period for jurisdictions with turnover against their matched controls. Grey bars present the turnout distribution for the jurisdictions with turnover. The clear bars with black outline present the turnout distribution for the matched control jurisdictions. The plot only includes officials in jurisdictions where the election official has authority over all or nearly all election-related matters.

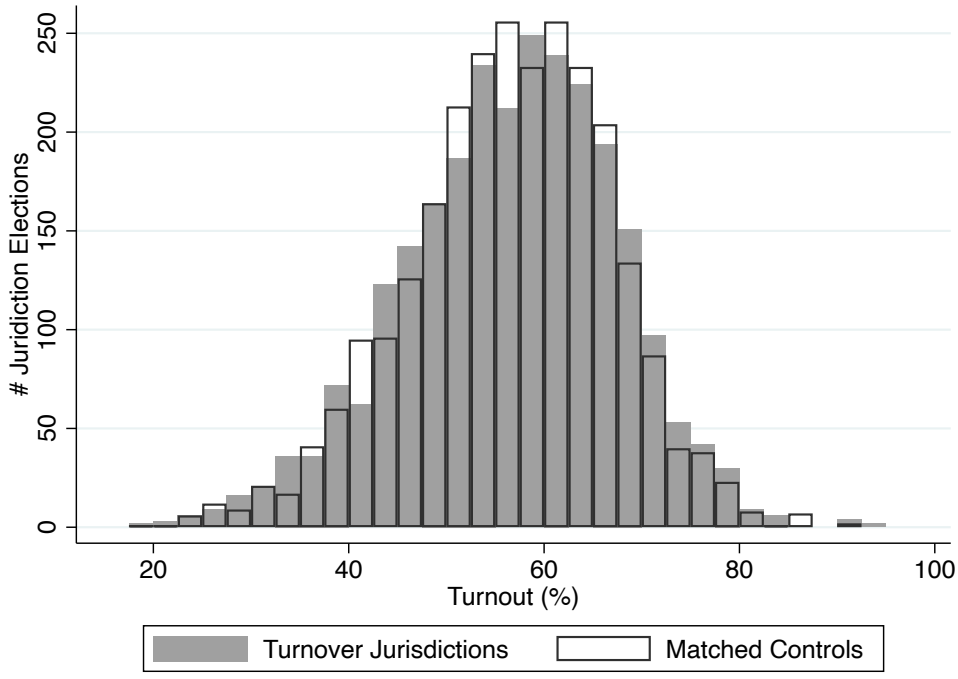


Table A.2: **Effect of Election Official Turnover on Turnout and Residual Vote.**

	Turnout (%)		Residual Vote (%)	
	(1)	(2)	(3)	(4)
Placebo Turnover	-0.09	-0.02	0.01	-0.05
	(0.09)	(0.12)	(0.06)	(0.06)
# Jurisdictions	3,201	978	1,597	863
# Obs	16,980	5,248	8,398	4,466
Strong Official Only	No	Yes	No	Yes
Matched Sample	Yes	Yes	Yes	Yes
Juris-by-Elec Type FE	Yes	Yes	Yes	Yes
Pair-by-Year FE	Yes	Yes	Yes	Yes

Robust standard errors clustered by jurisdiction reported in parentheses. Data is limited to jurisdictions with one primary official. Strong official only indicates jurisdictions where only one official is responsible for directing all aspects of election administration. Placebo turnover refers to a change in the election official prior to the election four years later. Matched sample limits data to jurisdictions that experienced turnover between 2012 and 2022 and a set of matched control jurisdictions from the same state with the same history of turnover and the most similar levels of the outcome in all prior elections. Matching is 1-to-1 with replacement. Matching is conducted using outcomes from the start of the data until two cycles prior to the turnover being studied (prior to the placebo turnover year). Turnout is measured as share of voting age residents who cast a vote in the presidential race for presidential years and the governor race for midterm years. Residual vote is measured as the the share of ballots cast without a vote in the presidential race in presidential years and governor race in midterm years. Regressions on unmatched data include jurisdiction-by-election cycle (presidential vs midterm) fixed effects and state-by-year fixed effects. Regressions on matched data include jurisdiction-by-election cycle fixed effects and matched pair-by-year fixed effects.

