Harris County, Texas residents faced several barriers to voter identification access during the 2016 United States election*

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This report analyzed reasonable impediment declaration (RID) data on barriers to voter identification access in Harris County, Texas during the 2016 United States election. In comparing Harris County to Texas at large, lack of transportation was an overrepresented impediment, hardship was an overrepresented grouped impediment, and hardship among Black RID-filers was overrepresented. Possible contributors to these findings, including health and public transit concerns in Harris County, were identified. Future research should examine ways of mitigating these issues, such as enhancing public transit access and improving public health.

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*Data and code used to generate this report are available here: https://github.com/bennyrochwerg/voter-id/ Replication of three graphs from Fraga and Miller (2022) is available here: https://www.socialsciencereproduction.org/reproductions/c0801c33-77d8-4be2-ad60-fa21826856ca/index

1 Introduction

In the United States (US), individual states have different voting practices (Fraga and Miller 2022). One such practice is mandating that individuals display a specific form of photographic identification (ID) in order to vote (Fraga and Miller 2022). In the 2016 US election, Texas residents who did not possess voter ID could fill in a reasonable impediment declaration (RID), which allowed them to vote using non-voter ID such as a birth certificate (Fraga and Miller 2022).

This form of voter ID requirement, which Texas introduced in 2014, is under scrutiny for possibly contributing to voter disenfranchisement (Fraga and Miller 2022). This is especially alarming in the case of minority groups, which are among those with lower voter ID rates (Fraga and Miller 2022). Although Fraga and Miller (2022) examined the demographics most at risk of possible disenfranchisement from the voter ID requirement in Texas as a whole, barriers to acquiring said ID were not emphasized. Consequently, this analysis focuses on voter ID access barriers faced by individuals in Harris County, the most populated of Texas' 254 counties (United States Census Bureau 2022), which comprised approximately 16% of the state's population in 2020 (calculated based on United States Census Bureau (2022)). That is, the estimand or quantity of concern in this analysis is voter ID access barriers faced by individuals in Harris County (Alexander 2023).

As discussed in Section 2, replication data (Fraga and Miller 2021) from Fraga and Miller (2022) was used to examine the most common impediments to acquiring voter ID in Harris County, Texas. In Section 3, it was found that approximately 10% of RID-filers in Harris County listed lack of transportation as their voter ID impediment, that approximately 37% of Harris County RID-filers had a grouped voter ID impediment of hardship (e.g., lacking transportation or documentation, having work or family obligations, or having a disability or illness), and that approximately 39% of Black Harris County RID-filers experienced a grouped voter ID impediment of hardship. The discussion of these results in Section 4 using Texas-wide data from Section A indicated that lack of transportation was an overrepresented impediment in Harris County compared to Texas at large, that hardship was an overrepresented grouped impediment in Harris County, and that hardship among Black RID-filers was overrepresented in Harris County. Possible contributors to these findings, including health and public transit concerns, were also described in Section 4. This suggests that ways of mitigating these issues,

such as enhancing public transit access and improving public health, should be explored. This paper consists of Section 2, which describes the data and its measurement; Section 3, which contains the results; Section 4, which discusses the results alongside weaknesses and next steps; and Section A, which contains Texas-wide results and supplementary information.

2 Data

This report explores replication data (Fraga and Miller 2021) associated with the article *Who Do Voter ID Laws Keep from Voting?* by Fraga and Miller (2022). This data, along with associated code, was uploaded by the authors to The Journal of Politics Dataverse (Fraga and Miller 2021) to allow others to replicate aspects of the article such as graphs and tables. By facilitating the reproduction of the authors' findings, this data (Fraga and Miller 2021) contributes to the reliability and authenticity of the contents of the article (Alexander 2023) and its conclusions.

The data from Fraga and Miller (2021) includes both county- and voter-level variables from Texas in 2016. First, the county-level variables include the proportions of Black and Hispanic people, the proportions of individuals aged 18 to 24 and 75 and over, the proportion of people who voted for Barack Obama in the 2012 United States presidential election (excluding third-party candidates), the proportion of non-college educated individuals, the rate of RID usage in 2016, the rate of ID-capable individuals (i.e., RID-filers who did not have their voter ID on hand as they forgot it, lost it, or withheld it in a defiant manner), the rates of relocation (e.g., applying but not yet receiving voter ID) and hardship faced by individuals, and median household income (Fraga and Miller 2021, 2022). Second, the voter-level variables were collected from RID submissions and include the county of each RID-filer, the issue or impediment that prevented each filer from acquiring voter ID (as well as grouped impediments such as relocation, hardship, and being ID-capable), the age and predicted race of each filer, whether or not each filer was female, and the type of non-voter ID used by each filer (Fraga and Miller 2021, 2022).

