

**Inequalities in Vote by Mail for Native Americans in the US West:  
The Historical Political Economy of Postal Service in Northeastern Arizona**

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**Abstract:** Vote by mail has been disproportionately adopted by states in the U.S. West. While voting by mail is relatively easy for most individuals, who have what the United States Postal Service (USPS) characterizes as standard mail service (residential mail delivery), it is much more difficult for those having non-standard mail service, which requires traveling to post offices to access mail. Non-standard mail service is the norm for Native Americans living on reservations in the U.S. West, and for many rural non-Native neighbors. In this paper, we show how decisions taken by the USPS in the latter part of the nineteenth century and early twentieth century have resulted in deeply entrenched structural inequities in access to mail services on reservations in Arizona when compared to the services available in non-reservation communities. We explore the political economy of these decisions, most notably the military conquest of the West in the late nineteenth century and support for white settlers. These inequities seriously impinge on the ability of people living on the reservation to vote by mail in the current times. We use detailed data on precinct locations, post office locations, drop box locations, and Election Day voting sites to show there are systemic inequities that result in voters on the reservations (primarily the Navajo Nation) having less opportunity to vote than is available to other Arizona voters, both urban and rural. We also document how these differences in voting access adversely affect voting by mail among Native voters, particularly those living in the precincts with the least access.

**Draft Prepared for the *Journal of Historical Political Economy*,  
Special Issue on Development of the American West**

## **Introduction:**

During the 2020 election, voting by mail provided a way to vote without risking exposure to the coronavirus. For people who have what the United States Postal Service (USPS) characterize as standard mail service (e.g., residential mail delivery six days per week), voting by mail is logistically easy. It is much harder for those having non-standard mail service, which requires traveling to post offices to receive and post mail. It is difficult to understate the economic and physical barriers for individuals to access mail in the most rural parts of the American West and how these barriers may straightforwardly impact ballot access when voting is primarily done via the mail.

In this paper, we examine how racially-based structural inequities in mail service that originated in the settlement of the American West have resulted in differential access to voting by mail. We describe the development of the postal system in northeastern Arizona over the 19<sup>th</sup> and early 20<sup>th</sup> centuries and how that legacy remains in place today, given 89% of current post offices were established prior to 1920. The earliest post offices were set up for military purposes, for the explicit goal of “pacification” of the Navajo, and then for the development of economic networks among Euro-American settlers, who were disproportionately Mormon. Nearly all of the reservation post offices were located on trading posts that serviced the needs of settlers. Given that mail service was not organized for the purpose of providing equal access to the ballot, and mail service was part of a larger economic exploitation of the Navajo, it is not surprising that mail service today remains inequitable for individuals living on reservations.

We also empirically examine disparities between access for voters on the Navajo Nation territory and nearby reservations and voters living off-reservation in the same three Arizona counties (Apache, Navajo, and Coconino). This study is part of a growing body of research on Native Americans, who have the lowest registration and voting rate of any racial group in the

country (Peterson 1997, Huyser, Sanchez and Vargas 2017), but who have become increasingly important part of the electorate, especially in battleground states such as Arizona.<sup>1</sup> Native people on reservations have also raised the issue of mail service as a critical one to their voting rights.<sup>2</sup> This research also contributes to our understanding of political development in the western parts of the United States, showing that patterns of settlement and economic development have long term consequences.

The Navajo Nation is the largest reservation in the country, encompassing 27,425 square miles. Two-thirds of the territory is in three northeastern Arizona counties (Apache, Navajo, and Coconino) with the rest in Utah and New Mexico. Navajo Nation land makes up nearly half of the territory in the three Arizona counties.<sup>3</sup> All of the Navajo Nation land is classified as rural by the federal government, as are most of the non-reservation parts of the counties. Having a safe way to vote in 2020 was particularly important for the Navajo, given their COVID-19 hospitalization and death rates were among the highest in the country.<sup>4</sup> An analysis of COVID-19 through May 28, 2020 found that cases for Native Americans in Coconino County were 14 times higher than among whites. In Navajo County and Apache County, the Native American rates respectively were 19.3 and 16.75 times greater than among whites (Oppel, et. al. 2020).

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<sup>1</sup> For more on the increasing importance of Native voters and indicators of greater political engagement, see Skopek and Garner (2014), Evans et. al. (2019), and Sanchez, Foxworth, and Evans (2020). Our research also fits in a large research agenda on indigenous voting rights beyond the United States, in nations such as Canada (Budd et al. 2019), the nations of Latin America (Van Cott 2010), and the US Pacific Islands (Spitzer 2019), among others.

<sup>2</sup> For example, the Navajo Nation sued the state of Arizona over discriminatory postal access in the 2020 election in the case *Yazzie v. Hobbs*. Access to mail has been covered as a voting rights issue in the primary tribal media outlets, such as *Indian Country Today*, with recent articles on vote by mail access in South Dakota (<https://indiancountrytoday.com/news/voting-by-mail-isnt-so-easy-on-reservations>), coverage of the *Yazzie v. Hobbs* case in Arizona (<https://indiancountrytoday.com/news/navajo-citizens-challenge-mail-in-ballot-ruling>), and online voter registration in Arizona extended to those without residential street addresses, who are nearly all reservations residents (<https://indiancountrytoday.com/news/arizona-policy-could-help-natives-in-voter-registration-hurdle>).

<sup>3</sup> Appendix Figure 1A shows a map of Arizona with the Navajo nation indicated in red and all post office locations in Arizona marked with pins. The counties also include territories belonging to the Hopi, Apache, and Havasupai. The counties also include lands controlled by the federal government, especially national parks and national forests.

<sup>4</sup> In May 2020, the Navajo Nation actually had the highest per-capita COVID infection rate in the United States (Silverman et. al. 2020).

Most Arizona voters have chosen to be on the Permanent Early Voter List (PEVL), which means they automatically receive ballots by mail in every election. When tabulating votes, election officials do not distinguish between early voting and voting by mail, but nearly all voting in Arizona even before COVID was by mail, and nearly all votes labeled as early or by mail are mail in ballots.<sup>5</sup> While the system provides most voters with a convenient means of voting, it does not provide equal opportunities for Navajo Nation voters, who generally have non-standard mail service (Ferguson-Bohnee 2020). Decisions taken more than 100 years ago by the USPS about where to locate post offices have resulted in deeply entrenched structural racial inequities in mail service. There are far fewer post offices on the reservation and their hours of operation and access to post office boxes is far less. The delivery time for letters is much longer, and letters are more likely to be lost in-route, even when accounting for rurality (Schroedel et al. 2022).<sup>6</sup>

This research applies to a broader historical political economy literature on the importance of decisions behind placement of development-oriented government infrastructure. For example, Nall (2015) identifies racial considerations behind the placement of US highways that have resulted in systemic inequalities for those communities in the decades since. The US Post Office is a particularly interesting case to examine, given it represents a major resource redistribution to rural areas (Historian United States Postal Service 2013) and it is the most diverse federal government branch with more than half of its workforce comprised of racial minorities (United States Postal Service no date). Recent research by Blevins (2021) definitively shows that the USPS played an essential role in settlement of the West; we build off that contribution by demonstrating that the

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<sup>5</sup> Even before COVID, most Arizona voters used vote by mail/early voting. In the 2016 general election, 80% of all votes were classified as vote by mail/early voting. *Democratic National Committee v. Reagan*, 329 F. Supp. 3d 824, 839 (D. Ariz. 2018).

