# Blocked from the Ballot Box

## *Structural Obstacles Depress Turnout, Exacerbate Ballot Rejections Across Racial Lines*

### HIGHLIGHTS

***Effective participation in elections is at the heart of our political system, but not everyone is equally represented. The 2016, 2020, and 2024 presidential elections saw significant disparities in turnout and ballot rejections, disenfranchising Black, Hispanic, Native American, and Asian American voters. Decisions made by elected officials are thus less likely to reflect the interests of these communities of color, and public policies are less likely to protect them.***

***Examining precinct-level turnout, ballot rejection, and demographic data within key counties shows the effects of inequality on the electoral process. Communities with lower rates of turnout also experienced higher rates of ballot rejections, diminishing their political representation. While these disparities are a symptom of wider inequalities, better policies for ballot design and election data transparency can help remedy these gaps.***

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# Introduction

Whether an individual has the ability to participate in their political system often depends on three factors: resources, interest, and recruitment. People are more likely to participate when they possess the necessary resources of time, money, information, and skills; are interested and motivated to participate; and are recruited into the process (Verba, Schlozman, and Brady 1995). Communities deprived of resources or unable to resource-share find it difficult to form strong participatory norms and traditions or create organizations dedicated to mobilizing voters. As a result, members of these communities often cannot participate effectively (Bond et al. 2012; Carlson, Abrajano, and Bedolla 2020; Rolfe 2012; Uhlaner 1989). Existing race and class disparities in the United States mean that these foundations of political participation are not equally distributed across groups (Schattschneider and Adamany 1975; Schlozman, Brady, and Verba 2018).

The structures of our political institutions and electoral system further exacerbate these inequalities, with certain electoral rules creating additional barriers to voting (Burden et al. 2016; Cox 2015; Davidson and Grofman 1994; McDonald et al. 2024; Shino, Suttmann-Lea, and Smith 2022). Redistricting rules, registration laws, voting access, and voter identification laws are just a few recent examples of how electoral rules and their implementation can affect whether a person votes and, furthermore, whether their vote is counted (Hajnal, Lajevardi, and Nielson 2017; Hunt 2018; Ritter and Tolbert 2020).

Such electoral rules can, and often do, disproportionately harm traditionally marginalized communities (Brater et al. 2018; Fraga 2016; Fraga and Miller 2022). Political inequality is also geographic. Access and quality of voting precincts, for instance, varies significantly—not only across states but also within states (Barreto and Leal 2024; Ritter and Tolbert 2024). For this reason, and because elections are held primarily at the county level, evaluating the quality of election administration solely at the state level overlooks critical variation (Ritter and Tolbert 2024).

Low-income communities and communities made up mostly of people of color are more likely to have lower-quality voting precincts that amplify inequalities. These polling locations are more difficult to locate and navigate and are also less stable—meaning they frequently change locations (Barreto and Leal 2024). According to their county election administration (CEA) index,[1] Ritter and Tolbert (2024) found that larger urban counties—such as those analyzed here—have comparatively lower election administration quality. The authors also found significant differences based on the counties' racial composition.[2]

According to the 2020 election analysis, White people are more likely to live in counties with high or very high election administration performance. Conversely, Black and Latino people are the groups most likely to reside in counties with low or very low election administration performance (Ritter and Tolbert 2024). Asian Pacific Islanders, Native Americans, and those

*[1] The CEA index contains 19 components of election administration, including percentage of mail ballots rejected, percentage of registration forms rejected, disability access as the percentage difference between turnout of voters with disabilities and voters without, and average wait times (Ritter and Tolbert 2024).*
*[2] As the authors note, there are accuracy issues and other challenges associated with using Election Administration and Voting Survey data, especially when evaluating local-level factors (Ritter and Tolbert 2024).*

who identify as Other regarding race are "slightly more likely to live in communities with lower-performing election administration" (Ritter and Tolbert 2024, 270).[3]

These findings have real-world implications. When members of certain groups are less likely to vote or to have their ballots counted when they do vote, they are more likely to be underrepresented or unrepresented altogether by their elected officials and, consequently, are more likely to be disregarded in government policy (Bartels 2008; Franko and Witko 2017; Griffin and Newman 2008).

One way to assess the pervasiveness of racial inequalities in our electoral system is to analyze voter turnout rates. The racial turnout gap measures the difference in voter turnout across racial groups and is used as a common indicator of inequality in elections (Fraga 2018; Morris and Grange 2024). **But examining turnout rates alone is not sufficient to fully capture the relative equality of an election and the inequalities in electoral power.**

Another factor that adds perspective to inequalities is ballot rejection rates. Ballot rejections are a natural and necessary component of elections, but research shows that certain groups, such as inexperienced voters, younger voters, and voters of color, are more likely to have their ballots rejected (Baringer, Herron, and Smith 2020; Cottrell, Herron, and Smith 2021; Shino, Suttmann-Lea, and Smith 2021).

Each election, hundreds of thousands of ballots are rejected and thus not counted. In 2020, a total of 86,537 mail ballots (or 0.80 percent) were rejected in the seven states included in this analysis (EAC 2021). In 2016, some 0.77 percent of mail ballots were rejected nationally (EAC 2017). Mail ballots are rejected for a variety of reasons. A nonmatching signature accounted for nearly 30 percent and 33 percent of rejected mail ballots in 2016 and 2020, respectively, and slightly more than 40 percent in 2024 (EAC 2017; EAC 2021; EAC 2025). The second most common reason for rejection in 2016 was late receipt of the mail ballot (about 21 percent), while "other reason given" was the second most common reason for rejection in 2020 and 2025 (EAC 2017; EAC 2021; EAC 2025).

During the first 100 days of the second Trump presidency, the administration and the Republican-controlled Congress have worked to dismantle prior progress, strengthen existing barriers, and establish new obstacles to public participation. Efforts include President Trump's rescission of Biden's Executive Order 14019 Promoting Access to Voting (Cohn 2025), the passage of the Safeguard American Voter Eligibility (SAVE) Act in the House of Representatives (Knutson 2025), the potential repeal of the National Voter Registration Act of 1993 (Gordon-Rogers 2025), the Department of Justice's abandonment of civil rights and voting rights cases (Cohen 2025), and President Trump's executive order instituting a proof of citizenship requirement (Marley 2025).

Moreover, the Supreme Court could weaken the Voting Rights Act of 1965 further in the coming months, depending on its decision in a Louisiana gerrymandering case (Li 2025). Additionally stoking fears about the future of US democracy, Trump and some of his allies have floated the possibility of a third Trump term (Welker and Lebowitz 2025). In the face of these ongoing threats to democracy, elections, and fair representation, it is important now more

*[3] In terms of the relative quality of county-level election administration, Ritter and Tolbert's (2024) CEA index scores for our sample counties in 2016 range from 44.92 (Columbus County) to 72.16 (Milwaukee County). In 2020, the last general election year for which scores are currently available, election administration quality ranged from 53.41 (Columbus County) to 70.21 (Maricopa County).*

than ever to create a benchmark for analyzing future elections and determining how these and other policy changes affect voter turnout and ballot rejections.

## Research Design

This analysis is part of the final phase of the Center for Science and Democracy's Precinct Analysis Project and is intended to assess precinct-level transparency and election equality in pivotal electoral jurisdictions. The goals of this project include

- increasing awareness and understanding of inequalities in turnout and ballot rejection rates across communities;
- improving capacity to educate the public about how ballots are verified and then scrutinized during counting; and
- identifying best practices for data generation and publication and for the development of procedures to reduce voter and administrative errors in ballot processing.

A precinct-level analysis of the past three presidential elections serves several additional purposes. First, it widens the lens to obtain a broader, more comparative perspective on the status of voter turnout, ballot rejections, and possible cumulative inequalities in our electoral system. Second, studying elections at the precinct level, the smallest geographic unit in US elections, identifies systematic inequalities in political participation, voter engagement, and a variety of other areas (Mac Donald 2008; Murray, Baltz, and Stewart 2023). Third, examining precinct data allows us to observe both if and how changes in election administration and law affect voters as well as test for racial inequality. Fourth, analyzing these data informs improvements and alterations to election administration.

To better visualize the differences between elections, our analysis is facilitated through the development of an ArcGIS StoryMap, a web-based application where users interact with maps alongside narrative text. Our story map compares 2020 and 2024 voter turnout and ballot rejection rates among racial groups as defined by the US Census Bureau.

Our research team identified a sample of battleground counties across multiple states: Allegheny (Pittsburgh) and Philadelphia Counties in Pennsylvania; Columbus, Durham, and Mecklenburg Counties in North Carolina; Cuyahoga (Cleveland) and Lorain Counties in Ohio; Fulton County (Atlanta) in Georgia; Maricopa County in Arizona; Milwaukee County in Wisconsin; and Wayne County (Detroit) in Michigan.[4]

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[4] *The following are racial demographics of the selected counties according to 2024 US Census Bureau (n.d.) estimates. Allegheny County, PA: 79.1% White alone, 13.5% Black alone, 0.2% American Indian/Alaska Native alone, 4.5% Asian alone, and 3.0% Hispanic/Latino; Philadelphia County, PA: 44.4% White alone, 43.0% Black alone, 1.0% American Indian/Alaska Native alone, 8.4% Asian alone, 3.1% Hispanic/Latino; Columbus County, NC: 63.4% White alone, 29.9% Black alone, 3.7% American Indian/Alaska Native alone, 0.6% Asian alone, 2.3% Hispanic/Latino; Durham County, NC: 55.2% White alone, 34.5% Black alone, 1.2% American Indian/Alaska Native alone, 6.1% Asian alone, 15.4% Hispanic/Latino; Mecklenburg County, NC: 56.6% White alone, 32.8% Black alone, 1.0% American Indian/Alaska Native alone, 6.7% Asian alone, 15.9% Hispanic/Latino; Cuyahoga County, OH: 63% White alone, 30.4% Black alone, 0.3% American Indian/Alaska Native, 3.6% Asian alone, 7.2% Hispanic/Latino; Lorain County, OH: 85.4% White alone, 9.1% Black alone, 0.4% American Indian/Alaska Native alone, 11.2% Hispanic/Latino; Fulton County, GA: 44% White alone,*

We selected these counties and states based on three criteria. First, they were significant in the outcome of recent presidential elections.[5] Second, these counties were the focus of voter suppression efforts in 2016 and 2020, including being flash points for election mis- and disinformation, such as drawing allegations of voter fraud (Broadwater and Eder 2023; Brownstein 2020; Eggers, Garro, and Grimmer 2021; Graham 2016). We can contribute to the science dispelling such allegations and demonstrate that ballots were rejected for various reasons by examining those rejections. Third, the counties were selected based on the likelihood they would be pivotal to the outcome of the 2024 election and therefore would continue to be targets of ballot challenges and subversion efforts (Cohen 2024; DD 2024; DD 2025a; DD 2025b; Gordon-Rogers 2024a; Gordon-Rogers 2024b; Latner 2022).