With respect to measurement, the authors collected the voter-level RID documents by submitting a Texas Public Information Act request (Fraga and Miller 2022). This yielded 16,097 RID documents, each of which included the filer's self-reported voter ID impediment, the type of non-voter ID used by the filer, and the filer's name (Fraga and Miller 2022). These RID documents were filed by individuals at their polling location (Fraga and Miller 2022), and the data from the RID documents was organized electronically by Fraga and Miller (2022). The authors then cross-referenced this RID data with Texas secretary of state voter registration data, which contained more personal details about each filer compared to the RID documents (Fraga and Miller 2022). Afterward, Fraga and Miller (2022) used the filers' personal details (e.g., their surnames) as well as other demographic and geographic resources to predict their races as the voter registration data only stated if a family name was Spanish or not (Fraga and Miller 2022). Moreover, the authors obtained demographic county-related data from the 2015

US Census American Community Survey and used imputation to fill in missing data from one of the counties (Fraga and Miller 2022).

Since this analysis exclusively focuses on the voter-level RID-filer data, which could only be accessed by the authors through a formal request (Fraga and Miller 2022), other similar datasets could not be used to generate this report. After downloading the data with the R programming language (R Core Team 2023) and the `tidyverse` (Wickham et al. 2019), `haven` (Wickham, Miller, and Smith 2023), and `labelled` (Larmarange 2023) packages, the `tidyverse` (Wickham et al. 2019) package was employed in order to clean and filter the data. In doing so, a new variable was created to indicate whether or not each individual was White. Finally, the `tidyverse` (Wickham et al. 2019) and `here` (Müller 2020) packages were used to load the data into the R programming language (R Core Team 2023), and the `tidyverse` (Wickham et al. 2019) package was used to create the graph in this section.

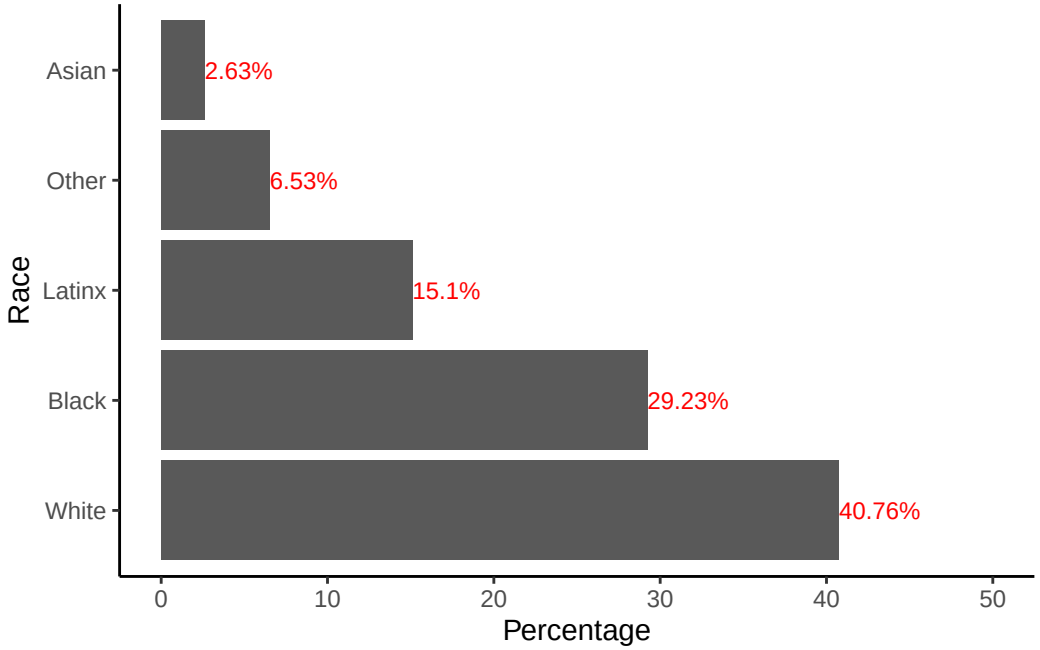

Figure 1: Races of Harris County, Texas RID-filers in 2016

Figure 1 illustrates that the most common race among Harris County, Texas RID-filers in 2016 was White (approximately 41%), followed by Black (approximately 29%), Latinx (approximately 15%), and Asian (approximately 3%). Approximately 7% of filers had a different race.