<sup>6</sup> The U.S. government uses three different definitions, but all are based on Census Bureau population numbers for census places: those with up to 2,500, those with up to 10,000, and those with up to 50,000. United States Department of Agriculture Economic Research Service, (n.d.). For more on the challenges of assessing rurality in political science, see Nemerever and Rogers (2021). See also Schroedel, Dietrich, and Rogers (forthcoming).

racial and economic discrimination that shaped location decisions in the 19th and early 20<sup>th</sup> centuries continues to have discriminatory effects in the present time, particularly as a source of unequal access to voting.

This research also fits in a broader literature on the long-term implications for Native Americans of federal government decisions made during the military conquest and settler colonial periods of the US West. For example, Alston et al. (2021), Dippel and Frye (2020), and Dippel et al. (2020) discuss how the secure property rights offered to Anglo-European settlers in comparison to the high degree of property rights uncertainty for Native Americans in the same areas have greatly hindered economic success on reservations. Scholars such as Anderson and Parker (2008), Dippel (2014), and others, have argued that institutional development, which has followed directly from discriminatory policies by the federal government, has led to sub-optimal economic and political outcomes for tribal governments in the US West. Feir et al. (2019) has shown the federal policy has greatly hindered migration for Native people, limiting their economic opportunity.

Our contributions are first, to examine the contribution of historical post office location decisions to the current differentials in access to postal services for reservations.<sup>7</sup> We do so by providing a history of the placement of post offices in northeastern Arizona with rich detail from primary and secondary sources. Next, we show these placements matter for voting access in the current times—individuals on reservations vote by mail significantly less, even when controlling for previous levels of turnout and other factors. In comparison to most research on Native American voting rights, we provide more historical detail as well as summary data and data analysis.

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<sup>7</sup> Extant research on Native voting rights (McCool, Olson, and Robinson 2007, McDonald, Pease, and Guest 2007, McDonald 2010, Schroedel and Hart 2015, Schroedel 2020) and the Arizona specific research (Ferguson-Bohnee 2015, Ferguson-Bohnee and Tucker 2020) provide important insights into the different types of barriers confronted by Native voters.

The research is divided into four sections. In the first section, we describe the political economy of the historical origins of deeply entrenched and racially-based structural inequities in the USPS' delivery of mail services to the Navajo Nation. In the second section, we provide data showing the different types of structural inequities in mail service and how those affect access to voting by mail. We detail the locations of post offices on and off-reservation in the three Arizona counties, their hours of operation, and hours of post office box access. In the third section we show that Arizona's other ways of accessing the ballot box cannot compensate for inequities in voting by mail. In the fourth section, we analyze precinct level mail-in voting on and off reservations, controlling for relevant factors such as turnout in the previous election. We see a large negative impact in precincts on reservations in vote by mail rates. The final section concludes and places the case of voting access for Native people in Arizona in broader U.S. context.

### **Post Offices and State Building in the West:**

As is typical in historical political economy approach, we combine detailed description of historical processes along with econometric analysis of historical data. We focus on a part of historical political economy on institutional persistence—showing how patterns of government interactions established in a particular historical period are carried over even though the reasons for their establishment may be long past. Pierson (2004: 8) labels this as the “stickiness of history.” Although there is a growing body of research on state building in the United States, there has been only limited attention given to the USPS compared to other national institutions (Skowronek 1982, Carpenter 2001, Rogowski 2016). This study also draws upon work done by geographers on the “spatiality of racism,” in which geographically-based inequities are unexamined because they have become completely normalized (Pulido 2000). We link these patterns in statistical analysis of the

voting access and voting outcomes for rural individuals on and off reservation in northeastern Arizona.

The expansion of post offices into the West was an important part of the “Great Reconstruction,” the effort of the federal government to regain control of the former Confederate states and defeat Native resistance to Anglo-American settlement in the West (West 2003, West 2009, Hixson 2013, Smith 2016, Blevins 2015, Blevins 2021).<sup>8</sup> Starting in 1864, the USPS employed cartographers to create detailed maps of Western territories (Blevins 2021). Between 1864-1889, there was a more than five-fold increase in the number of Western post offices (Blevins 2021). Post offices were conduits of economic development, allowing ranchers, soldiers, and miners to be connected across great distances (Blevins 2015, Blevins 2021).

In the Arizona Territory, post offices on army bases, such as those at Fort Defiance and Fort Buchanan, were established as part of military campaigns against the Navajo and Apache (Patera and Gallagher 1988).<sup>9</sup> With the end of fighting, there was a sizable expansion in Anglo-American settlement and growth in the numbers of post offices that provided essential linkages between communities, both in the West and across the continent. Many of these post offices were only in existence for short periods of time because the surrounding settlements went bankrupt (Patera and Gallagher 1988).<sup>10</sup> On tribal lands, post offices were established much later and initially served the needs of the small white populations working there.<sup>11</sup> A limited degree of mail service was provided at white-owned trading posts, which had contracts with the USPS (Kelley 1985).

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<sup>8</sup> The US military followed a scorched earth policy in the Indian Wars in the Plains and Southwest (Blakemore 2018).

<sup>9</sup> Although USPS regulations required annual reports from all post offices, the records from Arizona are incomplete. The USPS historian suggested to us Patera and Gallagher as the best source. We also double-checked their information with those provided by the USPS, a data set compiled by Blevins (2021) and Blevins and Helbock (2021). Blevins built off the data set compiled by Helbock, who died in 2011, but he likes to give him credit for the work by including his name.

<sup>10</sup> There are more ghost towns in Arizona than in any other state (Lawrence 2019).

<sup>11</sup> Evidence of the focus on white populations can be seen in the annual reports that postmasters sent to the Postmaster General in Washington DC. In response to the question asking them to describe the “population served,” reservation postmasters often would only list the local white population. Patera and Gallagher (1988) provide many examples of

The development of mail service in Northeast Arizona was also an outgrowth of Mormon settlement in the period after the Mexican-American War of 1846-1848. Between 1847 and 1900, over 500 Mormon farming settlements were established in Arizona, with the Church of Jesus Christ, Latter Day Saints (LDS) covering the costs of land purchases and LDS settler travel to the territory (Abruzzi 1997).<sup>12</sup> The Church distributed land allotments to settlers via a lottery, but all loans had to be repaid (McClintock 1921: 103)

In northeastern Arizona, the earliest Mormon settlement effort in 1873 failed, but Brigham Young sent out another group of 500 three years later. They established four settlements (Sunset, Brigham City, Obed, and St. Joseph) in the lower valley of the Little Colorado River. These communities served as the base for subsequent settlements, including Showlow, Snowflake, Taylor, and Woodruff located along the Silver Creek. They also helped set up Alpine, Eagar, and St. Johns along the upper part of the Little Colorado River (Abruzzi 1997). Much of the terrain was ill-suited to agricultural development, resulting in many settlements failing and being abandoned. Sunset, which was one of the original settlements, was abandoned in 1883. Poor soil was only one of the reasons for high failure rates. The settlements also suffered crop losses due to drought and flooding, insects, hailstorms, high winds, and early frosts—all of which meant that agricultural productivity varied enormously from year to year. Snowflake, St. Johns, Eagar, and Taylor, all still in existence with post offices, had the highest levels of agricultural production and least variability across time (Abruzzi 1997).