## Data Collection

Historical election data are from multiple sources. Precinct-level voter registration data from 2016 was derived from historical county or state election results or registration snapshot data. The Voting and Election Science Team at the University of Florida compiled election data and census geographic data and joined the two data sets (VEST 2020). Supplemental data collected by those at Dave's Redistricting were joined with 2020 voting tabulation district (VTD) shapefiles, the latter of which were used to project data into digital geographic boundaries, and the L2 voter file data were downloaded from the Redistricting Data Hub (RDH n.d.). L2 files were obtained from the L2 database. The RDH joined the L2 voter file to this 2020 census block assignment file and then aggregated the individual-level voter file to the census-block level.

Precinct data from 2024 were obtained through several ways—a formal public records request (Milwaukee County), a Freedom of Information Act request (Wayne County), our connection to an administrator, often facilitated by our Election Science Task Force (Allegheny and Philadelphia Counties; Cuyahoga and Lorain Counties; and Columbus, Durham, and Mecklenburg Counties), or being publicly available on county or state election websites (Fulton and Maricopa Counties).[6]Although Georgia's precinct-level voter turnout data were available online, we purchased Fulton County's voter file to obtain early voting data. The 2024 shapefiles used in the creation of the story map were available online (Allegheny and Philadelphia Counties; Columbus, Durham, and Mecklenburg Counties; Cuyahoga County; Fulton County; Maricopa County; Milwaukee County; and Wayne County) or were directly obtained from election administrators (Lorain County).[7]

Center for Science and Democracy researchers used the R package geomander to aggregate these data to the VTD level for most of the counties. This enabled the team to estimate VTD-level registered voters and Citizen Voting Age Population (CVAP), which was in turn used to

*45.1% Black alone, 0.3% American Indian/Alaska Native alone, 8.2% Asian alone, 8.2% Hispanic/Latino; Maricopa County, AZ: 81.3% White alone, 6.9% Black alone, 2.9% American Indian/Alaska Native alone, 5.1% Asian alone, 31.4% Hispanic/Latino; Milwaukee County, WI: 63.2% White alone, 27% Black alone, 1.1% American Indian/Alaska Native alone, 5.4% Asian alone, 17.2% Hispanic/Latino; and Wayne County, MI: 54.7% White alone, 38.1% Black alone, 0.5% American Indian/Alaska Native alone, 3.7% Asian alone, 7% Hispanic/Latino.*

[5] *The selected counties are generally the most populous in the state, but a small number of more rural counties is included in the sample to account for potential urban-rural disparities in voter turnout and ballot rejections.*

[6] *No L2 data were used in the 2016 or 2024 data analysis or story mapping.*

[7] *We were unable to obtain 2024 precinct-level election data from Milwaukee County at the time of analysis.*

approximate the majority racial group for each county. For the 2020 story map projections, we relied on the L2 registered voter turnout estimates. For the 2024 story map projections, we were unable to access block-level census data. The closest available were 2023 data at the level of the block group. To estimate block-level populations, we used the proportion of each block group's 2020 population that could be attributed to each block and multiplied that proportion by the population of the 2023 block group for each census-defined racial identity (Hawley and Moellering 2005; Lam 1983): non-Hispanic White, non-Hispanic Black or African American, non-Hispanic Asian or Pacific Islander (API), mixed (more than one) race, Hispanic, and Native American.[8]

For 2024, we were not able to match a small number of VTDs with demographic data. For Wayne County, the geomander method was not feasible because the resulting table was not joinable to the original voter data. Thus, we utilized the sf package to first map the intersections of each precinct and its constituent blocks and then estimate the fraction of the area of each block in each precinct. We then multiplied those fractions by the population of each racial group. For both methods, researchers visually checked a sample of each county against maps of racial demographics and precinct maps to confirm the validity of the assigned majority race.

## Election Administration and Law in 2016, 2020, and 2024

In the United States, state and local governments administer elections. The structure of election administration varies greatly by state. In 36 states, county governments hold most of the responsibility of overseeing and implementing elections (Nakintu et al. 2024). Generally, local governments adhere to one of three models of election administration: a single election official model, a local board of elections model, or a hybrid model that splits power between an official and a local election board (NCSL 2025b). Wisconsin is distinct from other states because its town, village, city, and county clerks are involved in election administration and state law requires that cities with large populations (including those of Milwaukee County) create a three-member board of election commissioners (Nakintu et al. 2024).

Arizona has decentralized election administration and, locally, elections are administered by County Recorders and Election Directors. In Georgia, most counties have a Board of Elections and Registration while a select number of counties have an Election Supervisor and Registrar. Michigan has highly decentralized election administration—the local election official can be a County Clerk, Board of County Election Commissioners, Board of County Canvassers, City/Township Clerk, or Board of City/Township Election Commission. North Carolina and Ohio have County Boards of Elections with an appointed Director of Elections. Pennsylvania has County Boards of Elections (NCSL 2025b).

Crucially, election administration is generally funded at the state and local levels and supplemented with occasional influxes of federal funding. Federal funding for elections has been on the decline in recent years. In 2020, Congress allocated $825 million to states to run elections. In the five years since, however, Congress has granted only a total of $220 million

[8] *Throughout this report, we use the racial categories established by the 2020 Census—Asian Pacific Islander (API), Black, Hispanic, Native American, and White–as these reflect how respondents were asked to self-identify.*

(Williamson 2025). Relatedly, several states have passed laws in recent years prohibiting private funding of elections (NCSL 2025a).[9]

Increased funding is likely to help improve election administration performance, which in turn increases turnout via more polling locations (Stanford 2022), increased voter access and equity (Schur, Ameri and Adya 2017) and improved voter confidence (Mohr et al. 2024). More specifically, the NC Budget and Tax Center (Sirota 2023 found that election administration spending has a positive relationship with voter turnout. Financial capacity has been found to have a negative but insignificant effect on the rate of over- and undervotes while higher levels of management capacity and technology—both likely associated with financial capacity—significantly decrease the number of over- and undervotes (Kropf et al. 2020).

The law and administration of elections have evolved significantly over the past several presidential cycles, with some of these changes perhaps explaining trends in voter turnout and ballot rejection rates in the counties examined in this analysis. Therefore, this section discusses key legislative and administrative shifts in the 2016, 2020, and 2024 general elections and their potential impact on turnout and rejections.

## 2016 General Election

According to the Brennan Center (2016), voters in 14 states, including Ohio and Wisconsin, faced new restrictions on the right to vote in the 2016 general election. Even more restrictions would have been in effect if courts had not blocked the implementation of laws in several states, including Georgia and North Carolina. Some of these new laws were enabled by the deconstruction of Section 5 of the Voting Rights Act due to the *Shelby County v. Holder* Supreme Court decision (Brennan Center 2016). Among the most suppressive laws passed between the 2010 and 2016 elections were strict voter identification laws–eight states had such laws in place for the 2016 election.

Research suggests that strict voter identification laws decrease turnout among voters of color (Hajnal, Lajevardi, and Nielson 2016). In a survey of registered voters in Milwaukee and Madison Counties, 10 percent of respondents reported they did not possess the required identification or cited the voter identification law as their primary reason for not voting in the 2016 election (DeCrescenzo and Mayer 2019). Some researchers theorize that voter identification laws may actually increase turnout via increased mobilization efforts by various community organizers (Citrin, Green, and Levy 2014; Valentino and Neuner 2017), but isolating the effect of these laws on turnout is difficult (Highton 2017). In addition, voter identification laws may increase the rates of provisional voting and overall ballot rejections for provisional, mail, and absentee voters who fail to produce the required identification.

Wisconsin's law, for example, permitted voters without the proper identification on election day in 2016 to cast provisional ballots that were to be counted only if the voters' identity was proved by the Friday following the election (Brennan Center 2016). More than half of all the identification-related provisional ballot rejections, though, were in counties other than Dane

[9] *In 2021, Arizona banned private money, Georgia banned grants or gifts from sources other than the state or federal government, and Ohio banned money from any nongovernmental person. Pennsylvania banned contracts, gifts, donations, grants, and funding from nongovernmental people or organizations in 2022. In 2023, North Carolina banned private donations or in-kind contributions. Wisconsin banned money or equipment donated or granted by any nongovernmental person or entity through a ballot measure in 2024 (NCSL 2025a).*

and Milwaukee (DeCrescenzo and Mayer 2019). Similarly, Georgia voters without an acceptable form of identification were permitted to cast provisional ballots under a strict voter identification law in effect by the 2016 election (Brennan Center 2016).

## 2020 General Election

In response to the COVID-19 global health crisis, many states implemented policies intended to expand voting options prior to the 2020 election (Altamirano and Wang 2022). Nationwide, turnout was 7 percent higher in 2020 than in 2016 (DeSilver 2021). Important to the context of this analysis, voting by mail grew in popularity from 2016 to 2024, partially due to the pandemic (EAC 2021). Nearly every state in our analysis made at least one temporary change to election processes for the 2020 general election, which may have influenced turnout and rejection rates. At the beginning of 2020, no state had a policy of sending a mail voting application to every registered voter, but 12 states implemented this practice before the general election, including 2 states included in our analysis, Michigan and Ohio (NCSL 2023). Overall, the average county-level election administration performance of the 2020 general election was higher than that of the 2016 general election (Ritter and Tolbert 2024).

Despite legal challenges, North Carolina changed the deadline for receiving mail ballots to nine days after Election Day as long as ballots were postmarked by Election Day. It also lowered witness requirements to one person from two (Altamirano and Wang 2022; Hasen 2020; NCSL 2023). Subsequent to a federal court order, the North Carolina State Board of Elections instituted a uniform statewide curing process that has since been enshrined in law (NCSL 2025c; SCSJ 2021).

Pennsylvania, too, extended deadlines for the receipt of mail ballots, to November 6 for ballots postmarked by the 3rd, a policy that was unsuccessfully challenged in court (Ballotpedia n.d.a).[10] The Pennsylvania Department of State issued guidance directing counties to not reject mail ballots because of signature mismatches (Couloumbis 2020).[11] In addition, the Pennsylvania state legislature passed Act 77 prior to the 2020 election, which permitted voters to request a mail ballot without providing a reason (Ballotpedia n.d.a). Wisconsin extended registration deadlines that could have conceivably increased turnout (Oxford 2020), but more flexible registration does not always translate to higher turnout (Merivaki 2021).