Section 3 includes graphs pertaining to all relevant observations and variables. These graphs also include summary statistics in the form of percentages.

3 Results

The graphs in this section were created with the R programming language (R Core Team 2023) and the `tidyverse` (Wickham et al. 2019) and `patchwork` (Pedersen 2024) packages. Alexander (2023) was used as a resource during this process.

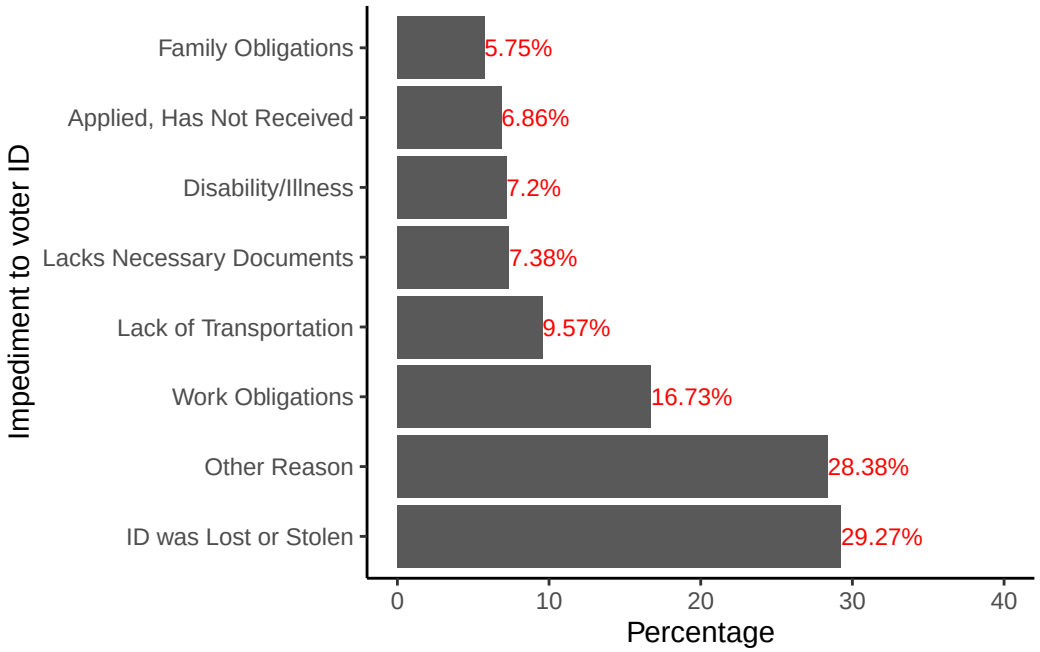

Figure 2: Voter ID impediments for Harris County, Texas RID-filers in 2016

Figure 2 illustrates that the largest voter ID impediment for Harris County, Texas RID-filers in 2016 was lost or stolen ID (approximately 29%). This was followed by work obligations (approximately 17%), lack of transportation (approximately 10%), lack of necessary documents (approximately 7%), disability or illness (approximately 7%), an ongoing application process (approximately 7%), and family obligations (approximately 6%). Approximately 28% of RID-filers provided a different reason for not being able to procure voter ID.

Figure 3 shows that the largest grouped voter ID impediment for Harris County, Texas RID-filers in 2016 was hardship (approximately 37%). This was followed by being ID-capable (approximately 32%) and relocation (approximately 27%).

Figure 4 illustrates that the largest grouped voter ID impediment for White Harris County, Texas RID-filers in 2016 was hardship (approximately 40%), followed by being ID-capable (approximately 30%) and relocation (approximately 26%). In addition, the largest grouped voter ID impediment for Black Harris County, Texas RID-filers in 2016 was hardship (approximately 39%), followed by being ID-capable (approximately 33%) and relocation (approximately 26%). Finally, the largest grouped voter ID impediment for Latinx Harris County, Texas RID-filers