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these reports. Some reports, such as the 1901 one filed by the Algert postmaster described their population served as “12 white, 1000 Indians.” Despite the large total population, the Algert post office closed in 1905, which is pretty clear evidence that it was not serving the needs of the Native population (Patera and Gallagher 1988: 56).

<sup>12</sup> The head of the first group, Horton Haight, reported to Brigham Young that the terrain was unsuitable, but Young sent James Brown to give him a second opinion. Brown said that it would be difficult but feasible. Brigham Young then told him that he wanted settlers who would stick it out and instructed him to send, “men with large families and small means so they when we get there they will be too poor to come back and we will have to stay” un-named article. 2013. “Mormon Colonization in Arizona: Answering the Call.” *Pioneer Magazine* 60(1) reprinted October 18, 2020. [Suponline.org/Mormon-colonization-of-arizona-answering-the-call/](http://Suponline.org/Mormon-colonization-of-arizona-answering-the-call/).

When settlements failed, people moved away and post offices were closed. Prior to January 1920, there were at least 30 post offices that had started and then were closed in the three northeastern Arizona counties (Apache, Navajo, and Coconino). There were 65 post offices in operation. Forty-four post offices (68%) were in off-reservation communities. Only fifteen (23%) were located on the Navajo Nation. The rest were on the small reservations allotted to the Apache, Hopi, and Havasupai (Patera and Gallagher 1988). Fifty years later most reservation post offices still were located on trading posts and that legacy has endured to the present period, as has the disparity between the predominantly white communities and those on-reservations.

Table OA1 in the Online Appendix shows all historical post office locations, by date of establishment, date of closure (if applicable), whether that site was on a reservation or not, and whether it is near a railroad line. Nineteen of the post offices were established in close proximity to railroad lines, and those were much less likely to fail compared to those established in agricultural and mining communities without railroad service. The crucial takeaway is that the vast majority of post offices available today were established during the settler period, when location decisions focused on first on military supply issues and, later, on meeting economic needs of white settlers.

### **Post Offices on Trading Posts:**

Post offices were a crucial piece in the economic development of the West, including northeast Arizona. Along with serving military purposes, the network of post offices facilitated the development of economic linkages between farming, mining, and ranching communities, and allowed them to market products in other parts of the country. Trading posts were an important part of that story. Often post offices were started within months of the establishment of settlements, and lasted as long as the settlement was viable. Post offices were part of a network of trading posts that provided essential goods to settlers and later also to Navajo.

The formal trading post system started in 1870 and can be traced to two sources: 1) The eastern trading posts grew out of the Army rationing system where Army settlers would provide extra rations to Navajo who brought in surplus wool. Some Army members quit the military and turned to trading with Navajos as a full-time occupation; 2) In the western part of the reservation, the trading post system grew out of the trade with Mormon settlers. Traders stocked staples, such as flour, sugar, and coffee, which they traded with the Navajo for wool, woven rugs, blankets, pottery, and jewelry. The building of the transcontinental railroad solidified the position of trading posts on the reservation. The railroad ensured an ongoing supply of manufactured products that could be purchased at the posts. At the same time, the railroads opened up Eastern markets for the goods produced by the Navajo (Winslow Historical Society, no date). The trading post system, which provided Navajo with an entry point into the dominant culture and economy, gave enormous power to the traders (Southwest Indian Development 1969).

In 1876, there were 5 trading posts on and around the reservation. In 1890, there were 40—much of that due to the railroad that was completed in 1884. Navajo weaving generated high profits for traders prior to World War I (Federal Trade Commission 1973). World War I, however, disrupted the market for Navajo weaving and the basis of trade shifted to lamb and wool production, which was seasonal and resulted in Navajo having to rely on a 6-month credit cycle. The trader would extend credit to the Navajo, who would use it to purchase essentials and then discharge the loan when he subsequently sold the lambs or wool to the trader. After 1940, the country's farming and stock raising shifted, with small producers such as the Navajo unable to compete. This led to a shift in the trading post system to a credit system based on short term credit (15-30 days) and reliant on government checks (monthly social security, welfare, and retirement) (Federal Trade Commission 1973).

While some trading posts are on private land that predates the 1860 creation of the reservation, the vast majority are on leased Navajo land. Legal title is vested with the US government that acts on behalf of the tribe. Leases can be for as long as 25 years and termination is up to the Secretary of the Interior/BIA (Federal Trade Commission 1973: 11). An August 15, 1876 Act gave the Commissioner of Indian Affairs the sole authority to appoint and regulate traders, who were white settlers and later their descendants (Federal Trade Commission 1973).

In the late 1960s, Southwest Indian Development, an activist group with the mission to document economic treatment of Native people, did an in-depth study of trading posts on the Navajo Nation. While noting that some traders used their position as intermediaries to the Anglo world in a way that benefitted all parties, many used it in an exploitative manner. Of particular concern were traders, who used their control over mail to exercise power over Navajo, who were waiting for government and employer checks. Instead of turning checks over to recipients, as required by law, traders would require the person to take scrip, which could only be spent at the trading post, where prices were much higher than in off-reservation stores (Southwest Indian Development 1969).<sup>13</sup>

The Federal Trade Commission report also noted that the trading posts were a frequent site of exploitation of the Navajo because the trading posts had a geographic monopoly (Federal Trade Commission 1973) and controlled the Navajo's access to mail, and thus to government checks. The FTC report describes:

Of immense importance is the trader's role as postmaster. In those areas where population is scattered, the trading post may physically be the only logical, central place to offer postal services. In communities, where separate postal facilities have been established, the trader still acts as mail depository for many of his customers. Abuses relating to this aspect of trading post operation are among the most offensive discovered by this investigation... (p. 12).

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<sup>13</sup> A particularly egregious example of a trader using control over mail service was reported in a 1970 story in the local newspaper. A Navajo woman, who refused to turn over her railroad retirement check to him and take scrip, was threatened by a trader holding a knife (Anderson 1970).

The FTC documented abuses in detail in its 1973 report, detailing how trading posts in some cases limited access of the Navajo to government checks, and forced them into debt and dependency on the trader, as a provider of subsistence goods, but also access to employment and other off-reservation opportunities in Anglo communities.

### **Post Offices Versus Postal Providers:**

The pattern of mail service, established in the post-bellum era, is still largely in place, with most of the current USPS post offices dating back to the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. See Table 2A for a listing of the postal locations established prior to January 1920. The off-reservation portions of Apache, Navajo, and Coconino Counties still have far more post offices than do the reservation portions. In the three-county area there are 78 locations where residents can post and receive mail.<sup>14</sup> Of these, 52 are USPS staffed post offices and 26 are postal provider sites, staffed by non-USPS contractors and are adjuncts to another business—typically a mini-mart or a gas station. Postal providers offer far fewer services and much shorter hours than are the norm at post offices. Only 42.3% of the postal locations (both post offices and postal providers) are located on tribal lands of the Navajo, Apache, Hopi, and Havasupai. The off-reservation communities have 61.5% of the full-service post offices, so they have access to more services and hours when they can conduct business.