Absher and Kavanagh (2023) calculated a measure estimating states' flexibility in election processes, finding that voters in states with higher levels of flexibility were 0.9 percentage points more likely to vote in 2020. Evidence suggests, though, that compared to other racial groups, Black voters were the least affected by election flexibility scores (Absher and Kavanagh 2023). Similarly, research has shown that voter turnout in the 2020 general election was disproportional across different populations, with the turnout gap between White voters and voters of color widening from 10 points in 2012 to 12 points in 2020 (Morris and Grange 2024).[12]

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*[10] The US Court of Appeals for the Eleventh District overturned Georgia's attempt to extend receipt deadlines for the 2020 general election (Brumback 2020).*

*[11] This guidance was challenged in court but was permitted to stand by the Pennsylvania Supreme Court (Couloumbis 2020).*

*[12] Black and White voters used nontraditional methods of voting at nearly equal rates in 2020 at 69.60% and 67.50 percent, respectively (Scherer 2021). Asian (82.4 percent) and Hispanic (76.70 percent) voters used nontraditional means at slightly higher rates (Scherer 2021).*

Before the 2020 election, Arizona passed three restrictive laws that established new voting barriers by making it more difficult to remain on the state's absentee voting list, imposing stricter voter identification requirements for mail voting, and permitting the use of flawed data to conduct voter roll purges (Wilder 2021).

Most states saw a decrease in mail ballot rejections in 2020, with several experiencing a steady decline since the 2016 election. Between the 2016 and 2020 general elections, Georgia had the greatest decrease in rejections. From 2018 to 2020, North Carolina and Pennsylvania also saw a decrease in rejection rates (Altamirano and Wang 2022). The researchers found evidence that states that had adopted more flexible election processes (e.g., ballot curing, drop boxes, ballot tracking) rejected fewer ballots than states that did not (Altamirano and Wang 2022).[13]

While many voters relied on voting by mail in the 2020 general election, issues within the US Postal Service resulted in delayed ballot deliveries, which disproportionately affected voters of color (Mackinney et al. 2020; Wilder 2021). A Union of Concerned Scientists study comparing Freedom of Information Act (FOIA) records related to mail delays found that the number of complaints filed per 1,000 residents was 49.44 percent higher in zip codes with higher populations of Black, Latino, Asian, and Native Americans (Mackinney et al. 2020). In Georgia, mail ballots cast by Asian and Latino voters were rejected at twice the rate of those cast by White voters in the state's 2020 presidential primary (Morris 2020). Moreover, the Georgia State Election Board found that absentee voters in Fulton County were the most likely to be affected by delays in ballot processing in the primary election (Wilder 2021).

Research also found that mail ballots of Black voters were rejected more often than those of White voters across the state of North Carolina in September 2020 (Rogers 2020).[14] Despite attempting to decrease racial disparities in rejections by instituting more uniform notice and curing policies, 21 of the 25 most populous counties in the state rejected Black voters' mail ballots 1.8 times more often than White voters' mail ballots, according to an October analysis of election returns (Eberhard, Gustafson, and Norimine 2020). These rejection rates vary significantly across counties. According to Altamirano and Wang (2022), on average, counties east of Charlotte (in Mecklenburg County) saw higher rejections than the rest of the state. Nevertheless, it should be noted that while disparities persist, the adoption of uniform curing policies in the state allowed nearly 20,000 voters—disproportionately, Black voters—to cure their mail ballot or be given enough advance notice to use a different voting method (SCSJ 2021).

According to the Brennan Center, election officials in Georgia conducted a "pattern of aggressive voter purges that disproportionately harm voters of color," which could have had an impact on provisional vote rates (Wilder 2021, 6). In 2020, Ohio also may have disproportionately purged Black voters after resuming contested voter file maintenance practices (Wilder 2021).

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*[13] Every county in our analysis allows voters to cure ballots (Ballotpedia n.d.b). What constitutes an error eligible for curing, the methods of curing, and the deadlines to do so, however, vary across state and county. North Carolina law requires that county boards of election determine how voters can cure their ballots (NCSL 2025c). Pennsylvania does not have a statewide curing policy; its county election administrators have the authority to determine if voters can cure ballots (Walker 2024). In 2020, Philadelphia County permitted curing, whereas Allegheny County did not (Farley 2020). In 2024, both Philadelphia and Allegheny Counties had cure policies as well as notice policies (Walker 2024).*

*[14] North Carolina (along with New York, Kentucky, Arkansas, and Mississippi) was among the states with the highest rate of rejections from 2016–18 (Altamirano and Wang 2022).*

## 2024 General Election

In Arizona, two new restrictive laws in place for the 2024 election impeded fixing mail ballot signature errors (Carter et al. 2024). In Georgia, a 2021 law substantially affected mail voting by shortening the time voters had to request ballots, requiring counties to wait longer before sending out ballots, prohibiting election administrators from sending a ballot to voters who did not request one, and creating new identification policies. The same law further restricted provisional voting by instituting rules making it more difficult for ballots cast at the wrong precinct to be counted (Carter et al. 2024).

North Carolina passed a law that moved up the deadline for receiving mail ballots and required election officials to reject ballots associated with an address verification notice returned as undeliverable, though the state was ordered by a federal judge to notify such voters and provide them the opportunity to address the error. Moreover, the 2024 election was the first under North Carolina's 2018 photo identification law, which requires voters without an acceptable form of identification to cast provisional ballots that are counted only if voters verify their identity within 10 days (Carter et al. 2024). Voters are permitted to submit an ID Exception Form alongside their provisional ballots if they have "a reasonable impediment" preventing them from showing acceptable photo identification (NCSBE n.d.)[15]

Despite these changes, disruptions to election administration in North Carolina due to Hurricane Helene led to the institution of several alterations to the 2024 election that may have affected turnout and rejections—extended voter registration deadlines, modified voting hours and locations, expanded access to absentee voting through the acceptance of ballot requests by email or fax, and permission to return ballots to any state county board or voting site (Slattery, Holland, and Oliphant 2024). Absentee ballot rules were also updated to permit voters to return ballots to counties other than their residential counties (PD 2024). Mecklenburg County is the only North Carolina county in our analysis included in the federal disaster declaration (FEMA n.d.).

A 2023 Ohio law instituted new requirements for acceptable identification for in-person voting, applying to vote by mail, and voting by mail. It requires in-person voters without proper identification to cast provisional ballots and shortens mail ballot return and curing deadlines (VRL 2023).

Conversely, Michigan passed a battery of expansive voting legislation following the 2020 election. Several new rules expanded access to voting by mail, including establishing a curing process and a permanent mail voting option (Carter et al. 2024). Wisconsin made minimal changes to its elections, largely because of a series of gubernatorial vetoes in the years between the 2020 and 2024 general elections.

For each state in our analysis, we examined Cost of Voting Index (COVI) values,[16] a measure calculated using a variety of variables to estimate the relative costliness of exercising the right to vote in each state. Arizona had the lowest cost among the states in our 2024 sample at 0.31 (Pomante 2025). Pennsylvania had a COVI value of 0.49; North Carolina, 0.66; Georgia, 0.95;

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*[15] Reasonable impediments include lack of transportation, disability or illness, lack of necessary documents to obtain a photo identification, conflicting work or school schedule, family responsibilities, lost or stolen identification, and waiting for an identification (NCSBE n.d.).*

*[16] The Cost of Voting Index value includes the following issue areas: registration deadlines, registration restrictions, preregistration laws, automatic voter registration, voting inconvenience, voter identification laws, poll hours, early voting days, and absentee voting (Pomante 2025).*

Ohio, 1.35; and Wisconsin, 1.37. For context, the state with the highest cost to vote was Mississippi with a value of 1.94, while Oregon had the lowest value at -2.46. From 2020 to 2024, North Carolina underwent the steepest increase in voting difficulty (Pomante 2025).

## Voter Turnout

### 2016 General Election

As shown in Table A1 in the appendix, voter turnout varied across jurisdictions in the 2016 general election. Average turnout was highest in Milwaukee County, Wisconsin, and Fulton County, Georgia, at 77.58 percent and 71.07 percent, respectively.[17] Conversely, overall turnout rates were lowest in Mecklenburg County, North Carolina, at 61.71 percent, and Maricopa County, Arizona, at 63.45 percent.[18] Voter registration data from 2016 for Wayne County, Michigan, were available only in an image-based pdf, which prevented their use in this analysis.[19]

As seen in Figure 1, average voter turnout in majority-White precincts was 72.44 percent in the 2016 general election. Majority-Black precincts had the highest rates of turnout among groups of color at 64.44 percent, followed by majority-API (58.85 percent), plural (58.40 percent), and majority-Hispanic (55.10 percent).[20] Our results indicate that majority–Native precincts had the lowest average turnout, 40.32 percent, though there are only a few such precincts in our sample (14 precincts).[21] Analyses of 2016 turnout, as seen in Table A2 in the appendix, show that differences in average turnout between majority-White precincts and majority-Black, majority-Hispanic, majority-API, majority-Native, and racially plural precincts were statistically significant.

According to our baseline analysis,[22] residing in a majority-Black precinct was associated with an estimated 9.03 percentage-point decrease in voter turnout in 2016 compared to living in a majority-White precinct. Living in majority-Hispanic, plurality, majority-API, and majority-Native precincts were associated with even lower likelihoods of voting compared to majority-White precincts. The most substantial difference was the approximate 33 percentage points in voter turnout between majority-Native precincts and majority-White precincts.

To account for state-level variables such as geography and socioeconomic status, we conducted an additional analysis including state-level fixed effects.[23] In this second model,

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*[17] Statewide turnout in Wisconsin was nearly 70 percent in the 2016 general election, while Georgia had an average turnout of nearly 60 percent (McDonald 2023a). Interestingly, Milwaukee County had the highest-quality election administration of the counties in this analysis in 2016, according to data from Ritter and Tolbert (2024). Fulton County, however, was ranked 8th of the 11 counties—though it did have higher-quality election administration relative to many other counties that year (Ritter and Tolbert 2024).*

*[18] North Carolina's average turnout in 2016 was 64.72 percent, while Arizona's was 55.97 percent (McDonald 2023a).*

*[19] In all election years, there were multiple precincts with 100 percent or higher reported voter turnout. We removed the former for being extreme outliers and the latter for representing impossible values. Precincts with 100 percent or higher reported turnout occur for various reasons, including having a small population and being assigned mail or early voting. Moreover, precincts with 0 percent reported turnout were also excluded due to concerns that such values may reflect reporting or technical errors.*

*[20] Table A2 in the appendix lists the average turnout for each racial majority.*