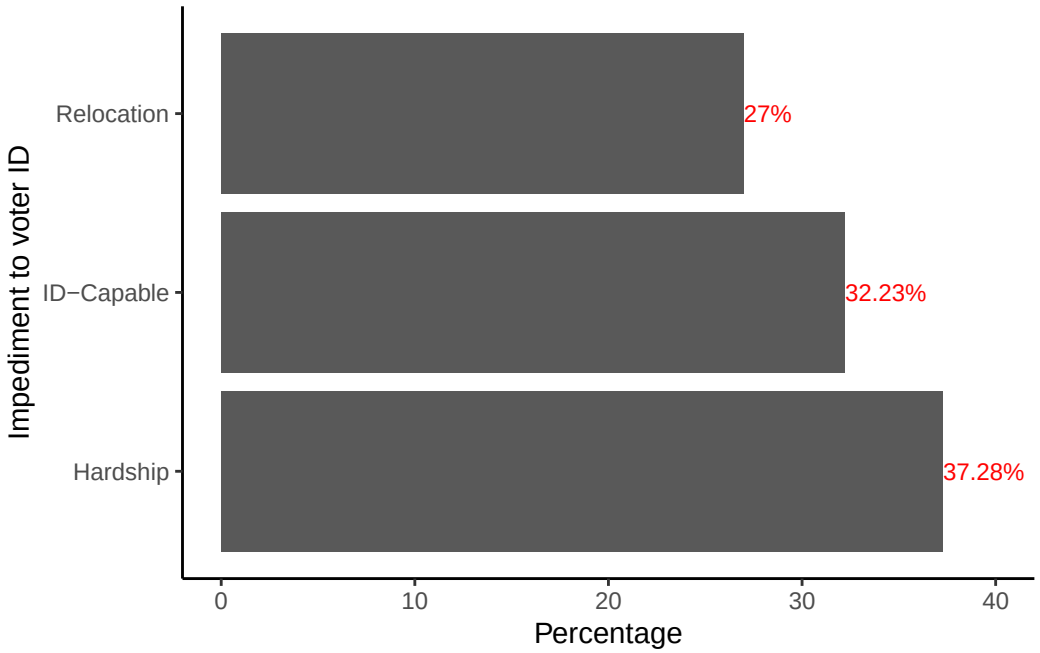

Figure 3: Grouped voter ID impediments for Harris County, Texas RID-filers in 2016

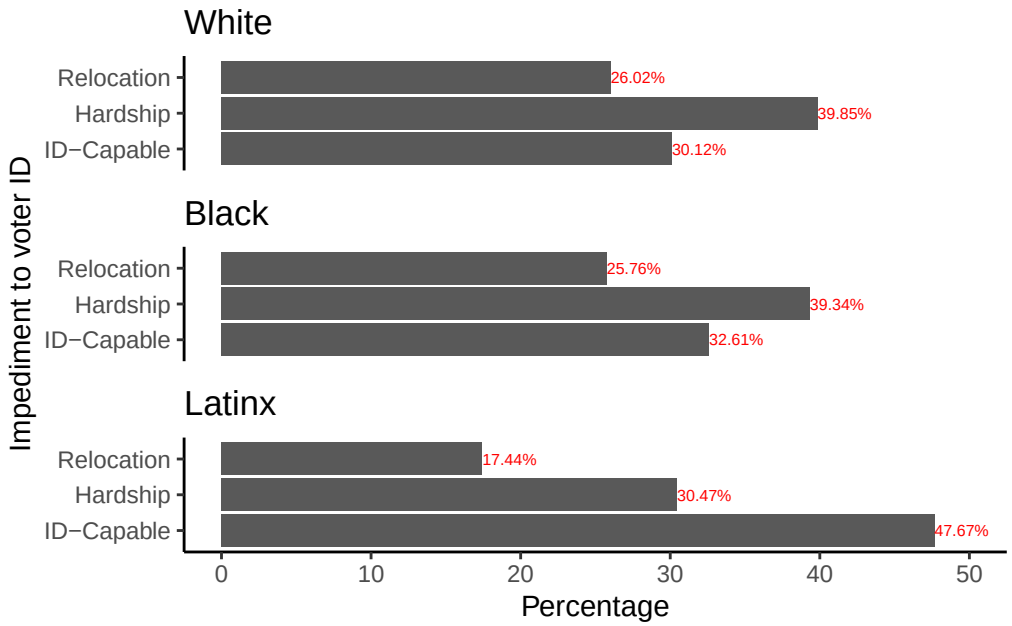

Figure 4: Grouped voter ID impediments for Harris County, Texas RID-filers in 2016 by race

in 2016 was being ID-capable (approximately 48%), followed by hardship (approximately 30%) and relocation (approximately 17%).