Since our interest is comparing the mail services on the Navajo Nation to those provided to off-reservation communities, we are excluding from our discussion the ten post offices located on

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<sup>14</sup> While doing research on postal access during the pandemic, we regularly discovered discrepancies between the hours listed on USPS websites and the actual hours of operation. Some places arbitrarily cut hours of operation and others failed to open for extended periods. Locations in which a single person handled all of the postal business, which is very common in the most rural postal locations, were unable to operate if that person got sick or had to care for sick relatives. For these reasons, we have chosen to note that the numbers on post offices and postal provider sites presented here are what we identified as in operation in early March 2022. These figures are slightly different from what we previously found and are due to differences related to COVID.

tribal lands controlled by the Apache, Hopi, and Havasupai Nations.<sup>15</sup> This leaves us with 42 USPS post offices and 26 postal provider sites. On the Navajo Nation, there is an average of one location (post office or postal provider) for every 680.8 square miles.

What we found is that the off-reservation communities generally have access to full service post offices. Of the 32 USPS post offices in off-reservation communities; nearly all (89%) of these were established prior to 1920, which meant they were part of the previously described USPS expansion into the West.<sup>16</sup> The historical location of the USPS sites during Western expansion thus have a very strong influence on mail access today. Nearly all of the off-reservation postal provider sites established after 1920 were aimed at providing limited mail services to tourists visiting national parks and other sights (Schroedel et. al. 2022).

In contrast, there are only ten USPS post offices on the Arizona portion of the Navajo Nation, but there are thirteen postal provider sites. Seven of the post offices were established prior to 1920,<sup>17</sup> but only two of the reservation postal provider sites (Leupp and Lukachukai) are from the early settlement period and none are directed at meeting the needs of tourists (Schroedel et. al. 2022). Instead, the postal contractors are providing basic mail service, often the only mail services within a large geographic area to Navajo residents.

A stark example of the failure to provide mail service on the Navajo Nation comes from Apache County. There is an 870.7 square mile area in northeastern part of the county that includes the communities of Dennehotso, Mexican Water, and Rock Point and does not have a single post

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<sup>15</sup> The post offices on the Apache, Hopi, and Havasupai Nations are included in our vote by mail analysis in Tables 4, 6, and 7. These are listed in Online Appendix Table OA2.

<sup>16</sup> The only off-reservation post offices established after 1920 were Overgaard (1938) and Page (1957) and second post offices in Flagstaff and Sedona. Initially Ft. Defiance was part of the Navajo Nation, but it subsequently was moved outside of the boundaries of the tribe.

<sup>17</sup> On the Navajo Nation, the pre-1920 post offices are, Ganado, Tuba City, St. Michaels, Chinle, Kayenta, Sanders, and Cameron. The later three are Window Rock, Pinon, and Teec Nos Pos.

office. Residents wanting to post letters and receive mail must travel to the postal provider offices in Dennehotso and Rock Point, neither of which is open for more than 20 hours per week.

### **The Political Economy of Mail Service, Past and Present:**

The previous sections provide support for our contention that establishment of post offices in northeast Arizona were in nearly all cases driven by two factors: 1) providing resources to the military bases put in place to “pacify” Native populations—these locations were chosen for military advantage; 2) support and trade for settlers, the majority of whom were white settlers, typically LDS, who requested post office locations to support their agricultural settlements. Additionally, as railroads moved into Northeast Arizona, postal locations were established along these routes to facilitate trade and provide services to settlers. Crucially, nearly all of the modern post offices in Northeast Arizona were established prior to 1920. These two purposes—military conquest and commerce for (largely white) settlers—clearly have very little to do with providing equal access to voting.

Within political science, there is a large body of research on factors that affect people’s decision on whether to vote. Most are refinements in the basic Downsian model in which the reward that one gets from voting is a function of the perceived benefits minus the cost (Downs 1957). Proponents of voting by mail argue that it reduces the cost of voting to near zero. This is not true for Navajo voters, who have non-standard mail service. At every decision point, they must make choices that involve incurring costs, but do so without needed information. Navajo voters do not know when their ballots are likely to arrive at the postal location where they have post office boxes or pick up general delivery mail.<sup>18</sup> Typically this involves driving for 45 minutes to two hours for

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<sup>18</sup> General delivery mail is only kept for 30 days, but renting a post office box involves additional costs. For example, the yearly cost for a post office box, at the post office in Leupp on the Navajo Nation, is \$136 along with a \$6 key fee.

individuals on reservations in Arizona (Ansolabehere 2020). At a minimum, there is the cost of gasoline. For the many Navajo without a running vehicle, the cost also includes paying someone for transportation. It is not surprising that anyone would forgo voting under those circumstances, much less those individuals with highly limited budgets.

The relative costs are quite high for Navajo, whose median household income is roughly half the overall median for households in Arizona (Combrink n.d.), but the disparity is even greater when one controls for household size. Forty percent of Navajo families fall below the Census Bureau's poverty line,<sup>19</sup> which means that decisions to spend money are not made lightly. This raises a number of questions about the vote by mail process, especially when mail service is known to be problematic in the area (Schreodel et al. 2022). What if the person comes to the postal location and the ballot has not arrived? Can the voter afford to return? If so, when should the voter return? If the voter waits for a longer period of time, the chances are greater that the ballot will have arrived, but if she waits too long, there may not be enough time for the ballot to be returned via post prior to the Arizona ballot receipt deadline on Election Day.<sup>20</sup> Once the person has gotten the ballot, how much time can she take before mailing it back, which entails another trip to a postal location and the additional costs associated with it?<sup>21</sup>

Uncertainty is a huge factor here. In the *Yazzie et. al. v. Hobbs* (2020) case filed shortly before the 2020 election, plaintiffs representing the Navajo Nation presented evidence showing that people living on the reservation did not know how long it would take for mail to arrive at the county recorder offices. They showed that letters mailed from urban Scottsdale arrived at the Maricopa County recorder office in less than one day (17 hours and 48 minutes), while those mailed from off-

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<sup>19</sup> On the Arizona portion of the Navajo Nation, 21.8% of households meet the Census Bureau's classification for "severely poor," and another 19.3% are classified as "poor" (Combrink n.d.: 35).

<sup>20</sup> Arizona requires that ballots be received by election day to be counted. Other states, such as Utah, which includes a part of the Navajo nation, allow ballots to be mailed by election day to be counted.

<sup>21</sup> This is why many Navajo, prior to the *Brnovich* ruling, had supported ballot collection efforts to reduce the high costs of voting, especially for poor and elderly people.

reservation locations in Coconino, Apache, and Navajo Counties took slightly longer to reach county recorder offices, but all arrived in less than two days. The USPS standard for first class mail is 1-3 days. But letters posted from locations on the Navajo Nation took much longer, as much six to ten days to reach county recorder offices (Schroedel and Healy 2020a: 16-19; Schroedel and Healy 2020b: 7-13).

A much larger test of mail delivery times, with letters posted from 27 locations and controlling for rurality as a potential explanation for the slowness of mail from the Navajo Nation, found that letters posted from rural off-reservation locations arrived nearly as fast as those from urban Arizona post offices, while those posted from Navajo Nation locations took up to four times longer to arrive and some never did reach their intended recipient (county recorder offices) (Schroedel, et. al. 2022). This means Navajo voters must factor in a great deal of uncertainty as to the timing of every step in the voting by mail process. They do not know when ballots might arrive at postal locations and then how much time they should factor in when sending ballots back via post.