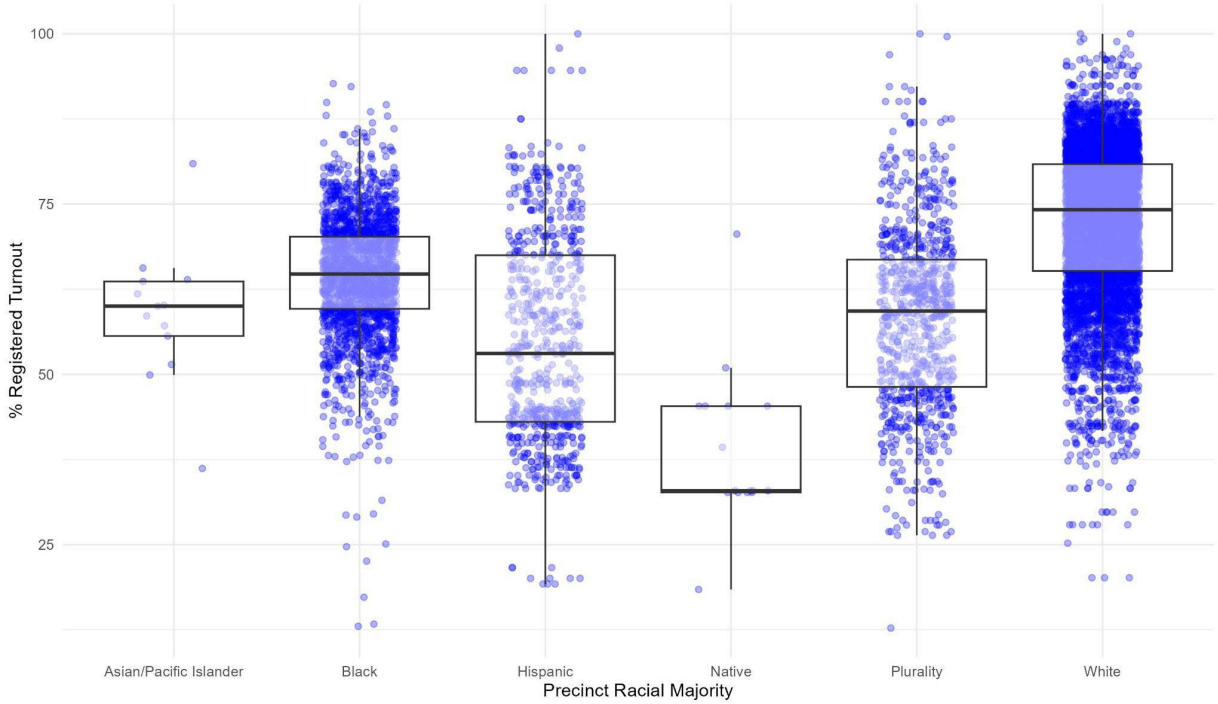
*[21] There were also a small number of majority-API precincts (13).*

*[22] Full results are shown in Table A3 in the appendix.*

*[23] There was insufficient variance between counties to include county-level effects.*

significant racial disparities persisted. The predicted turnout was significantly lower in each precinct made up of a majority of a group of color than in majority-White precincts. In fact, majority-Black and majority-API precincts had even lower turnouts relative to majority-White precincts in model 2 than in model 1. After controlling for state-level factors, majority-Black precincts showed lower voter turnout by about 11 percentage points compared to majority-White precincts.

Figure 1. 2016 Precinct Turnout by Census-Defined Racial Group




*Groups that constitute a majority of CVAP within a precinct, as defined by the Census: Asian (Asian + Pacific Islander), Black/African American, Hispanic/Latino, White, and plural, wherein there is no majority race. Black lines inside boxes represent mean turnout within group, and boxes represent one standard deviation from the mean. Each dot represents an individual precinct.*

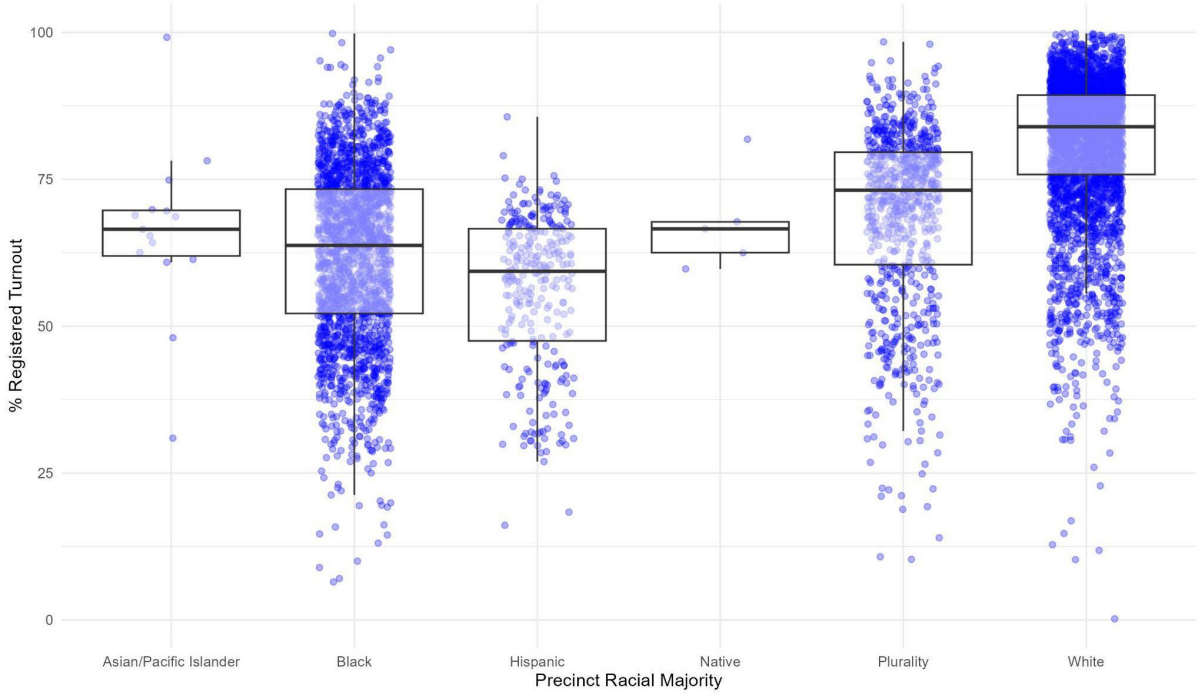
Like model 1, majority-Native precincts in model 2 had the lowest turnout, showing a 27 percentage-point difference in voting relative to majority-White precincts. Georgia and Wisconsin were significant with positive coefficients, indicating that these states had significantly higher turnout than the reference category, Arizona. Together, results from 2016 suggest that systemic racial disparities in voter turnout exist, as precincts with a majority group of color had significantly lower turnout than majority-White precincts.

## 2020 General Election

In 2020, average turnout rates, as shown in Table A4 in the appendix, were over 80 percent in Durham (84.35 percent), Mecklenburg (82.02 percent), Maricopa (82.09 percent), and

Allegheny (81.84 percent) Counties.[24] Conversely, Wayne (62.72 percent) and Milwaukee (55.72 percent) Counties had the lowest average turnout.[25] National turnout was about 66 percent (Hartig et al. 2023).

Figure 2. 2020 Precinct Turnout by Census-Defined Racial Group




*Groups that constitute a majority of CVAP within a precinct, as defined by the Census: Asian (Asian + Pacific Islander), Black/African American, Hispanic/Latino, White, and plural, wherein there is no majority race. Black lines inside boxes represent mean turnout within group, and boxes represent one standard deviation from the mean. Each dot represents an individual precinct.*

As expected, we observe substantial racial disparities in 2020 general election voter turnout. As shown in Table A5 in the appendix, voter turnout rates were highest in majority-White precincts (80.93 percent) and lowest in majority-Hispanic precincts (56.13 percent). Majority-Black and racially plural precincts fared only marginally better, with an average turnout rate of about 62 and 69 percent, respectively. Majority-API and majority-Native precincts, each making up only a small number in the sample, had estimated average turnout rates of 65.93 and 67.68 percent, respectively. Figure 2 shows these relationships graphically.

*[24] North Carolina's statewide turnout was 71 percent, Arizona's was about 67 percent, and Pennsylvania's was nearly 70 percent in the 2020 general election (McDonald 2023b).*
*[25] Michigan's statewide turnout was slightly over 73 percent in 2020, while Wisconsin's was about 75 percent (McDonald 2023b). According to Ritter and Tolbert's CEA index, Wayne County ranked 4th and Milwaukee County ranked 3rd in terms of election administration quality among the 11 sample counties (2024).*

According to our analysis,[26] living in majority-Hispanic precincts was associated with the largest estimated decrease in voter turnout in the 2020 general election compared to living in majority-White precincts, with a 24.80 percentage points from the reference category of majority-White precincts. Living in a majority-Black precinct showed the second highest estimated gap in voter turnout rates compared to majority-White precincts at 18.89 percentage points. Living in majority-Native and majority-API precincts had a 13.25 percent and a nearly 15 percent gap in voter turnout, respectively, relative to majority-White precincts. As with 2016, racial inequalities in voter turnout in 2020 remained highly significant even in a mixed effects model. In fact, disparities between majority-Hispanic, majority-Native, and racially plural precincts relative to majority-White precincts increased in model 2.

Overall, the persistence of substantive and significant racial differences in model 2 suggests that state-level factors, such as voter access, electoral competition, and other variables that commonly affect turnout, do not alone explain these differences. Instead, they are in part a result of the types of communities people reside in, as discussed in the introduction. It is important to note that low- and high-turnout precincts exist within each racial majority group. For example, many majority-Black precincts and precincts without a racial majority had higher levels of turnout than majority-White precincts in the 2020 general election, and some majority-Hispanic precincts had turnout averages close to those of majority-White precincts.

## 2024 General Election

In 2024, average turnout rates, as shown in Table A7 in the appendix, were highest in Maricopa County, Arizona (79.24 percent),[27] Philadelphia County (74.98 percent) and Allegheny County, Pennsylvania (74.50 percent).[28] Conversely, Wayne County had by far the lowest average turnout at 44.45 percent.[29] This is largely explained by low turnout rates in Detroit, which had an average of 20 percent in a majority of its precincts. Nationwide, about 64 percent of eligible voters voted in the 2024 general election (McDonald 2024).

