Exploratory Data Analysis

Lab 1, Part 2

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Research Question

Did Democratic voters or Republican voters experience more difficulty voting in the 2020 election?

Sub-Questions

Below are some of the sub-questions that need to be answered in order to answer the research question.

Voter: How are we defining who is a voter?

Based off the codebook, there appears to be one good summary variable, **V202109X**, that combines three survey questions into an analysis of whether an individual voted or not (details of how that is derived is in programming section of codebook)

- 1) V201024: Which one of the following best describes how you voted (early)?
- 2) V202066: Did voter vote in November 2020 election?
- 3) V202051: Where are you registered to vote? (I am not seeing how this variable is relevant or referenced, but including it since it was listed)

Using this variable to review our dataset, we find that **6,450** of the original 8,280 rows contain individuals that are believed to have voted.

Political Affiliation: How are we defining the political affiliation of individuals?

There are multiple variables that could assist in defining what political party an individual best aligns with. Similar to voter, there is a calculated variable, V201231x, which is based on several other variables and might be our best indicator for the political affiliation of an individual.

It is composed of the following survey variables:

- 1) V201228: Do you think of yourself as Democrat, Republican, or other?
- 2) V201229: Would you call your affiliation strong?
- 3) V201230: If you didn't identify, do you lean either direction?

There are very few individuals (16) that did not provide information regarding affiliation, and 560 individuals that are categorized as Independent (*Democrat/Republican neutral*). This reduces our number of individuals with some sort of affiliation lean to **5874**.

Double Checking Affiliation

Do any of the earmarked "nuetral" individuals show signs political affiliation? To test this we reviewed individuals from the previous test that responded as Independent. We checked their responses to

other variables that might provide evidence of affiliation. The variables we have selected are as follows:

- 1) V201018: What political party are you registered with? (pre-vote)
- 2) V202064: What political party are you registered with? (post-vote)
- 3) V202429: Which party represents your views best?
- 4) V202443: Which party do you feel closest to?
- 5) V202073: Which President did you vote for?

Only 2 of these five survey questions were well answered by this subset of Independent voters. The two questions were the pre-vote registration and presidential vote. Reviewing those two questions, of the 560 individuals, there were 23 that answered Democrat to both, and 9 that answered Republican to both. Since this is such a small quantity compared to our current sample size, we will continue to leave these individuals out of our active dataset.

For the individuals we have grouped by political affiliation, do any of them have survey answers that conflict their current affiliation? We will use and check the same variables as above against the two political affiliations to see how they align.

Once again some of these variables did not have high response rates, so we are choosing to focus on the three questions. Below are the three questions and the number of Democrat individuals that responded in favor of Republican for each:

- 1) V202429: Which party represents your views best? 65 Republican responses
- 2) V202443: Which party do you feel closest to? 54 Republican responses
- 3) V202073: Which President did you vote for? 90 Republican responses

Of the 3,160 Democrat individuals, **24** provided Republican responses to all three of these questions. Because this conflicts with how we currently have them grouped, we will be removing them from the dataset.

In our initial Republican grouping, below are the individuals that provided Democrat responses.

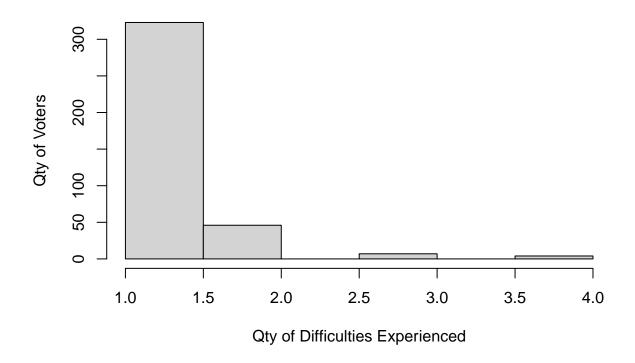
- 1) V202429: Which party represents your views best? 67 Democrat responses
- 2) V202443: Which party do you feel closest to? 80 Democrat responses
- 3) V202073: Which President did you vote for? **264 Republican responses**

Of the 2,714 Republican individuals, **37** provided Democrat responses to all three of the above questions. We will be removing these from our dataset as well.

This leaves us with 5.813 total individuals, 3.136 grouped as Democrat and 2.677 grouped as Republican

Difficulty Voting: How are we defining difficulty voting?

Republican Difficulties Voting



Democrat Difficulties Voting