**Hours of Access:**

Not only must voters with non-standard mail service incur the costs of travel to post offices and postal provider sites, they must schedule those trips to coincide with the hours of access.<sup>22</sup> The degree of access available to those with post office boxes and those without post office boxes is different. Because voters without post office boxes must get their ballots via general delivery, their visits must be during retail hours of operation, which typically are more limited than the hours of access to post office boxes. In general, both the hours of access to retail services and those to post office boxes are much less on the Navajo Nation than in off-reservation communities.

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<sup>22</sup> The state's ban on ballot collection, as approved by the Supreme Court in *Brnovich*, makes it very difficult for another party to pick up or mail ballots for a voter.

In what follows, we compare the hours of access to a cross-section of post offices and postal provider offices in Apache, Coconino and Navajo Counties.<sup>23</sup> As close as was possible, we tried to match the population sizes and population density<sup>24</sup> of the reservation and non-reservation sites. This allowed us to examine what, if any effect, rurality and population size affected the degree of mail service availability.<sup>25</sup>

**Table 1: Weekly Hours of Access to Mail Services**

<b>Navajo Nation Locations</b>	<b>Retail Hours</b>	<b>PO Box Hours</b>	<b>Population</b>	<b>Population Density</b>
Tonalea*	72	72	549	55.3
Rock Point*	20	20	642	45.3
Shonto*	17.5	17.5	591	129.6
Teec Nos Pos	42.75	42.75	730	51.1
Dennehotso*	15	15	746	75
Many Farms*	35	35	1348	165.4
Chinle	27.5	53.5	4518	281.8
Tuba City	40	98	8611	960
<b>Off-Reservation Locations</b>				
Nutrioso	10	168	26	83.9
Concho	38.75	168	38	84.4
Pinedale	22	168	487	50.3
Marble Canyon*	13.5	168	767†	
Fredonia	35	168	1314	179.5
Joseph City	32.5	78	1366	187.3
Springerville	41.25	168	1433	242.1
Grand Canyon	35	119	2004	149.6
Overgaard	37.5	91	2542†	215.5†
Williams	35	168	3023	69.6
St. Johns	37.5	168	3480	134.3
Taylor	40	168	4112	125.9
Holbrook	32	78	5,063	291.4
Sedona	38.75	168	2842^	454.7
Flagstaff	45	168	65870	1031.3

Notes: \*Postal provider sites are marked by a star (\*). † indicates estimated figures. We included a ^ after the population figure for Sedona. Most of Sedona is in Maricopa County, so we only included the population for the non-Maricopa County portion of the town.

<sup>23</sup> Although the USPS website provides hours of operation and post office box access hours, we previously discovered that actual hours for some postal provider offices on the Navajo Nation were different from what was listed. We verified all hours via telephone calls in October 2020 during the time when people would be voting by mail.

<sup>24</sup> Population density is the average number of people per square mile.

<sup>25</sup> For population and population density figures, see United States Census Bureau (2012): 10-19.

As can be seen in Table 1, all of the reservation locations fit within one of the three US government definitions of rurality (up to 2500, up to 10,000, and up to 50,000 inhabitants) and only Tuba City, which is the largest Navajo Nation community, falls outside of the strictest definition. For comparison purposes, we sought out a mix of rural off-reservation postal locations to examine, but with an emphasis on finding heavily rural ones that would allow us to assess the assertion that rurality, as opposed to race, could explain disparities in mail service and difficulties in voting by mail. Of the fifteen off-reservation postal locations, nearly half fall within the strictest definition of rurality and only Flagstaff is not rural, according to the criteria established by the federal government. Yet all the off-reservation communities, aside from Marble Canyon, are served by the USPS as opposed to contracted postal providers. This is markedly different from the pattern on the Navajo Nation, where some postal providers serve larger population bases than off-reservation communities with post offices.

The hours of retail service and post office box access vary dramatically across the three counties. Even though Flagstaff has residential mail delivery, it provides the highest degree of post office access, probably because it has the largest population. Less explicable is why nearly all off-reservation sites provide 24 hour per day/seven days per week access to post office boxes, while none on the Navajo Nation does so.<sup>26</sup> Among off-reservation communities, Joseph City (population 1366) has the least hours of post office box access (78 per week), but that is greater than all Navajo Nation communities, aside from Tuba City.<sup>27</sup> The fewest hours of access is in Dennehotso (15 hours

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<sup>26</sup> We also checked the hours of post office box access for all post offices and postal provider offices on the Navajo Nation. Not a single one provided 24 hour a day/seven days a week access to post office boxes. Tuba City with 98 hours of weekly access is the highest.

<sup>27</sup> While it is likely that Tuba City's greater access to mail service is due to its position as the largest town on the Navajo Nation, it is also possible that it is due to its origin as a non-Navajo settlement. Tuba City was started as an off-reservation Mormon settlement, initially aimed at converting Navajo and Hopi. The Mormon established a woolen factory employing Native labor, but the Navajo were opposed to that type of work and refused to provide the owners with wool, which led to the enterprise failing. In 1903 the Mormons left Tuba City and the Navajo destroyed the factory (McClintock 1921: 99-100).

per week) even though it is the furthest from another postal location. The average number of hours of post office box access for the off-reservation postal locations is 3.34 times larger than what is available for people living on the Navajo Nation.

Table 2 summarizes the differences in access to retail service and post office boxes weighted by population and population density. People in the off-reservation communities receive far superior service, as measured by retail hours and hours of access to post office boxes, compared to people living on the Navajo Nation. Depending upon the measure, the degree of greater service ranges from two to ten times greater. Keep in mind, this only applies to what is available at the post offices and postal providers, it does not factor in that people on the reservation have to incur much greater costs (time and money) to travel to the postal locations.

**Table 2: Weighted Access Differences On-and Off-Reservation**

	<b>On-Res</b>	<b>Off-Res</b>	<b>Better Access Off-Res</b>
Pop weighted retail hours per capita	150	494	3.3x
Pop weighted PO box hours per capita	34	328	9.6x
Pop density weighted retail hours per capita	27	267	9.9x
Pop density weighted PO Box hours per capita	1041	2214	2.1x

**A Comparison of Voting Access:**

At the heart of our study is a concern with equal voting access for individuals living on the reservation. We have focused in particular on access to postal services due to the increased use of vote by mail to expand participation and reduce costs to voters. In the previous sections, we showed that access to postal services is not equal for those living on the Navajo Nation compared to those living off-reservation. This was true with respect to the location of post offices, the hours of post office services, hours of access to drop boxes, and finally in the quality of first-class mail delivery. In this section we provide a birds-eye view of voting access on the Navajo Nation (as well as Hopi,

Fort Apache, Hualapai, Havasupai, Zuni, Kaibab reservation lands<sup>28</sup>) and off reservation for the three counties in our study: Coconino, Apache, and Navajo. We draw from an extensive data collection effort to quantify the range of election services available to voters, both their access to postal services and their access to the polls. Our goal is to further elucidate differences in mail services, as well as to see whether the inferior access to voting by mail is being ameliorated by greater access to other forms of voting.