A.4 Similar Effects of Turnover in Presidential and Gubernatorial Elections

In Table A.3 we present estimates of the effect of turnover on turnout and residual vote separately for governor and presidential elections. Columns 1, 2, 5, and 6 present our estimates of the effect on turnout and residual vote in presidential elections. As in our main analysis in Table 1, looking at both two-way fixed effects regression estimates and matching estimates, we find that turnover leads to at most a small drop in turnout and a very modest increase in residual vote. Our estimates of the effects in midterms are less precise because we rely on governor elections and some states hold their governor elections during presidential election years. Nevertheless, the evidence suggests that turnover is not causing turnout to drop by more than three quarters of a percentage point and is not causing residual vote to increase by more than one third of a percentage point.

Table A.3: **Effect of Election Official Turnover on Turnout and Residual Vote, Midterm vs General.**

	Turnout (%)				Residual Vote (%)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Turnover	0.01	-0.05	0.01	-0.25	0.07	-0.01	0.00	0.05
	(0.08)	(0.16)	(0.15)	(0.26)	(0.04)	(0.06)	(0.05)	(0.13)
# Jurisdictions	1,181	778	758	327	966	668	653	303
# Obs	5,905	5,104	3,790	1,892	4,830	4,296	3,265	1,682
Outcome Mean	61.33	60.64	48.00	46.29	1.51	1.65	1.87	1.58
Min Detectable Effect	0.21	0.44	0.41	0.74	0.10	0.16	0.13	0.37
Cycle	Pres	Pres	Mid	Mid	Pres	Pres	Mid	Mid
Matched Sample	No	Yes	No	Yes	No	Yes	No	Yes
Juris-by-Elec Type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	No	Yes	No	Yes	No	Yes	No
Pair-by-Year FE	No	Yes	No	Yes	No	Yes	No	Yes

Robust standard errors clustered by jurisdiction reported in parentheses. Data is limited to jurisdictions where one official is responsible for directing all or nearly all aspects of election administration. Cycle is either presidential or midterm with midterms limited to states with midterm governor elections. Matched sample limits data to jurisdictions that experienced turnover between 2012 and 2022 and a set of matched control jurisdictions from the same state with the same history of turnover and the most similar levels of the outcome in all prior elections using 1-to-1 matching with replacement. Turnover refers to a change in the election official since the election two years prior. Turnout is measured as share of voting age residents who cast a vote in the presidential race for presidential years and the governor race for midterm years. Residual vote is measured as the the share of ballots cast without a vote in the presidential race in presidential years and governor race in midterm years. Regressions on unmatched data include jurisdiction-by-election cycle (presidential vs midterm) fixed effects and state-by-year fixed effects. Regressions on matched data include jurisdiction-by-election cycle fixed effects and matched pair-by-year fixed effects. Min detectable effect refers to the minimum effect that a two-sided test with a 0.05 alpha would have 80% power to detect.

A.5 Turnover Does Not Have a Larger Effect When Election Officials Depart Voluntarily

One concern about our main analysis is that it may average over two effects that run in opposite directions: perhaps turnover has a negative effect when a good official leaves and a positive effect with a bad official leaves. In this case, we might see an average effect close to zero depending on how many good and bad performers end up in office.

Here, we proxy for election official quality using information on why they left office. In Figure A.4, we present evidence that the vast majority of election officials leave office voluntarily, either by retiring or choosing not to run again. This means that our estimates of the average effect of turnover are mostly capturing voluntary turnover. Given this, the effect of the departures of low-quality officials would need to be very positive to be consistent with a small negative effect of people who left voluntarily. We directly estimate these effects in Table A.4. Subsetting to cases where the election official left voluntarily, we find that, if anything, turnout increases. This suggests that our average estimates are not masking large positive effects of the departures of low performers and substantial negative effects from the departures of high performers.

Figure A.4: **Reason for Election Official Departure, 2020 and 2022**. Out of the 373 cases of election official turnover prior to the 2020 and 2022 elections where the reason for departure is publicly available, 321 (86%) of the departures were voluntary. Voluntary includes retiring or leaving for a new position. Involuntary includes being fired, being voted out of office, and resigning in scandal. Unsure are cases where there is no public reporting on the departure and the office did not provide a reason when contacted.