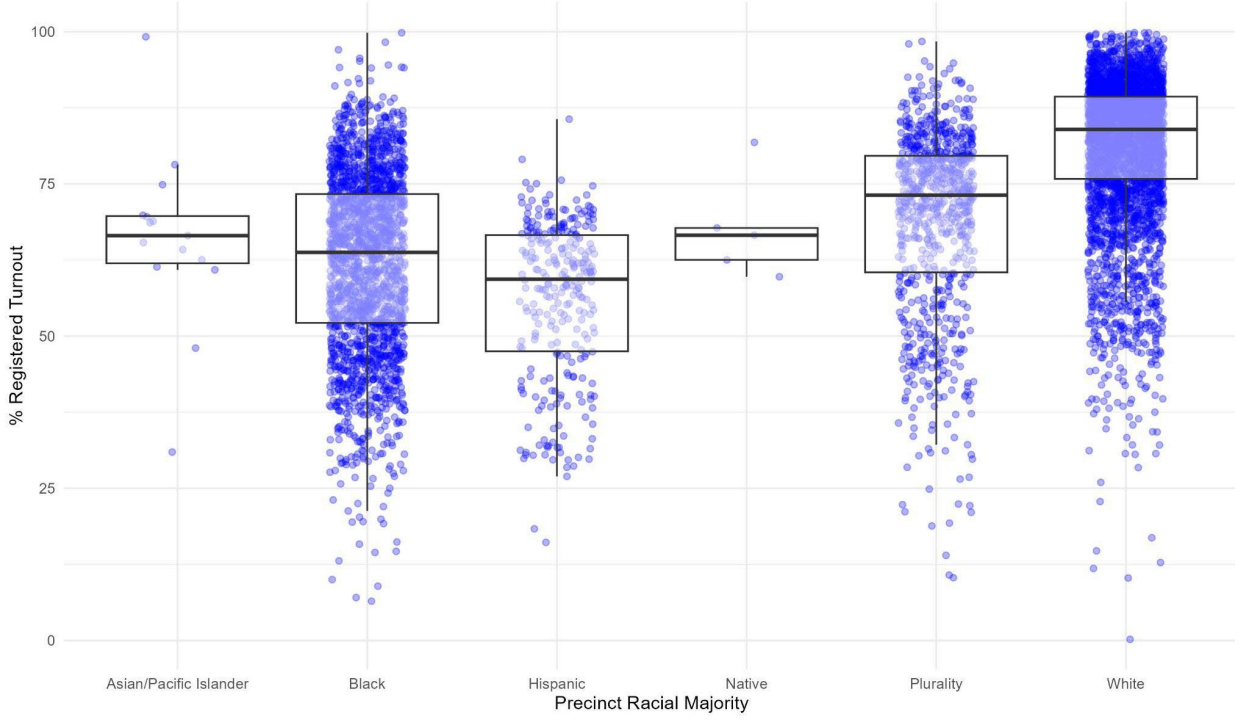
As in both 2016 and 2020, the 2024 average turnout rate in majority-White precincts (75.77 percent) was higher than precincts with a majority group of color.[30] (See Table A8 in the appendix.) Majority-Native precincts had the lowest average turnout (51.09 percent), though there were only five such precincts in 2024. Majority-Hispanic and majority-Black precincts also had an average turnout rate in the 50 percent range, at around 53 and 50 percent, respectively. Racially plural (60.64 percent) and majority-API precincts (60.67 percent) had slightly higher average turnouts in 2024.

Our baseline analysis shows that these racial disparities in voter turnout are statistically significant.[31] Living in a majority-Hispanic precinct is associated with an estimated nearly 23 percentage-point gap in voter turnout below majority-White precincts. Living in a majority-Black precinct is associated with about 25 percentage points less. In a state-level random effects model, the substantial and significant turnout disparities between majority-White and all other majority-race and racially plural precincts suggest that state-level factors alone do not

*[26] Table A6 in the appendix contains full analyses.*
*[27] Arizona's statewide average turnout was 63.60 percent in the 2024 general election (McDonald 2024).*
*[28] Pennsylvania's statewide average turnout was 71.43 percent in the 2024 general election (McDonald 2024).*
*[29] Michigan's statewide average turnout was 74.64 percent in the 2024 general election (McDonald 2024).*
*[30] Table A8 in the appendix lists average turnout by racial majority for the 2024 general election.*
*[31] Table A9 in the appendix contains full analyses.*

explain these differences. In other words, these racial disparities cannot be explained merely by what is happening at the state-level but are a result of something more systematic. Moreover, the estimated gap in turnout relative to majority-White precincts increases in this mixed effects model for majority-Hispanic, majority-API, majority-Native, and racially plural precincts.

Figure 3. 2024 Precinct Turnout by Census-Defined Racial Group




*Groups that constitute a majority of CVAP within a precinct, as defined by the Census: Asian (Asian + Pacific Islander), Black/African American, Hispanic/Latino, White, and plural, wherein there is no majority race. Black lines inside boxes represent mean turnout within group, and boxes represent one standard deviation from the mean. Each dot represents an individual precinct.*

## Ballot Rejections

While the Constitution establishes two requirements to vote—being a US citizen and at least 18 years old—many states have erected additional restrictions on the right to vote. States' additional requirements range from registration deadlines, voter identification laws, and, more recently, redundant proof of citizenship laws (NCSL 2024; NCSL 2025e; Underhill 2025).[32] Additionally, there are a wide range of methods used to verify and process ballots, to

[32] *At the time of analysis, the federal government was also considering instituting a law for proof of citizenship to vote, the Safeguard American Voter Eligibility (SAVE) Act (Cassidy 2025).*

determine which ballots are to be rejected, and, for voters, to correct ballot errors.[33] Consequently, comparing ballot certification and ballot rejection rates across jurisdictions is difficult.[34]

Arizona, Michigan, and Ohio require signature verification of mail ballots, whereas Georgia, North Carolina, Pennsylvania, and Wisconsin do not (NSCL 2025d). In signature verification states, the ballot envelope signature is compared to the signature(s) on the voter's registration record, and if the signatures do not match, it is rejected. Georgia requires voters to sign an oath under penalty of false swearing and provide an accepted form of identification. North Carolina mail ballots must be signed by either two witnesses or a notary public in addition to the voter, who must also provide a copy of an accepted form of photo identification or an exemption form. Pennsylvania's mail ballot envelope includes a statement that must be signed by the voter under penalty of unsworn falsification, and the county board "verifies the proof of identification and compares the information . . . with the information in the 'registered absentee voters file'" (NCSL 2025c). Wisconsin requires a single witness's signature along with the voter's signing under penalty for making a false statement (NCSL 2025d).

We considered provisional or absentee ballots rejected if they were cast but not counted because of clerical error, such as incomplete notary or witness information; voter error, including rejections pending a cure, which is notifying and allowing a voter to correct a ballot error; late return, with the deadline often being prior to Election Day; unmatched or invalid signature; failure to provide proof of citizenship; or being recorded as "spoiled" or "other," which are often the largest categories.

In 2016, we obtained ballot rejection data from 6 of our 11 sample counties. We were unable to secure data from the Pennsylvania counties, Ohio counties, or Milwaukee County, Wisconsin. In 2020, we calculated ballot rejection data for all jurisdictions except Maricopa County, Arizona, and Milwaukee County, Wisconsin, where we were unable to generate usable data on the provisional ballots cast and rejected. Maricopa County, Fulton County, and the three North Carolina counties provided reasons for rejections in 2016 (see Tables A11–A15).[35] In 2020, just four of the counties in our analysis—Philadelphia County and all three North Carolina counties—provided data on reasons for ballot rejection (see Tables A17–A21). In 2024, we obtained the percentage of rejected ballots and the reasons for their rejection from three of our target counties, Cuyahoga County, Ohio, Philadelphia County, Pennsylvania, and Wayne County, Michigan (see Tables A24–26).[36]

We then used the available data for each county to rank into lower, middle, and upper thirds the frequency of provisional voting events (i.e., supplemental provisional ballots cast or "no-identification" affidavits signed) and total ballot rejections recorded as a percentage of ballots cast. This process standardized the scale of rejections, making it possible to compare high-incident precincts (those in the upper third) to other precincts and to analyze the properties of

*[33] For more information on state curing processes and verification practices, see NCSL (2025c) and NCSL (2025d), respectively.*
*[34] For context, Oregon, which had the highest COVI value in 2016 and 2020, rejected 0.69 percent of absentee ballots in 2016 and 0.70 percent in 2020 (COVI n.d.; EAC 2017).*
*[35] We do not include a table detailing reasons for rejection for Fulton County in the 2016 election, as data show only one ballot was rejected that year.*
*[36] See the discussion section for more on the availability of ballot rejection data.*

high-incident precincts across jurisdictions while considering all the legal, administrative, and behavioral differences that generate variability in ballot rejections across precincts.[37]

## 2016 Ballot Rejections

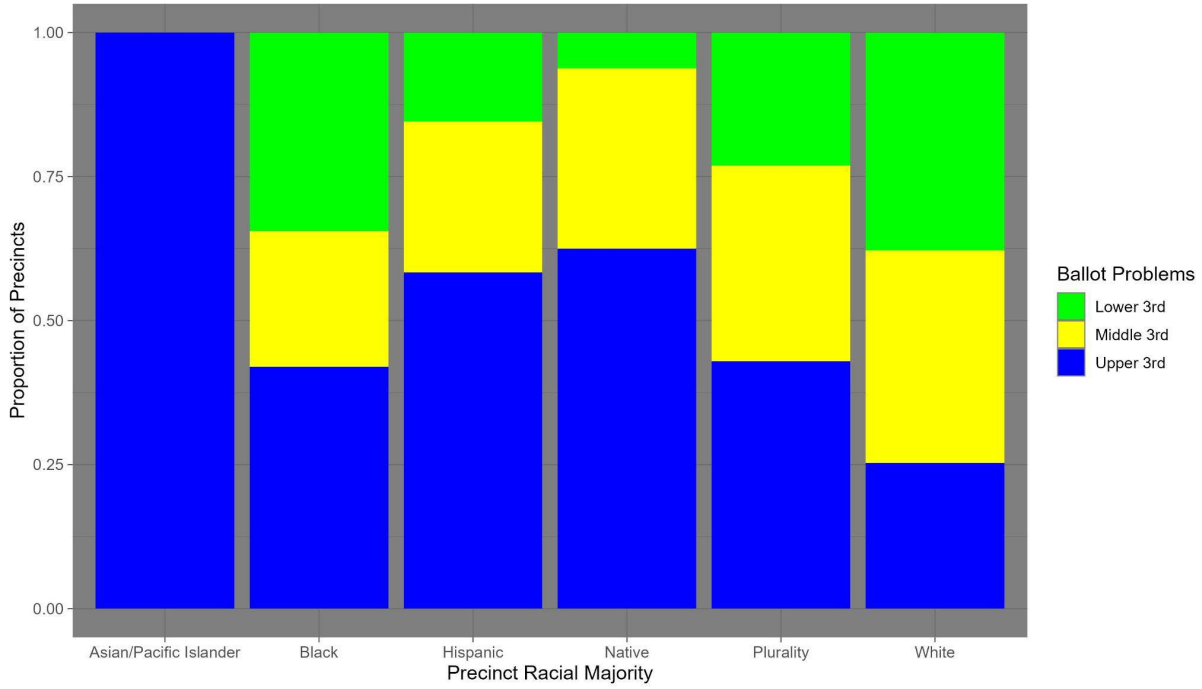
Table A10 shows that 2016 general election ballot rejections were highest in Durham County, North Carolina, with an average rejection rate of 0.73 percent (or 1,037 total ballots). Comparatively, Columbus and Mecklenburg Counties in North Carolina had rejection rates of 0.48 (or 128 total ballots) and 0.45 percent (or 2,057 total ballots), respectively.[38] The North Carolina counties provided reasons for rejection data, as shown in Tables A11–A13. The most commonly recorded reason for rejection was lack of a record of registration, accounting for over 70 percent of rejections in all three counties.