In Table 3, we show access to post offices and the polls by county, and by on-reservation or off-reservation precincts. We focus on indicators highlighting the difficulty or ease of voting created by physical distance, whether by mail (post offices per square mile, percentage of precincts with post offices, drop boxes per square mile) or in person (precinct size, polling locations per square mile). Across all counties and all categories, the general trend is that voters on reservations face higher barriers to vote.<sup>29</sup>

**Table 3: Access to Mail Services and Polling Places, by Location On or Off Reservation**

	Coconino County			Navajo County		Apache County	
	On-Res	Off-Res	Off-Res (Excluding Flagstaff)	On-Res	Off-Res	On-Res	Off-Res
<b>Post Offices per 1000 Sq Mile</b>	0.8	1.2	1.1	0.7	1.8	1.1	2.1
<b>Avg. Precinct Size (Sq Mi)</b>	466	204	384	3033	885	240	275
<b>% of Precincts with Post Offices</b>	38%	69%	41%	67%	75%	27%	73%
<b>Drop Boxes per 1000 Sq Mi</b>	1.1	1.2	1.1	0.8	0.8	0.8	1.6
<b>Polling Place per 1000 Sq Mi</b>	2.1	1.9	1.6	1.7	2.7	1.1	2.6

*Notes:* Data from 2020 precincts. Given the small sizes of Flagstaff precincts and distances to the post office, we consider all Flagstaff precincts to have post offices. All underlying data shown in Online Appendix. On reservation refers to all reservation land (Navajo, Hopi, Fort Apache, Hualapai, Havasupai, Zuni, Kaibab).

<sup>28</sup> The large majority of reservation land in Apache, Coconino, and Navajo counties is either Navajo land or uninhabited federal government land.

<sup>29</sup> Flagstaff is the largest urban area in our study, and it has considerably higher population density and access to services than any other area across the three counties. For Coconino county, we show voting access off reservation in two ways—including Flagstaff and excluding Flagstaff.

With regard to access to mail voting, we show that the average post offices per square mile value is lower on reservation than it is off reservation. Considerably fewer precincts located on reservations have access to post offices. In Coconino County, 38% of on reservation precincts include post offices, while 69% of off reservation precincts have post office access. Even when urban Flagstaff is dropped from consideration, the off-reservation precincts are slightly more likely to have post offices (41% versus 38%). The same trend holds in Navajo County (67% on reservation vs. 75% off reservation), but the difference is particularly striking in Apache County, in which 27% of precincts on reservations have post offices while 73% of precincts off-reservation have this access. Moreover, one needs to keep in mind that the average geographic size of precincts on reservations is far greater than the off-reservation precincts in the three counties.

We also collected information from elections officials in all three counties about voter drop box locations and polling locations for the 2020 election. See Tables OA2-OA5 in the Online Appendix for the information that underlies these tables. We again find unequal access to ballot drop box location and polling places per 1000 square miles. In Apache County, voters off reservation have double the drop boxes available in comparison to on reservation precincts in that county. In Navajo County we see both on and off reservation voters have relatively sparse access to drop boxes per 1000 square miles (less than 1, both on and off reservation).

Polling places also are sparser on reservations in Navajo and Apache Counties and precincts tend to be geographically larger, especially in Navajo County. In Coconino County, access to polling places and drop boxes is relatively even on a per square miles basis. In Navajo County, polling places are much farther apart on-reservations (1.1 per 1000 square miles) compared to 2.6 per 1000 square miles off reservation. In Apache County, voting locations are also different, with 1.7 locations on reservation, compared to 2.7 per 1000 square miles off-reservation. Importantly, however, mail access is highly unequal in Apache County, with only 27% of on-reservation

precincts having post offices versus 73% of precincts off reservation, so shifts away from in person voting towards by mail voting will likely reduce voting access for Apache County residents in particular.

**Impact of Mail Service on Voting by Mail:**

These inequities have impacts on voting outcomes. We focus on voting outcomes related to mail in voting, given our study is on the unequal access to post offices for individuals on reservations. We begin our analysis by comparing vote by mail in the 2020 general election in the six precincts on the Navajo Nation that have the least and greatest access to mail service. As noted earlier, three Apache County precincts (#013 Dennehotso, #041 Mexican Water, and #054 Rock Point) do not have a single USPS post office in their total 870.7 square miles of territory. The three precincts with the greatest access (#019 Fort Defiance, #029 Kinlichee, and #088 Window Rock) have three full service post offices in 363.2 square miles and another post office is only a short distance outside of the #29 Kinlichee precinct boundary in Ganado.

As expected, Table 4 shows turnout levels were lower in the precincts without access to a post office than in the precincts that had better mail service. Also, there were stark differences in their use of the early voting/vote by mail option.<sup>30</sup> There were 2920 register voters in the three low mail access precincts and only 1785 (61.3%) voted in the general election. The high mail access precincts had 6211 registered voters and 4391 (70.7%) voted. While still below the rate (79.9%) for Arizona as a whole, the high access precincts clearly did much better than the turnout in the low access precincts. The biggest difference, however, is in the method of voting. In the low mail access precincts, only 51.93% of the ballots were early/vote by mail as opposed to 73.26% in the high mail

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<sup>30</sup> [Azsos.gov/sites/default/files/2020.11.18-Apache-General\\_Election\\_Canvass.pdf](https://www.azsos.gov/sites/default/files/2020.11.18-Apache-General_Election_Canvass.pdf).

access precincts. The turnout figures for each precinct and mode of voting are presented in Table 5.<sup>31</sup>

**Table 4: Voting in the 2020 Elections in Precincts with High and Low Mail Access**

<b>Low Mail Precincts</b>	<b>Voter Turnout</b>	<b>Election Day Voting</b>	<b>Vote by Mail*</b>
013 Dennehotso	670 (59.03%)	360 (53.73%)	310 (46.27%)
041 Mexican Water	165 (56.5%)	58 (35.15%)	107 (64.85%)
054 Rock Point	950 (63.63%)	440 (46.32%)	510 (53.68%)
<b>High Mail Precincts</b>	<b>Voter Turnout</b>	<b>Election Day Voting</b>	<b>Vote by Mail*</b>
019 Fort Defiance	2420 (73.27%)	527 (21.78%)	1893 (78.22%)
029 Kinlichee	671 (65.21%)	387 (57.68%)	284 (42.32%)
088 Window Rock	1300 (69.19%)	260 (20%)	1040 (80%)

*Notes:* Election day voting refers to in person voting. \*Vote by mail includes a small percentage of early, in person voting.

While the data from the six precincts strongly suggest there is a relationship between the ease of mail access and voting, the sample is too small for us to generalize, and one of the high mail access precincts (Kinlichee) does not fit expectations. Therefore, it is important to delve more deeply into the turnout and mode of voting data.

In Table 5, we show simple summary statistics of mail in voting and voter turnout in the 2020 and 2016 presidential elections. We show 2016 in addition to 2020 because of the politicization of vote by mail in the 2020 election that depressed mail in voter turnout amongst Republicans during that contest. Moreover, the COVID 19 pandemic dramatically increased mail in voting in 2020, so we include 2016 as a “normal” or baseline election to see differences in mail in voting access.

The differences seen in Table 5 are stark. Rural voters off reservation vote at much higher rates by mail, and overall, than rural voters on reservations. We can see that rural voters off reservation in fact vote at higher rates than urban voters, as is apparent when we take out the urban voters in the Flagstaff precincts. Mail in voting rates were higher by 24% in 2020 and 36% in 2016 in rural, off reservation districts. Recall that in 2020 Republican voters shifted away from mail in

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<sup>31</sup> Since we are interested in the mode of voting, the provisional ballot figures are not treated separately, but are included in the Election Day precinct voting totals.

voting in large numbers due to the politicization of mail in voting by the Republican Party and President Trump, and Democratic voters increased mail in voting, so these differences are extremely stark given that reservations tend to be Democratic strongholds and the off reservation rural areas are heavily Republican.