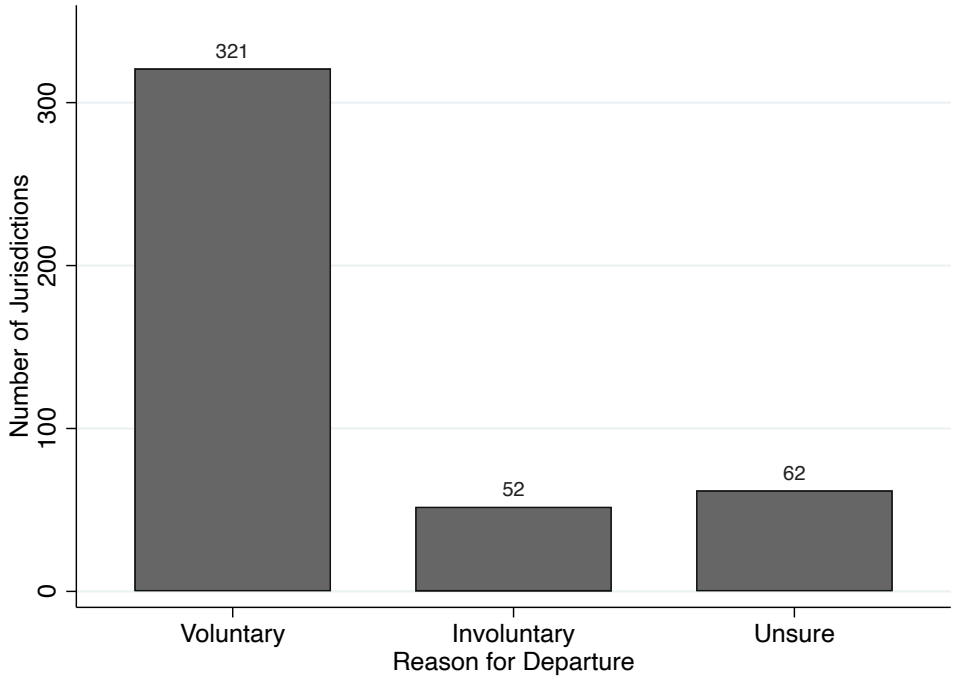


Table A.4: **Effect of Election Official Turnover on Turnout by Reason for Departure.**

	Turnout (%)	
	Any Departure Reason	Left Voluntarily
	(1)	(2)
Turnover	0.01	0.20
	(0.27)	(0.29)
# Jurisdictions	427	374
# Obs	2,520	2,180
Outcome Mean	57.81	57.94
Min Detectable Effect	0.75	0.80
Matched Sample	Yes	Yes
Juris-by-Elec Type FE	Yes	Yes
Pair-by-Year FE	Yes	Yes

Robust standard errors clustered by jurisdiction reported in parentheses. Data is limited to jurisdictions where one official is responsible for directing all or nearly all aspects of election administration. Matched sample limits data to jurisdictions that experienced turnover between 2012 and 2022 and a set of matched control jurisdictions from the same state with the same history of turnover and the most similar levels of the outcome in all prior elections using 1-to-1 matching with replacement. Turnover refers to a change in the election official since the election two years prior. Turnout is measured as share of voting age residents who cast a vote in the presidential race for presidential years and the governor race for midterm years. Regressions on matched data include jurisdiction-by-election cycle fixed effects and matched pair-by-year fixed effects. Min detectable effect refers to the minimum effect that a two-sided test with a 0.05 alpha would have 80% power to detect. First column restricts data to jurisdictions and years where the reason that the election official left office is known and matched controls. Second column restricts data to jurisdictions and years where the election official left voluntarily and matched controls.

A.6 Similar Estimates When Excluding Turnover Due to Institutional Change

One explanation for our findings is that when local government officials and citizens are unsatisfied with election administration, they may be more likely to hand the job of running elections to a different office. If this were the case, our results, which focus on all turnover including turnover that arises from institutional change, may understate the effect of the more typical types of turnover where an experienced official retires or moves on to a different job.

We test this claim in Table A.5. Across all columns we limit our data to jurisdictions without any institutional changes. We also focus on elected election officials, where the duties of the election official tend to be more consistent over time. We estimate very similar effects to Table 1 in the main text, suggesting that the effect of turnover is similarly small whether that turnover arises from institutional changes or from retirements, firings, and election losses.