Maricopa County, Arizona, had the second-highest ballot rejection rate in 2016 at 0.65 percent (or 33,274 total ballots).[39] Like the North Carolina counties, Maricopa County provided rejection codes in the 2016 data (see Table A14), the primary reasons being unregistered individuals (25.45 percent) and lack of a signature (23.44 percent). Conversely, Fulton County had the lowest rate of rejection at 0.0004 percent.[40]

Figure 4 shows the proportion of precincts for each ballot rejection category in the 2016 general election. Majority-White precincts had a lower proportion of precincts in the high-incident category, with about 25 percent of precincts in the upper-third tercile of ballot rejections. Comparatively, nearly 45 percent of majority-Black and racially plural precincts were in the high-incident rejection category. A slightly higher percentage of majority-Native precincts were in the high-incident rejection category, and majority-Hispanic and -API precincts had even higher proportions of precincts in the high-incident tercile, at about 65 and 100 percent of precincts, respectively. Together, these results suggest that ballot problems were more concentrated in precincts with majority populations of color in the 2016 general election.

*[37] Since most precincts in Wayne County, Michigan, had rejection rates of 0 percent in 2020, each of the terciles contain some 0 percent precincts.*
*[38] Statewide, North Carolina rejected 0.71 percent of absentee ballots in the 2016 general election (EAC 2017).*
*[39] Statewide, Arizona rejected 0.43 percent of absentee ballots in the 2016 general election (EAC 2017).*
*[40] Statewide, Georgia rejected 5.77 percent of absentee ballots in the 2016 general election (EAC 2017). That there was only one ballot rejected in Fulton County in 2016 indicates there may be issues within the data.*

Figure 4. Proportion of Precincts in Each Ballot Rejection Category 2016



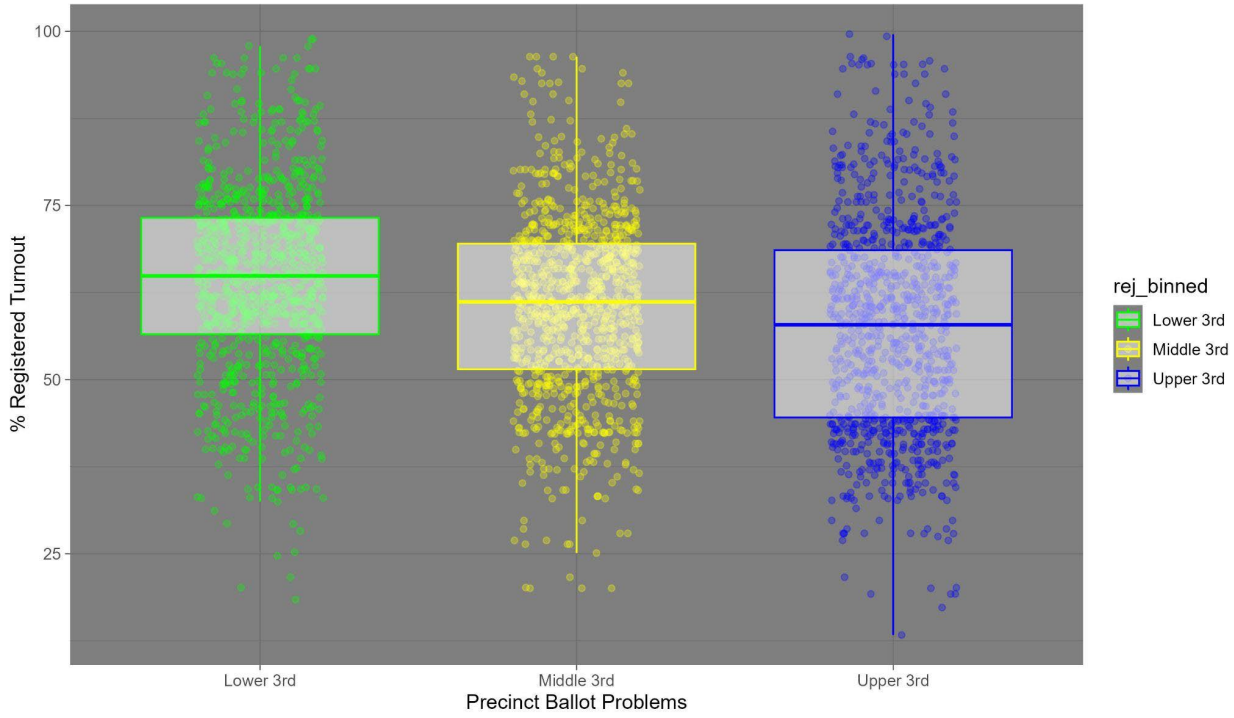

*This figure shows the proportion of precincts for each ballot rejection category in the 2016 general election.*

The relationship between ballot rejections and voter turnout in 2016 is shown in Figure 5. Precincts in the lower third, or the low-incident category, had the highest turnout rates, with a median rate of about 70 percent. Precincts in the middle third had a median turnout of around 65 percent. And precincts in the high-incident category, or those with the most ballot problems, had a median turnout of 60 percent. These results indicate that as ballot problems increase, turnout decreases. Moreover, combined with Figure 4, our analysis points to the potential of existing cumulative inequalities in these communities. Not only are the communities deprived of the resources necessary for effective political participation, but when they do manage to overcome these barriers, the votes of their residents are more likely to go uncounted.

Our baseline multivariate analysis of rejection rates indicates that living in a majority-Black precinct significantly decreases the rate of rejections compared to majority-White precincts in the 2016 general election.[41] In a mixed effects model, however, majority-Black, -Hispanic, -API, -Native, and racially plural precincts are predicted to have significantly higher rejection rates.

[41] *Full analyses are shown in Table A16 in the appendix.*

Figure 5. 2016 Registered Turnout by Ballot Problem Terciles




*This figure shows the relationship between ballot rejections and voter turnout in the 2016 general election.*

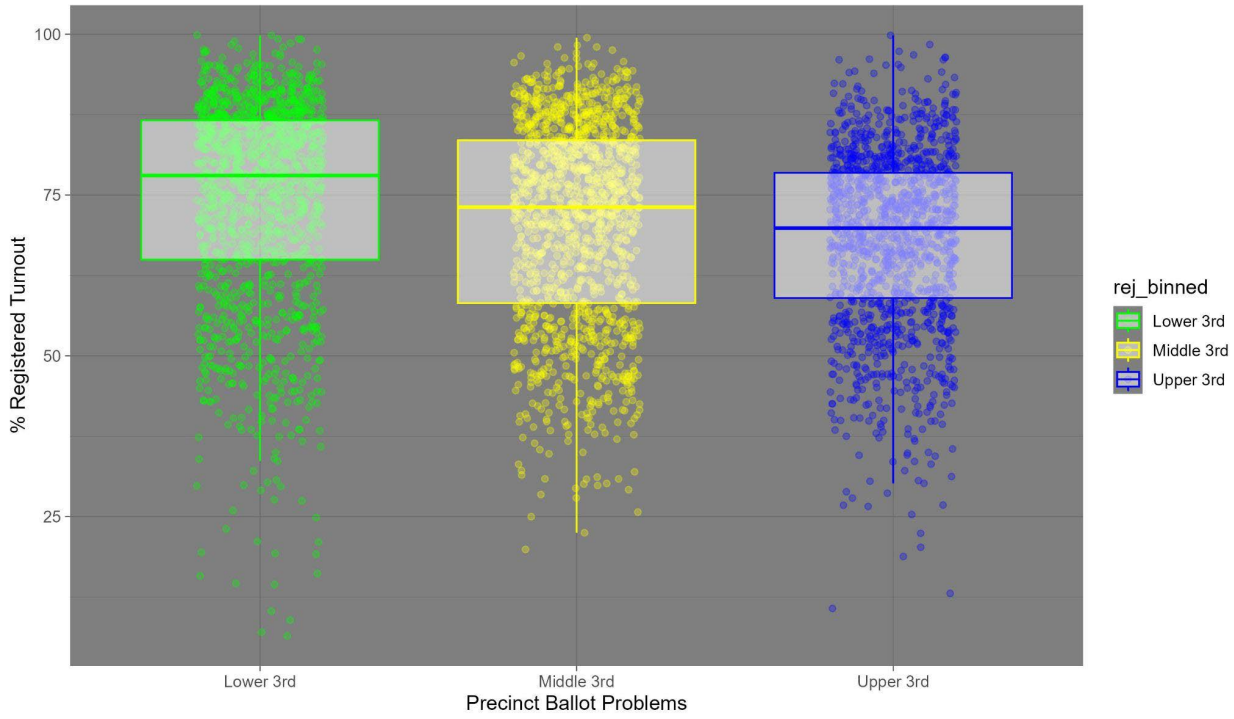
## 2020 Ballot Rejections

Table A17 displays average ballot rejection rates by county in the 2020 general election. Philadelphia County had the highest average rejection rate at 0.77 percent (or 4,172 total ballots).[42] According to the rejection reasons provided by the county (see Table A18), nearly 70 percent were rejected because the voter was not registered to vote. Philadelphia County was followed by Durham and Columbus Counties, with average ballot rejection rates of 0.57 percent (or 1,246 total ballots) and 0.56 percent (or 294 total ballots), respectively.[43] Like Philadelphia County, Durham County recorded its most common reason for ballot rejection in 2020 (see Table A19) as nonregistered voters (55.30 percent). No reason was provided for Columbus County's most common reason for rejection in 2020, accounting for slightly over 54 percent of its rejected ballots.[44] In Fulton County, which rejected an average of 0.16 percent of

*[42] According to statewide data from Pennsylvania, the percentage of provisional ballots rejected due to technical errors increased from 0.95 percent in 2016 to 4.92 percent in 2024. Officials speculate that the reasons for the state's comparatively high rejection rates of provisional ballots are due to the number of envelope requirements, poll worker training and turnover, and unclear provisional ballot design (Walker 2025). Statewide, Pennsylvania rejected 1.3 percent of mail ballots in the 2020 general election (EAC 2021).*
*[43] Statewide, North Carolina rejected 0.70 percent of mail ballots in the 2020 general election (EAC 2021).*
*[44] Table A21 shows Mecklenburg County's reasons for rejections in the 2020 general election.*

ballots, 57.47 percent of those were missing signatures and 35.73 percent arrived after the deadline.[45] Wayne County had the lowest average rejection rate at 0.03 percent.[46]