**Table 5: Descriptive Statistics, By Mail Voting and Voter Turnout (all precincts)**

	<b>On Reservation</b>	<b>Off Reservation</b>	<b>Off Reservation*</b>
<b>By Mail and Early Voting Share, 2020</b>	64.3%	88.6%	87.1%
<b>By Mail and Early Voting Share, 2016</b>	34.6%	70.5%	69.5%
<b>Turnout, 2020</b>	69.2%	85.6%	87.8%
<b>Turnout, 2016</b>	54.7%	78.2%	79.1%

*Notes:* \*Flagstaff precincts excluded

We should also note the serious differences in overall over turnout on and off reservation shown in Table 5. In 2020 off-reservation rural (non-Flagstaff) precincts had 18.6% higher voter turnout and in 2016 the turnout difference was 24.4% in favor of rural, off reservation precincts. This is a function of unequal access to polls and post offices, as well as (related) stark differences in socioeconomic status. We show in Online Appendix Table OA6 that whether a precinct is on or off reservation is a strong predictor of voter turnout in regression models of the precincts in the three counties.

In Table 6, we conduct a regression analysis of Mail in Voting Rates for the precincts in the three counties. Our dependent variable is the share of voting that is mail in or early voting because Arizona does not distinguish between these two forms of voting. It is important to note, however, that nearly all of these mail in and early votes are mail in votes, given the PEVL policy which sends mail ballots to most voters. It is also important to note that this variable does not capture overall levels of voting, which are known to be significantly lower for Native Americans given their socioeconomic status and historic mistrust for US government institutions (Peterson 1997, Huyser, Sanchez, and Vargas 2017). It is the share of voting that is conducted by mail, which should be

higher for Democratic constituencies in 2020 and for those individuals for whom a voting precinct is far away, both of which were the case for on-reservation voters in 2020.

In addition to seeing whether a precinct being on reservation, we control for Democratic Vote Share, given that Republicans voted by mail less and Democrats more, in 2020. We control for access to polls, both on a per capita basis and per square mile given the rurality of these precincts. We also control for whether the precinct was relatively urban, using a dummy variable for the precincts in Flagstaff. We include levels of voter turnout in 2016, to control for general factors that affect voter turnout in these precincts. Similarly, we control for county fixed effects, in case counties have different access or different policies that are not well captured by other variables.

**Table 6: Mail/Early Voting in Coconino, Apache, and Navajo Counties, 2020**

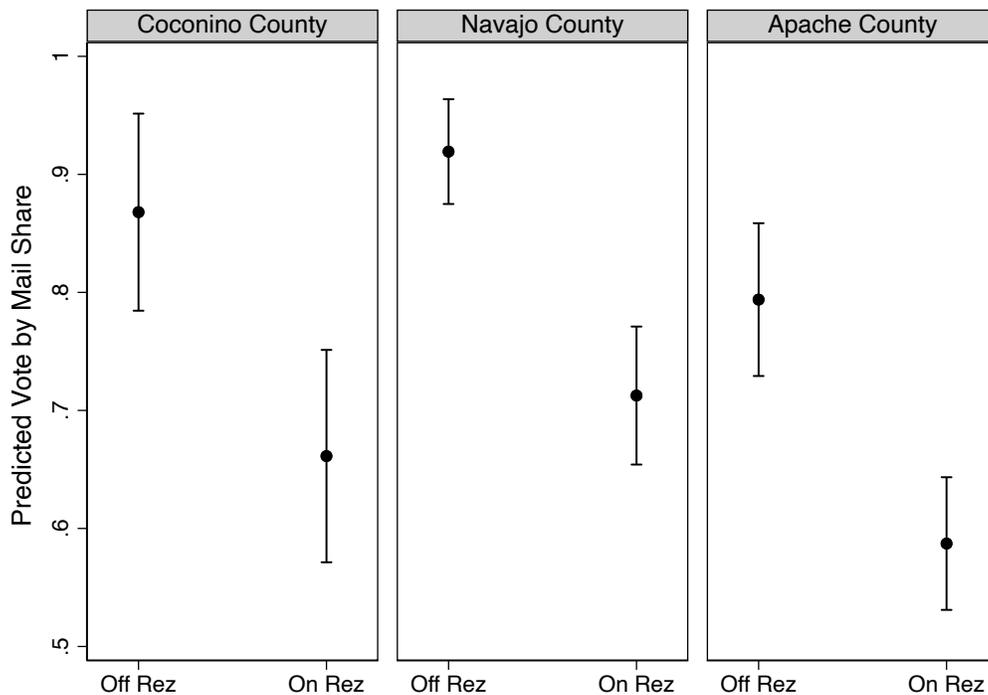
	(1)	(2)	(3)
	Mail & Early Voting	Mail & Early Voting	Mail & Early Voting
On Reservation Precinct	-0.194*** (0.030)	-0.207*** (0.031)	-0.138*** (0.050)
Post Office per Sq Mi		-4.048 (3.926)	-4.454 (3.901)
Polls per Sq Mi		4.023 (3.926)	4.440 (3.902)
Urban		0.013 (0.039)	-0.000 (0.039)
Voter Turnout, 2016			0.003* (0.002)
Navajo County	0.038 (0.044)	0.051 (0.047)	0.048 (0.047)
Apache County	-0.071 (0.047)	-0.074 (0.047)	-0.077* (0.046)
Observations	129	129	129
R-squared	0.434	0.452	0.466
Controls	No	Yes	Yes
County FE	Yes	Yes	Yes
Lagged Turnout	No	No	Yes

Notes: Standard errors in parentheses. Coconino County is the comparison county. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

What is apparent from Table 6 is that whether a precinct is on reservation is a very strong predictor of low vote by mail rates, even when controlling for other factors. Across all models, and

strong specifications, we see a large effect of on-reservation status on vote by mail share. Table 6 shows the difference between on-reservation precincts and off-reservations precincts overall with estimates ranging from 14-21% lower vote by mail rates depending on the model. In fact, in a model without any controls or county fixed effects, on-reservation status explains nearly 40% of the variance in by-mail voting. We can see clear differences in mail in voting that, we argue, directly flow from historical processes that resulted in unequal access to mail and distrust of mail in voting for on reservation communities.

**Figure 1: Predicted Early Voting Share, On and Off Reservations**



*Notes:* Estimates based on Table 6, Model 2.

Figure 1 plots the estimated impact of a precinct being on the reservation on vote by mail rates.

Being on a reservation negatively impacts mail and early voting in all three counties to a significant

degree. In Navajo County, for example, the off-reservation mail in voting rates are around 92%. In on reservation precincts, the mail and early voting rate is 71%, over 20% lower. The results are similar in Coconino and Apache Counties.

### **Concluding Thoughts:**

Voting by mail, which for most people find to be a convenient way to vote, increased dramatically during the 2020 election. We have shown that for Navajo Nation voters, with non-standard mail service, voting by mail in 2002 was far from easy. There are deeply rooted structural inequities in mail service, which have their roots in the role that the USPS played in the military conquest of the territory. The expansion in mail service in the post-bellum era made it possible for Anglo-American mining, ranching, and agricultural communities to forge economic links. In contrast, the network of postal services on the Navajo Nation were created to serve the needs of the US military and Anglo-American trading post operators. Even though the roots of the disparity lie in the late 19<sup>th</sup> century, the pattern remains largely unchanged.