Table A.5: **Effect of Election Official Turnover on Turnout and Residual Vote, No Institutional Changes**

	Turnout (%)				Residual Vote (%)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Turnover	-0.06	-0.07	0.00	-0.12	0.08	0.03	0.06	0.01
	(0.06)	(0.11)	(0.07)	(0.14)	(0.03)	(0.05)	(0.03)	(0.06)
# Jurisdictions	1,681	1,417	1,131	940	1,351	1,194	922	833
# Obs	13,785	10,166	9,245	6,688	10,720	8,118	7,705	5,700
Outcome Mean	54.16	55.18	56.49	57.30	1.50	1.50	1.66	1.62
Min Detectable Effect	0.16	0.32	0.19	0.39	0.08	0.15	0.09	0.16
Strong Official Only	No	No	Yes	Yes	No	No	Yes	Yes
Matched Sample	No	Yes	No	Yes	No	Yes	No	Yes
Juris-by-Elec Type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	No	Yes	No	Yes	No	Yes	No
Pair-by-Year FE	No	Yes	No	Yes	No	Yes	No	Yes

Robust standard errors clustered by jurisdiction reported in parentheses. Data is limited to jurisdictions with one primary official. Strong official only indicates jurisdictions where only one official is responsible for directing all aspects of election administration. Matched sample limits data to jurisdictions that experienced turnover between 2012 and 2022 and a set of matched control jurisdictions from the same state with the same history of turnover and the most similar levels of the outcome in all prior elections using 1-to-1 matching with replacement. Turnover refers to a change in the election official since the election two years prior. Turnout is measured as share of voting age residents who cast a vote in the presidential race for presidential years and the governor race for midterm years. Residual vote is measured as the the share of ballots cast without a vote in the presidential race in presidential years and governor race in midterm years. Regressions on unmatched data include jurisdiction-by-election cycle (presidential vs midterm) fixed effects and state-by-year fixed effects. Regressions on matched data include jurisdiction-by-election cycle fixed effects and matched pair-by-year fixed effects. Min detectable effect refers to the minimum effect that a two-sided test with a 0.05 alpha would have 80% power to detect.

A.7 Turnover May Modestly Increase Wait Times

In this section we present additional analyses of the effect of turnover on wait times. Figure A.5 documents the robustness of our finding of a modest effect of turnover on wait times. Across all four of our regression specifications, we see a similar pattern where fewer voters report no wait in jurisdictions with turnover and more voters report wait times between 30 minutes and an hour. All of these effects are relatively small, and the only statistically significant change across most specifications is an increase in wait times over 30 minutes. Still, given the consistent pattern across different specifications, we take this as evidence that wait times may have modestly increased in places with new election officials.

In Table A.6, we present formal estimates of the effect of turnover on wait times. Columns 1 through 4 present the effect of turnover on the share of voters who wait more than 10 minutes. When we adjust for county factors that may be associated with longer or shorter wait times in columns 3 and 4, we cannot reject the null hypothesis that counties with turnover and similar counties without turnover have the same shares of voters waiting over 10 minutes at the polls. In columns 5 through 8 we change the outcome to look at wait times over 30 minutes. Here, as we show in Figure A.5, we find that turnover is associated with approximately two percentage points more voters waiting over 30 minutes than we would have expected in similar counties in the same state and year.

Figure A.5: **Election Official Turnover May Modestly Increase Wait Times**. The figure presents estimates of the effect of turnover on the share of probability a resident experiences a given wait time. The estimates come from four different regression specifications: 1. no covariates (difference in means); 2. state-year fixed effects; 3. state-year fixed effects, county covariates, and respondent covariates; and 4. state-year fixed effects, county fixed effects, and respondent covariates. The plot relies on data from the Survey of the Performance of American Elections and is weighted using the weights constructed by the survey team.