Figure 6. 2020 Registered Turnout by Ballot Problem Terciles

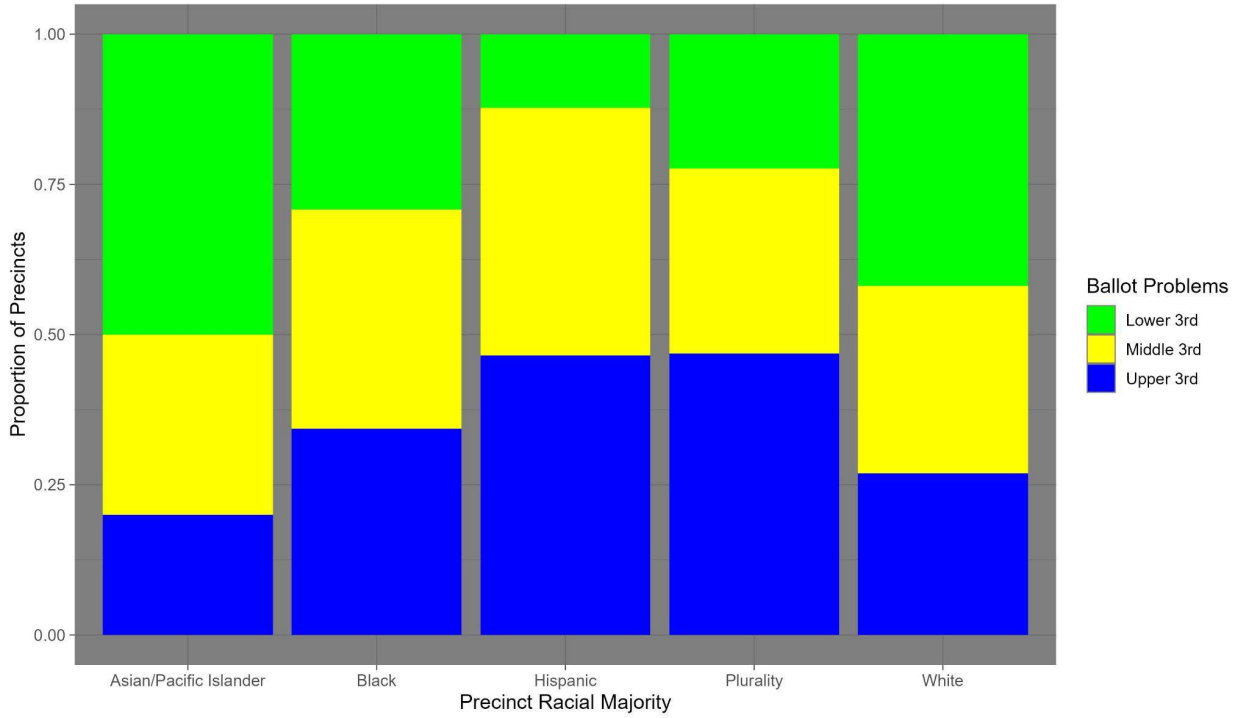



*This figure shows the relationship between ballot rejections and turnout in the 2020 general election.*

Figure 6 shows that in 2020, average turnout was highest in the precincts with the lowest ballot incident rates and lowest in those with the highest ballot incident rates. Comparing low-incident and high-incident ballot rejection precincts, as shown in Figure 7, we find substantial racial inequalities in rates across precincts of different racial majorities. Approximately 25 percent of majority-White precincts were in the high-incident category (the upper-third tercile of ballot problems), but around 35 percent of majority-Black and nearly 50 percent of majority-Hispanic and racially plural precincts were in the high-incident category. Majority-API precincts had the lowest proportion of precincts in the high-incidence category of ballot problems, at about 20 percent.

[45] *Table A17 in the appendix shows Fulton County's reasons for rejection. Statewide, Georgia rejected 0.40 percent of mail ballots in the 2020 general election (EAC 2021).*
[46] *Statewide, Michigan rejected 0.70 percent of mail ballots in the 2020 general election (EAC 2021).*

Figure 7. Proportion of Precincts in Each Ballot Rejections Category 2020




*This figure shows the proportion of precincts in each ballot rejection category in the 2020 general election.*

Our baseline analysis of ballot rejections by racial majority in the 2020 general election finds that living in a majority-Black precinct increases ballot rejection rates compared to majority-White precincts by about 0.20 percentage points.[47] Living in a racially plural precinct instead of a majority-White precinct was estimated to increase ballot rejections by 0.28 percentage points. Disparities were comparatively more pronounced with residing in a majority-Hispanic precinct, which was associated with an estimated 0.75 percentage-point increase in ballot rejections over that of majority-White precincts. In model 1, majority-API precincts were the only racial group of color not having a statistically significant higher rate of rejections relative to majority-White precincts.

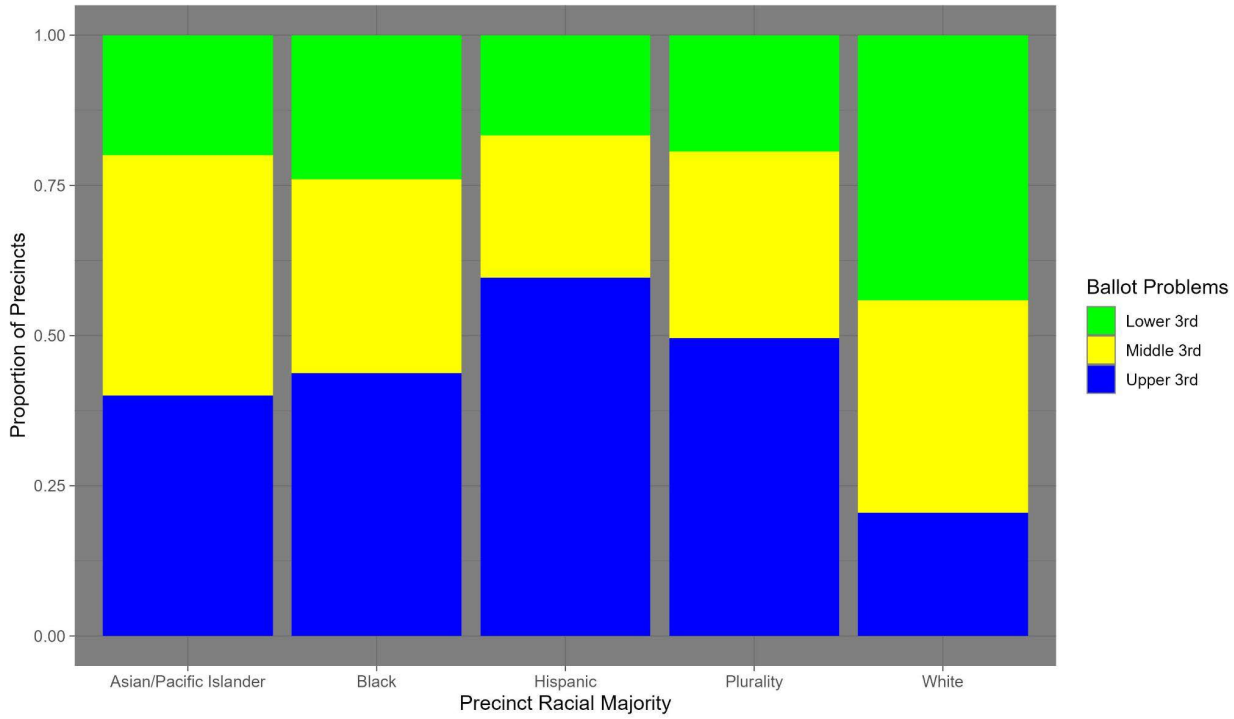
In model 2, a mixed effects model that controls for county-level effects, these significant racial disparities persisted. The difference between majority-Black and majority-White precincts was even larger, with living in the former being associated with a 0.23 percentage point increase in rejections over living in the latter. The estimated ballot rejection rate in plurality and majority-Hispanic precincts relative to majority-White precincts was smaller in model 2 but still positive and significant.

[47] *Full analyses are shown in Table A22.*

## 2024 Ballot Rejections

Wayne County had the highest rejection rate (1.66 percent, or 14,939 ballots)[48] of the three counties for which we received rejection data for 2024. Philadelphia County had an average rejection rate of 1.10 percent (or 13,236 ballots), and Cuyahoga County had an average of 0.65 percent (or 3,087 ballots), as shown in Table A23.[49] In Cuyahoga County (see Table A24), close to 60 percent of absentee ballots were rejected because the voter was not registered. The second most common reason for rejection (14 percent) was the voter missing acceptable identification.

Figure 8. Proportion of Precincts in Each Ballot Rejections Category 2024




*This figure shows the proportion of precincts in each ballot rejection category in the 2024 general election.*

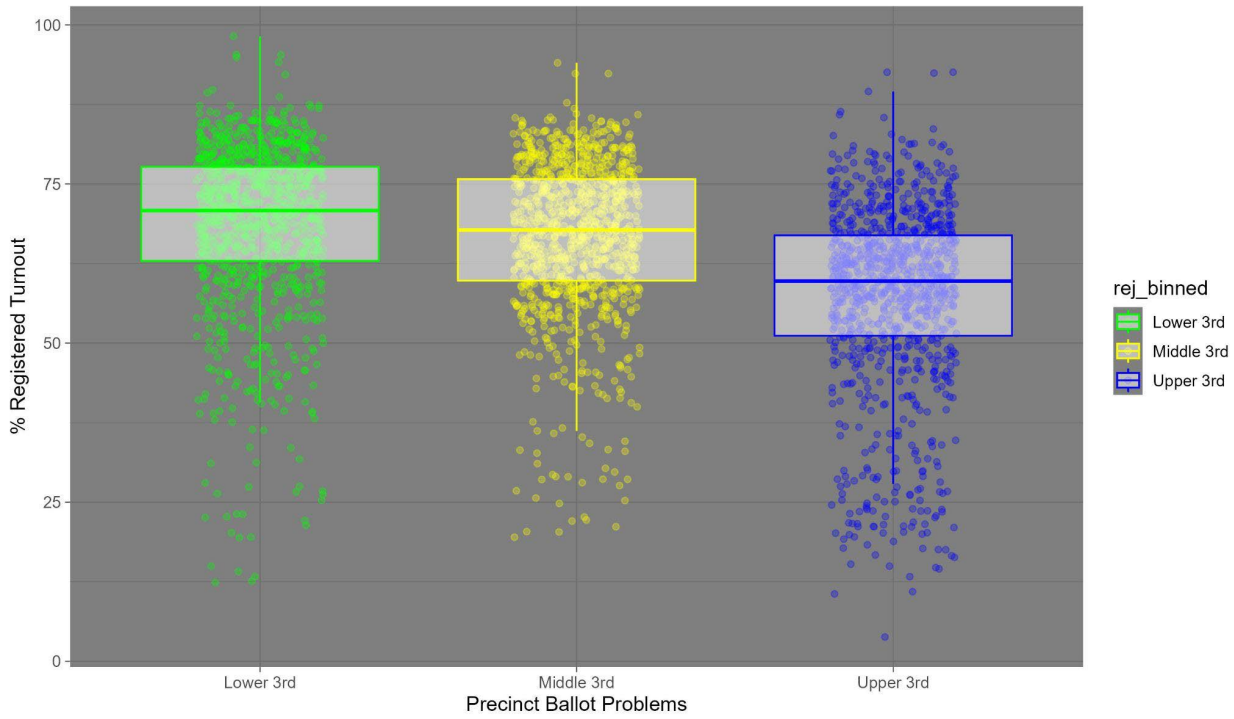
According to the rejection data shown in Table A25, the most common reason for ballot rejection in Philadelphia County was that the absentee ballot was returned to the election offices as undeliverable (27.20 percent). The second most common reason was a missing

[48] *A large number of ballot rejection values were not available from Wayne County. This is due to inconsistency in the naming conventions of many Detroit precincts, which made it impossible to merge rejection data for those precincts. Additionally, many cities had more precincts in the voter turnout file provided by the county than they did in the ballot rejection file, leading to increased missingness. Michigan rejected 3.1 percent of mail ballots in the 2024 general election (EAC 2025).*

[49] *Pennsylvania rejected 1 percent of mail ballots in the 2024 general election. Ohio rejected 0.8 percent of ballots in the 2024 general election (EAC 2025).*

signature (23.3 percent), and another 16 percent were rejected for arriving after the return deadline. Table A26 displays the reasons for rejection in Wayne County, with the most common reason being that the voter had already voted at an early voting site or previously on Election Day, which accounted for about 66 percent of rejected ballots.[50] The second most common rejection reason was the voter moving to another jurisdiction (10.72 percent), followed by late return of ballot (6.28 percent). Nationally, the most common reason mail ballots were rejected in the 2024 general elections was a missing or nonmatching signature, accounting for a little over 40 percent of rejections (EAC 2025).