We considered that rurality alone might explain differences in mail access. Setting aside the fact that accommodations should be in place for rural voters to access the ballot on equal terms to urban voters, we tested the rurality explanation by comparing mail access on the Navajo Nation with that provided by the most rural off-reservation locations. By every measure the off-reservation rural areas had far more access and we show in regression analysis that being on reservation was a very strong predictor of vote by mail, even controlling for rurality and turnout in previous elections. Not only do voters on the Navajo Nation have less access to mail service when compared to people living off-reservation, they also must factor in uncertainty related to their mail at every stage. Given the slowness of mail service, they do not know when to arrange travel to collect ballots, and even more importantly, the timing of mailing those ballots back. Arizona has a strict ballot receipt deadline, which means that ballots arriving after Election Day are not counted. What makes the

uncertainty even more troubling is that most Navajo have very limited resources, so they must carefully weigh the financial costs of arranging extra trips to postal locations.

We also examined whether election officials have addressed the barriers to voting by mail on the Navajo Nation by increasing the access to Election Day polling locations and drop box locations on the reservation. Instead, what we found is that these other ways of voting also were generally less accessible on the Navajo Nation when compared to off-reservation areas, even when the geographic size of precincts is considered.

While the specifics of the Arizona case are examined here, the issues of Native American voting rights and mail access are not limited to Arizona, but extend to much of the US West. For example, in the 2016 election cycle, two tribes in Nevada won an emergency injunction in *Sanchez v. Cegavske* to place voting sites on their reservations due to rurality and sociodemographic hardship placing an undue burden on voters required to travel very long distances to the polls. Native voters on South Dakota reservations report high barriers to voting and vote by mail, including travel distance, poverty, and racial discrimination.<sup>32</sup> In the 2018 Midterm elections, voters in North Dakota had to quickly create residential street addresses for reservations in order for voters to have access to mail-in ballots.<sup>33</sup> Across much of the West and other rural areas, examination of postal service and vote by mail will likely reveal similar discrepancies for marginalized groups.

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<sup>32</sup> <https://publicintegrity.org/politics/elections/us-polling-places/in-south-dakota-native-americans-face-numerous-obstacles-to-voting/>

<sup>33</sup> <https://www.pbs.org/wgbh/americanexperience/features/vote-mail-depress-native-american-turnout-north-dakota/>

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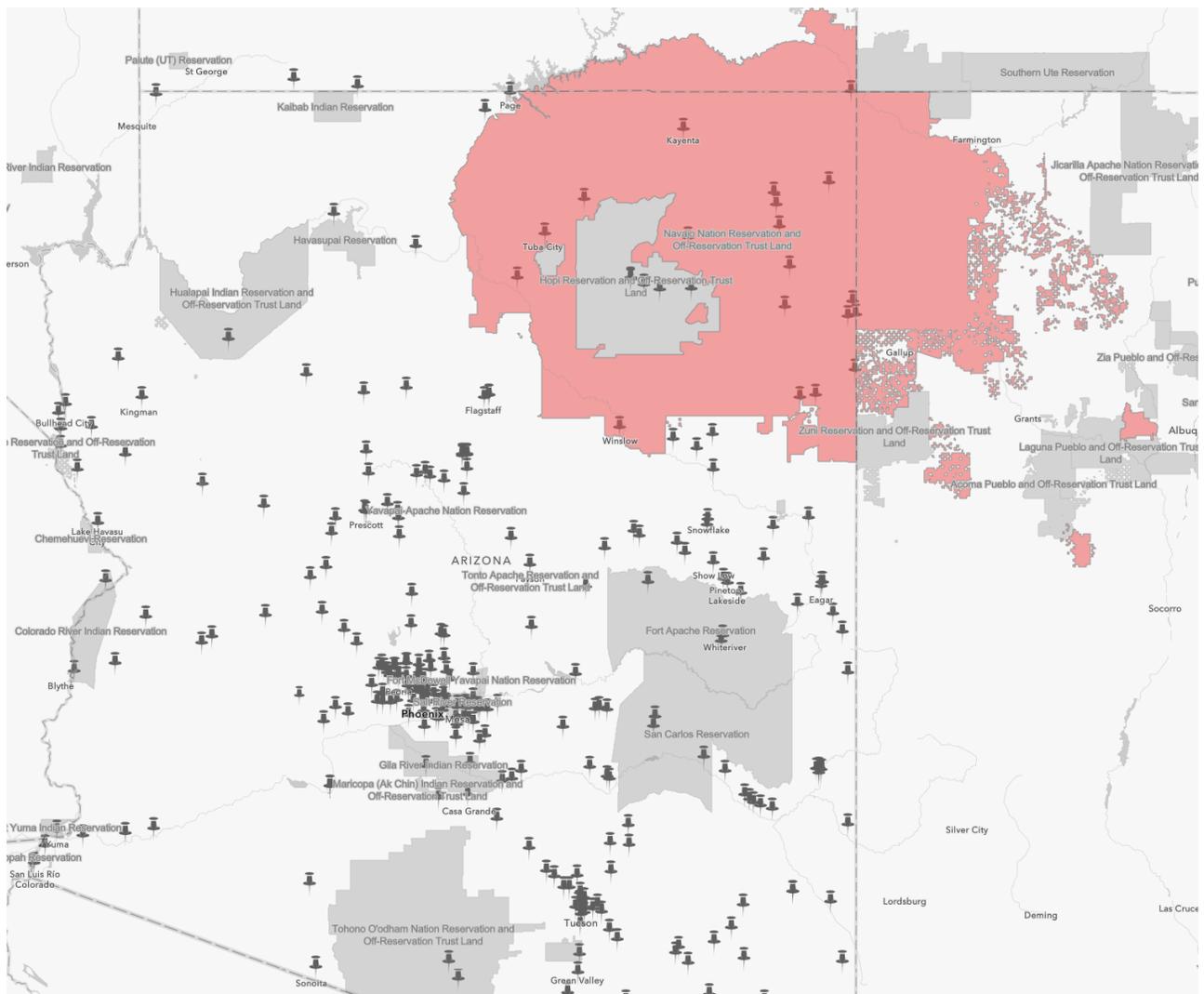
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## Appendix

**Figure 1A: Map of Arizona with Post Office Locations**



*Notes:* Postal locations indicated with pins. The Navajo Nation is shown in red, along with other reservations in Navajo, Apache, and Coconino counties, such as the Havasupi Reservation, Hopi Reservation, Apache Reservation, and White Mountain Apache.

**Table 1A: Sociodemographic Characteristics of Apache, Coconino and Navajo Counties**

	Arizona	Apache County	Coconino County	Navajo County
<b>% Native American</b>	4.6%	74.4%	25.9%	45.9%
<b>% White</b>	78.3%	21.0%	63.9%	46.2%
<b>Median Income</b>	\$62,055	\$30,480	\$58,085	\$38,897
<b>Poverty Rate</b>	13.5%	34.6%	15.8%	25.6%
<b>Employment Rate</b>	56.8%	34.1%	57.7%	41.1%
<b>% Bachelor's Degree</b>	30.2%	11.8%	39.6%	13.1%