4 Discussion

In this report, data from Fraga and Miller (2021) was used to assess voter ID impediments faced by RID-filers in Harris County, Texas in 2016. To do this, the data was loaded, cleaned, and graphed as discussed in Section 2.

4.1 Lack of transportation was an overrepresented impediment in Harris County

In Section 3, it was found that approximately 10% of RID-filers in Harris County listed lack of transportation as their voter ID impediment (Figure 2). Conversely, in Texas at large, lack of transportation was only listed on approximately 7% of RID documents (Figure 5). In 2015, the Houston bus transit system, which services large segments of Harris County (METRO, n.d.), was broadened to include more frequent busing between different locations in Houston (Yglesias 2015). However, this change increased the distance to a transit stop for a number of individuals (Yglesias 2015). Consequently, it is possible that this side effect of the Houston transit overhaul contributed to the higher lack of transportation voter ID impediment rate observed in Harris County compared to Texas as a whole.

4.2 Hardship was an overrepresented grouped impediment in Harris County

Based on Section 3, approximately 37% of Harris County RID-filers had a grouped voter ID impediment of hardship (Figure 3). However, the statewide rate of hardship was only approximately 33% (Figure 6). As per Fraga and Miller (2022), hardship includes a lack of transportation or documentation, work or family obligations, and disability or illness. The rate of hardship among Harris County residents has likely only been further exacerbated by recent health trends. For instance, 23% of Harris County adults reported "poor" or "fair" health in 2019, and approximately 30% of below-$25,000-per-year-earning adults experienced obesity in 2016 (Understanding Houston, n.d.). As a result, this confluence of health and financial issues likely continues to increase hardship among Harris County residents, ultimately limiting their ability to obtain voter ID.

4.3 Hardship among Black RID-filers was overrepresented in Harris County

Section 3 indicates that approximately 39% of Black Harris County RID-filers experienced a grouped voter ID impediment of hardship (Figure 4). This is noticeably greater than the rate of hardship among Black RID-filers in Texas overall, which was approximately 34% (Figure 7).

In 2016, approximately 47% of Black Harris County adults experienced obesity, and data from 2018 to 2020 indicates that Black people had a premature death rate approximately 1.5 times greater than that for White people in Harris County (Understanding Houston, n.d.). These factors likely contributed to the hardship faced by Black RID-filers in 2016, reducing their capability to procure voter ID.

4.4 Weaknesses, bias, and ethics

This investigation was prone to several weaknesses. First, as described in Section 2, the races of the RID-filers ("White", "Black", "Latinx", etc.) were predicted based on personal details like family name and external sources such as demographic and geographic resources rather than directly observed (Fraga and Miller 2022). This means that the race-based data analyzed in previous sections of this report may not have been fully accurate, likely leading to biased results in Section 3. Second, similar to what is described in Fraga and Miller (2022), the RID documentation did not capture data from individuals who did not vote or visit a polling station. This presumably contributed to bias in the data as the impediments to obtaining voter ID in Harris County were likely undercounted. With respect to ethics, it is unclear as to whether the RID-filers consented to the release of these documents based on Fraga and Miller (2022). This is especially concerning given that each filer's signature and name was provided on their RID document (Fraga and Miller 2022). Namely, the release of these RID documents to the researchers may have violated the filers' right to privacy by limiting their control of their sensitive details without consent (Panel on Research Ethics 2023).

4.5 Next steps

Future research should examine barriers to voter ID access in other Texas counties and voting difficulties in other US states to shed additional light on the challenges faced by eligible adults when seeking to vote. This could include focusing on voting access in swing states (i.e., states with outsized importance in US presidential elections), such as Pennsylvania and Arizona (USAFacts Team 2023). Moreover, future research should investigate methods of mitigating the voter ID barriers faced by Harris County residents, such as enhanced public transit access and improved public health.

A Appendix

A.1 Sketches

Sketches of the main data and graphs are available in the GitHub Repository associated with this report.

A.2 Simulation

A script containing data simulation is available in the GitHub Repository associated with this report. This script was generated using the R programming language (R Core Team 2023) and the `janitor` (Firke 2023) and `tidyverse` (Wickham et al. 2019) packages.