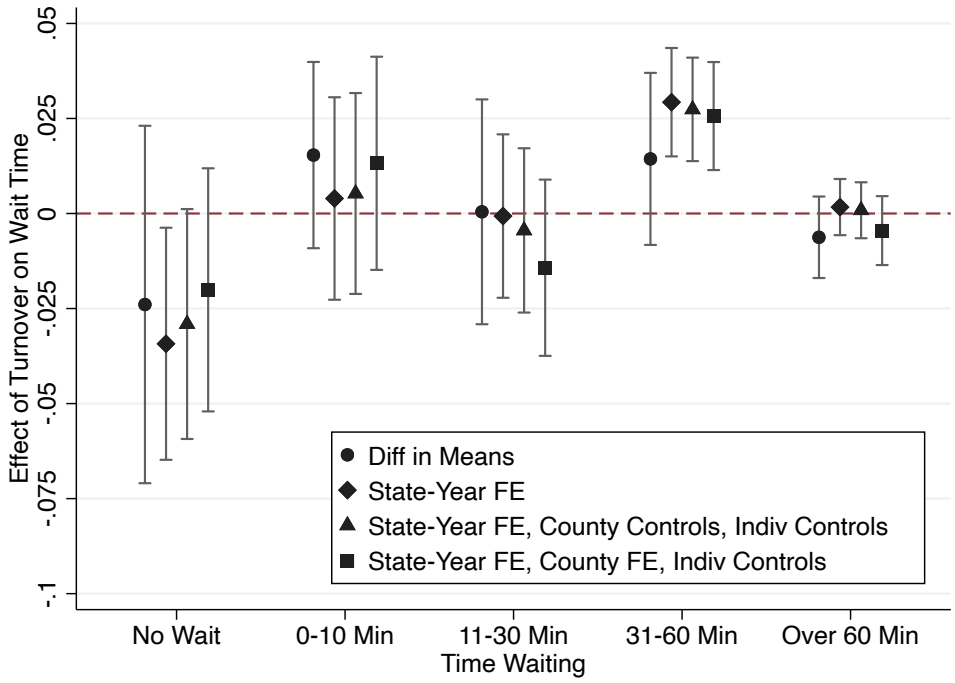


Table A.6: **Effect of Election Official Turnover on Voter Wait Times.**

	Wait Over 10 Min {0,1}				Wait Over 30 Min {0,1}			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Turnover	0.009	0.030	0.024	0.007	0.008	0.031	0.028	0.021
	(0.026)	(0.014)	(0.014)	(0.014)	(0.015)	(0.009)	(0.008)	(0.009)
# Counties	930	930	929	756	930	930	929	756
# Respondents	13,212	13,212	13,167	12,994	13,212	13,212	13,167	12,994
Outcome Mean	0.230	0.230	0.230	0.232	0.077	0.077	0.077	0.078
Min Detectable Effect	0.073	0.040	0.039	0.040	0.041	0.024	0.023	0.025
Strong Official Only	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Individual Controls	No	No	Yes	Yes	No	No	Yes	Yes
County Controls	No	No	Yes	No	No	No	Yes	No
County FE	No	No	No	Yes	No	No	No	Yes

Robust standard errors clustered by county reported in parentheses. Data is limited to counties where only one official is responsible for directing all or nearly all aspects of election administration. Each observation is one respondent to the Survey of the Performance of American Elections who reported voting. Observations are weighted according to the weights provided by the survey team. Turnover refers to a change in the election official since the election two years prior. The outcome is a dummy variable with value 1 for reporting a wait time over 10 or 30 minutes, respectively. Individual controls are gender, race, years of education, and party ID fixed effects as well as age included as a single covariate. County controls are the natural logarithm of voting age population and Democratic presidential vote share in 2020. Min detectable effect refers to the minimum effect that a two-sided test with a 0.05 alpha would have 80% power to detect.

A.8 Turnover Does Not Noticeably Increase the Rate of Election Reporting Errors

Table A.7: **Effect of Election Official Turnover on Reporting Errors.**

	Negative Residual Vote [0,1]		Error in Reported Polling Places [0,1]	
	(1)	(2)	(3)	(4)
Turnover	0.36	0.03	-0.04	-0.06
	(0.24)	(0.17)	(0.11)	(0.04)
Outcome Mean	0.77	0.19	0.25	0.03
# Jurisdictions	1,834	669	1,805	663
# Obs	15,030	5,805	18,050	6,630
Strong Official Only	No	Yes	No	Yes
Jurisdiction-by-Elec Type FE	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes

Robust standard errors clustered by jurisdiction reported in parentheses. Data is limited to jurisdictions with one primary official. Strong official only indicates jurisdictions where only one official is responsible for directing all aspects of election administration. Turnover refers to a change in the election official since the election two years prior. Negative residual vote takes value one when the jurisdiction reports more votes than ballots cast. Error in reported polling places takes value one when the jurisdiction a much larger or much smaller number of polling places in the Election Administration and Voting Survey. All regressions include jurisdiction-by-election cycle (presidential vs midterm) fixed effects and state-by-year fixed effects.