Figure 9. 2024 Registered Turnout by Ballot Problem Terciles




*This figure shows the relationship between ballot rejections and turnout in the 2024 general election.*

Comparing ballot rejections of low-incident and high-incident precincts (see Figure 8), we again see evidence of substantial racial disparities. Only about 23 percent of majority-White precincts are in the high-incidence category, while approximately 58 percent of majority-Hispanic, 51 percent of racially plural, 47 percent of majority-Black, and 43 percent of majority-API precincts were in the upper third of ballot rejections. Figure 9 shows that precincts in this upper-third, high-incidence category—or those with a higher rate of ballot rejections—were also those with the lowest average turnout.

Baseline analysis of ballot rejections by racial majority, as shown in Table A27, finds majority-Black, -Hispanic, -API, or racially plural precincts had significantly higher ballot rejection rates than those in majority-White precincts. Majority-API and -Hispanic precincts had the

[50] *Table A26 lists the reasons for rejection and their percentage of occurrence in Wayne County.*

greatest estimated impact on ballot rejection rates, with the former estimated to see a 1.68 percentage-point gap in rejections and the latter, 0.96 percentage points. In an analysis controlling for county-level effects, racial disparities in ballot rejections between majority-White precincts and those with a majority group of color remained significant and even increased in magnitude.[51]

## Discussion

In our analysis of voter turnout and ballot rejections in battleground counties in the 2016, 2020, and 2024 general elections, we found evidence of what we refer to as electoral cumulative inequalities. For each of those years, majority-White precincts had significantly higher turnout than precincts of a majority group of color or that were racially plural, meaning having no majority race. While average turnout in majority-White precincts increased from 2016 to 2024 (peaking in 2020), average turnout in majority-Black and -Hispanic precincts decreased from 2016 to 2024. In majority-Black precincts, average turnout fell from 64 percent in 2016 to 50 percent in 2024. In majority-Hispanic precincts, average turnout decreased from 55 percent in 2016 to 53 percent in 2024.[52]

Further, in analyses controlling for state and county effects, the negative effect on turnout of residing in a majority-Black or -Hispanic precinct increased over time. Living in a majority-Black precinct was estimated to decrease voter turnout by 11 percentage points in 2016 compared to living in a majority-White precinct, but in 2024, that figure was 22 percentage points. Living in a majority-Hispanic precinct was estimated to decrease voter turnout by 16 percentage points in 2016; in 2024, that figure rose to 26 percentage points.

Racially plural precincts and those with higher Black, Hispanic, and Native populations were estimated to have higher rates of ballot rejections than majority-White precincts in all three election years.[53] Moreover, we found that voters living in low-turnout precincts were estimated to have higher ballot rejection rates in the 2016, 2020, and 2024 general elections. **These findings suggest that ballots not cast and ballots cast but not counted are correlated and concentrated in certain precincts. That is, communities with lower rates of turnout also experience higher rates of ballot rejections, and as a result, these communities' political representation is diminished compared to those communities with high turnout and low rejection rates.**[54]

From 2016 to 2024, the percentage of majority-White precincts in the high-incidence category of ballot rejections remained fairly stable—around 23–25 percent. The percentage of majority-

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*[51] Model 2 is a mixed effects model with random effects for counties to account for unobserved differences between counties. This model does not include state-level effects due to insufficient variance within states.*
*[52] Though comprising a relatively smaller number of precincts in our analysis due to county selection, racially plural, majority-Native, and majority-Asian precincts saw mild to moderate increases in turnout from 2016 to 2020. Racially plural precinct average turnout increased from 58 percent in 2016 to 61 percent in 2024, peaking at 69 percent in 2020. Average turnout in majority-Native precincts increased from 40 percent in 2016 to 51 percent in 2024, with a high of 67 percent in 2020.*
*[53] Our analysis of rejection data also supports the various research that debunks mass voter fraud allegations—including the conspiracy theories of illegal voting specific to the counties in this analysis—by serving as evidence of the rigorous process ballots undergo before being counted and demonstrating the various reasons ballots are rejected each election cycle (Cottrell, Herron, and Westwood 2018; Eggers, Garro, and Grimmer 2021; Levitt 2007).*
*[54] Researchers have found evidence suggesting voters whose mail applications or mail ballots are rejected are less likely to vote for at least two years afterward (Morris and Grange 2025).*

Black precincts in the high-incidence category was about 45 percent in 2016, decreased to about 35 percent in 2020, and was 47 percent in 2024. The percentage of majority-Hispanic precincts in the high-incidence category decreased from 2016 to 2024—from about 65 percent in 2016, to some 50 percent in 2020, and finally, to 58 percent in 2024.[55]

**These racial disparities in voter turnout and ballot rejections—which are symptoms of systematic inequities in our electoral processes and political institutions—accumulate in the underrepresentation of the interests, needs, and preferences of communities in Black, Hispanic, Native, API, and racially plural precincts and the overrepresentation of the interests, needs, and preferences of communities in majority-White precincts. As a result, decisions made by elected officials are less likely to reflect the interests of these communities of color, and public policies are less likely to protect their health, safety, and well-being.**

Several explanations are possible for the observed racial disparities in rejection rates. There are two general theories that can explain the reasons we observe racial disparities in ballot rejection rates. One is the voter-centric perspective that suggests that voter demographics affect a voter's ability to correctly complete a ballot due to flawed ballot design and higher signature fluidity (Alvarez, Hall, and Sinclair 2008; Cotrell, Herron, and Smith 2021; Darcy and Schneider 1989; Kimball and Kropf 2005; Kimball, Owens, and Keeney 2004; Knack and Kropf 2003; Norden and Iyer 2011; Norden, Quesenbery, and Kimball 2012; Sinclair and Alvarez 2004; Tomz and Van Houweling 2003).

Conversely, the administrative-centric perspective suggests that disparities in rejection rates can be attributed to the discretion of local-level election administration through the neutral application of policies that happen to have unequal effects on different groups of people or through the implicit biases of election workers and administrators (Cotrell, Herron, and Smith 2021; Eberhardt 2019; Greenwald and Banaji 1995; Kimball and Kropf 2006; Kimball, Kropf, and Battles 2006; Smith 2018; White, Nathan, and Faller 2015). In reality, it is likely that rejection rate disparities are explained by all of the above.

**Fortunately, there are ways to reduce current racial inequalities in elections and work toward a multiparty and multiracial democracy wherein multiple parties effectively represent citizens of diverse racial and ethnic backgrounds. More equitable ballot design, including redesigning mail and provisional ballots to be more user-friendly and expanding language and disability access, can increase turnout and decrease rejections among marginalized groups (Gordon-Rogers, Latner, and Williams 2024a). Increasing election data transparency, including adopting new voter file maintenance practices and expanding curing opportunities and outreach, can increase rates of participation and reduce the number of rejected ballots (Gordon-Rogers, Latner, and Williams 2024b). Right now, we are actively advocating for these and other science-based policies in the areas of ballot design and election data transparency.** While important, such policy recommendations focus on election administration and do not rectify larger inequalities inherent in our electoral system. For that reason, UCS is also working on increasing fair

*[55] The percentage of majority-Asian precincts in the high-incident category was 100 percent in 2016, around 20 percent in 2020, and about 45 percent in 2024. We had rejection data for majority-Native precincts only for 2016. The proportion of racially plural precincts in the high-incidence category remained fairly stable over time.*

representation. Communities must have the power to elect the candidates they choose to represent their interests.

The process of working with election administrators to collect the data necessary for this analysis highlights two elements critical to the study of election administration in the United States. First, election administrators are dedicated public servants who are deeply committed to administering accessible, secure, and fair elections but face considerable impediments to achieving that mission, including but not limited to barriers to collect, secure, and disseminate precinct-level election data. We are not the first and will likely not be the last to acknowledge these barriers (Willis, Merivaki, and Ziogas 2022).

Second, the lack of comprehensive precinct-level data—such as 2024 ballot rejection data for many of our sample counties—is indicative of its widespread inaccessibility (Baltz et al. 2022). Both availability and quality of election data are indispensable to the study of elections, and without access to these data, researchers are constrained in their ability to identify issues within the administration of elections or to develop solutions to overcome these challenges (Murray, Baltz, and Stewart 2023; Willis, Merivaki, and Ziogas 2022). While our analysis is rigorous, our research and the resulting report—and the research of others in the field of election science and administration—would be improved with better data. This unavailability also illustrates the continuing importance of our work in the area of election data transparency, such as our development of election science recommendations for improving current levels of transparency (Gordon-Rogers, Latner, and Williams 2024b).

Despite its associated challenges, the examination of precinct-level election data is an area ripe for further research. Among the potential areas of study is whether the most common reasons for rejection vary based on the racial composition of precincts, similar to what is proposed in the state-level report by the Center for Inclusive Democracy and the Elections and Voting Information Center (CID and EVIC 2024). Another avenue for future research is to examine turnout and rejection rates using precinct-level estimates of the percentage of voters with disabilities or with limited English proficiency. Further study should explore precinct-level ballot rejections in other jurisdictions, such as those that are smaller or outside battleground states. Moreover, our selected counties have a relatively small number of majority-API and -Native precincts. Continued analysis of counties with higher populations of API and Native residents would improve the reliability of findings regarding voter turnout and ballot rejections for these communities.

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