A.3 Tests

The simulated and actual data were tested using the R programming language (R Core Team 2023) and the `tidyverse` (Wickham et al. 2019) package. Scripts containing the testing code are available in the GitHub Repository associated with this report.

A.4 Texas-wide results

The graphs in this section were created with the R programming language (R Core Team 2023) and the `tidyverse` (Wickham et al. 2019) and `patchwork` (Pedersen 2024) packages. Alexander (2023) was used as a resource during this process.

Figure 5 illustrates that the largest voter ID impediment for Texas RID-filers in 2016 was lost or stolen ID (approximately 27%). This was followed by work obligations (approximately 12%), disability or illness (approximately 8%), lack of necessary documents (approximately 7%), lack of transportation (approximately 7%), an ongoing application process (approximately 6%), and family obligations (approximately 4%). Approximately 36% of RID-filers provided a different reason for not being able to acquire voter ID.

Figure 6 shows that the largest grouped voter ID impediment for Texas RID-filers in 2016 was hardship (approximately 33%). This was followed by being ID-capable (approximately 31%) and relocation (approximately 29%).

Figure 7 illustrates that the largest grouped voter ID impediment for White Texas RID-filers in 2016 was hardship (approximately 33%), followed by relocation (approximately 32%) and being ID-capable (approximately 28%). In addition, the largest grouped voter ID impediment for Black Texas RID-filers in 2016 was being ID-capable (approximately 34%), followed by hardship (approximately 34%) and relocation (approximately 28%). Finally, the largest

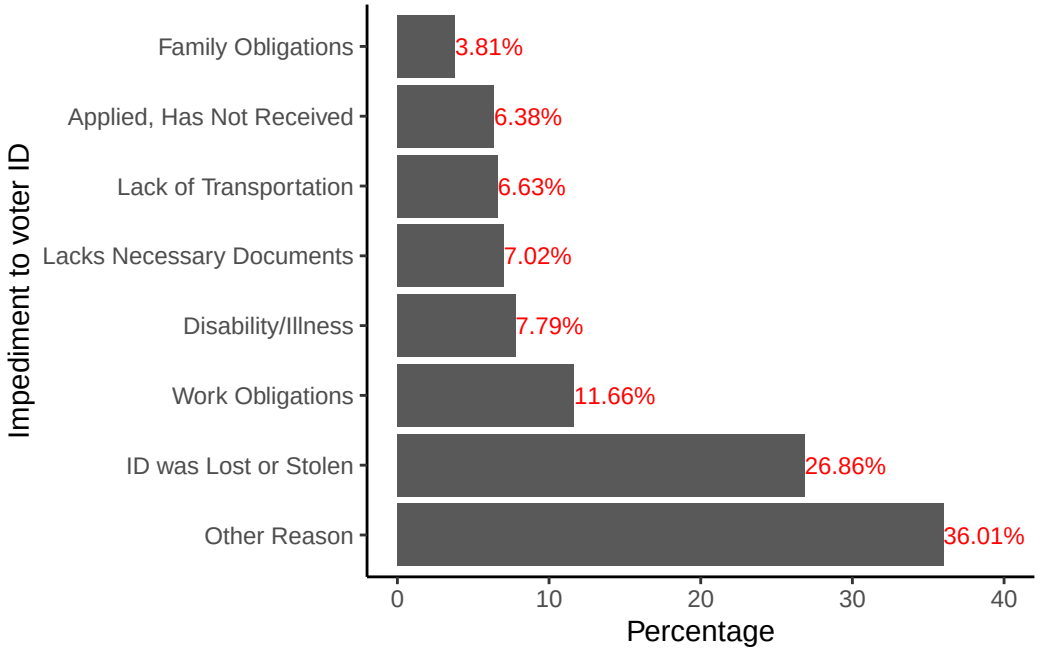

Figure 5: Voter ID impediments for Texas RID-filers in 2016 (reproduction of Figure 2 from Fraga and Miller (2022))

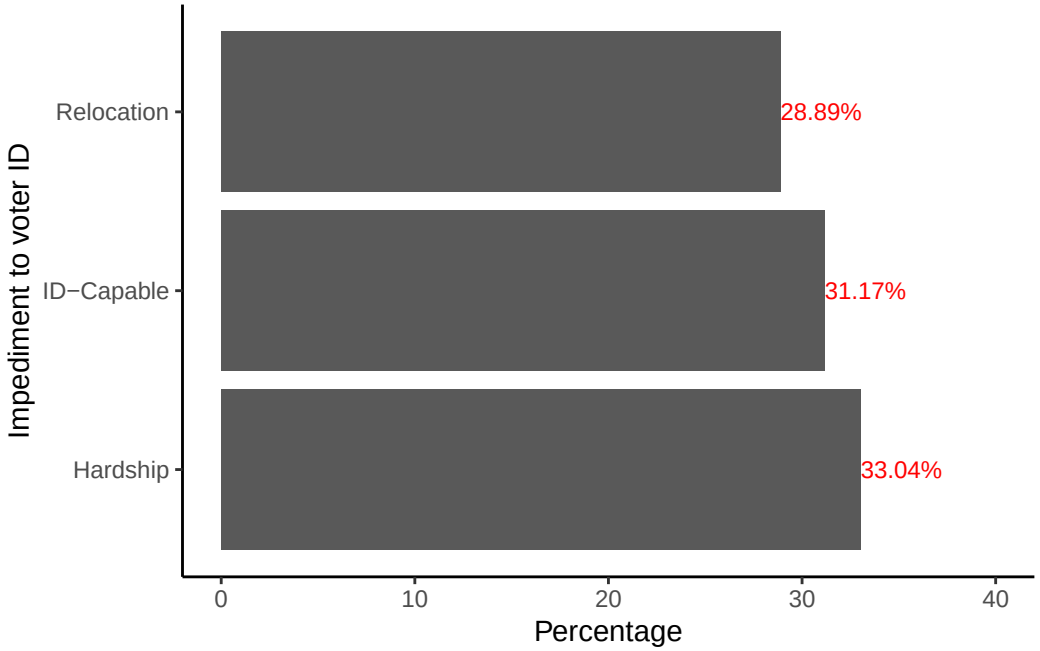

Figure 6: Grouped voter ID impediments for Texas RID-filers in 2016 (reproduction of Figure 3 from Fraga and Miller (2022))

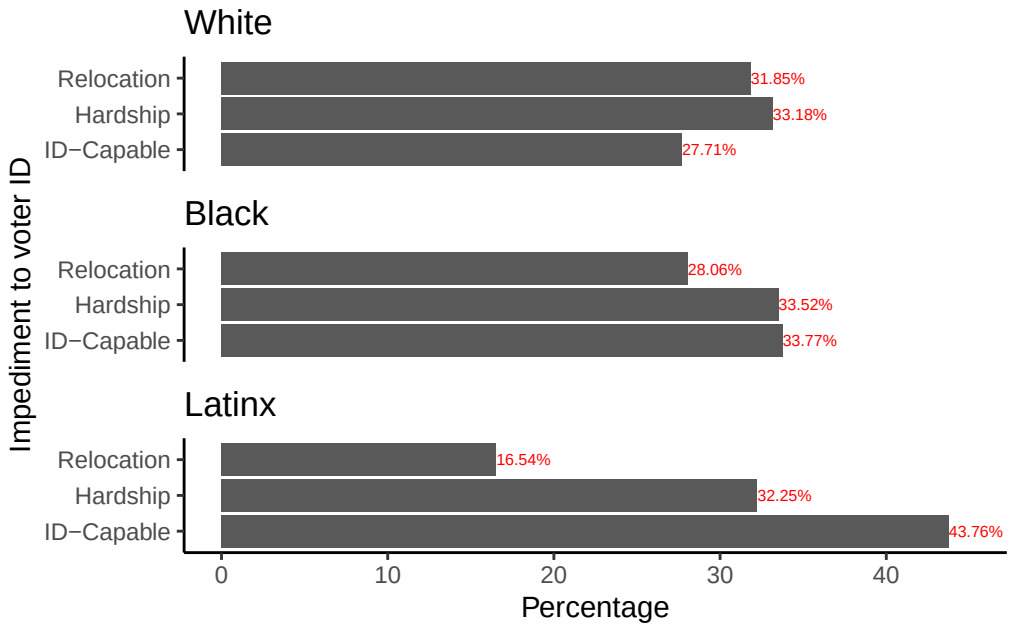

Figure 7: Grouped voter ID impediments for Texas RID-filers in 2016 by race (reproduction of Figure A2 from Fraga and Miller (2022))

grouped voter ID impediment for Latinx Texas RID-filers in 2016 was being ID-capable (approximately 44%), followed by hardship (approximately 32%) and relocation (approximately 17%).

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