An Election Year During A Politicized Global Pandemic

Kevin Joseph, Jim Lee, Peter Kennedy, Evan O'Keefe

Introduction

2020 has been far from a normal year and two main focuses within the United States were the Coronavirus Pandemic and the Presidential Election between incumbent Republican Donald Trump and Democratic Candiate Joe Biden. The goal of our group was to analyze how these two major events impacted each other specifically in the state of Wisconsin by observing a few different factors. A key aspect that we plan to observe is the impact of increased mail-in/absentee voting. To achieve this analysis, data was collected describing Wisconsin election data (including vote totals and absentee ballot data), COVID-19 cases data (including number of cases and deaths), and general census information. This project will test the hypothesis that conservative areas of Wisconsin will have higher COVID-19 infection rates and lower absentee voting due to the general rhetoric and actions of the American Republican Party.

Background

The datasets collected for this project contained many useful population observations; however, do to the scope of this project only a select few were used. These variables are described below:

County Statistics Dataset

1. County: (str) Name of the county for which the data was collected.
2. State: (str) Two leter intials for each US state. Only data from Wisconsin (WI) was used in this project.
3. percentage16_Donald_Trump: (float) Percent of the county vote for Donald Trump in the given election cycle. Given in the decimal form, maximum values of 1.
4. percentage16_Hillary_Clinton: (float) Percent of the county vote for Hillary Clinton in the given year. Given in the decimal form, maximum values of 1.
5. total_votes16: (int) Total number of county votes for the given election cycle. Includes democratic, republican, and any third party votes.
6. votes16_Donald_Trump: (int) Votes cast for Donald Trump in the given election cycle.
7. votes16_Hillary_Clinton: (int) Votes cast for Hillary Clinton in the given election cycle.
8. percentage20_Donald_Trump: (float) Percent of the county vote for Donald Trump in the given year. Given in the decimal form, maximum values of 1.
9. percentage20_Joe_Biden: (float) Percent of the county vote for Joe Biden in the given year. Given in the decimal form, maximum values of 1.
10. total_votes20: (int) Total number of county votes for the given election cycle. Includes democratic, republican, and any third party votes.
11. votes20_Donald_Trump: (int) Votes cast for Donald Trump in the given election cycle.
12. votes20_Joe_Biden: (int) Votes cast for Joe Biden in the given election cycle.
13. cases: (int) Number of COVID-19 cases in the county as of the dataset being published.
14. deaths: (int) Number of COVID-19 deaths in the county as of the dataset being published.
15. TotalPop: (int) Total population of the county including those not eligible to vote,
16. VotingAgeCitizen: (int) Number of citizens in the county that are eligible to vote in the election.
17. Unemployment: (float) Percent of the county that is not currently employed. Given in the percent form, maximum values of 100.

Absentee Ballot Report 2016

18. County: Same as previous *County*
19. BallotReturnedCount: (int) The number of absentee/mail-in ballots returned and counted during the election cycle.
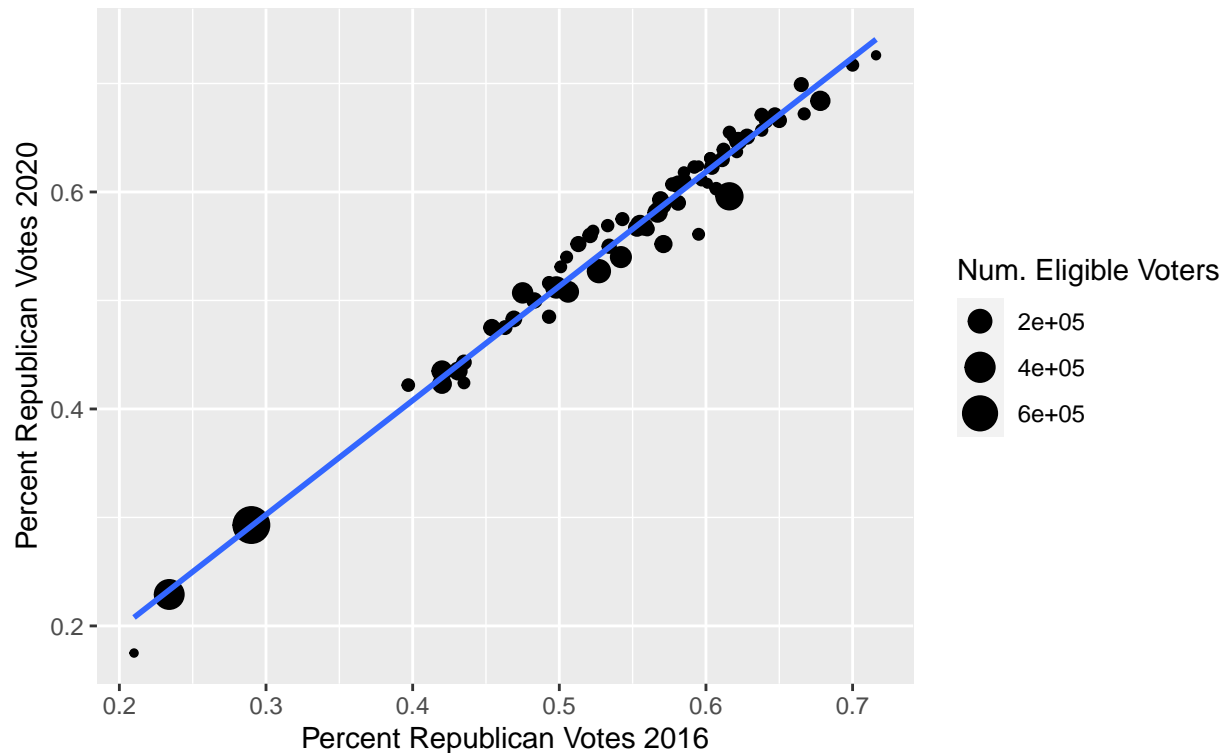
Absentee Ballot Report 2020

20. Jurisdiction: Same as previous *County*
21. BallotsReturned: Same as previous *BallotReturnedCount*

Calculated Values

22. cases_thou: (int) Number of COVID-19 cases in the given county, standardized to the county population.
23. deaths_thou: (int) Number of COVID-19 deaths in the given county, standardized to the county population.
24. pct_absentee_16: (float) Percent of the county votes that come from absentee/mail-in ballots for the given election cycle. Given in the percent form, maximum values of 100.
25. pct_absentee_20 = Same as *pct_absentee_16*
26. pct_absentee_diff: (float) Percentage change of absentee votes from 2016 to 2020. Given in the percent form, no maximum value.
27. third_party_16: (int) Number of votes cast for the third part canidate in the given election cycle.
28. third_party_20: Same as *third_party_16*
29. win_margin_16: (int) Difference in number of votes between the winning canidate and the losing.
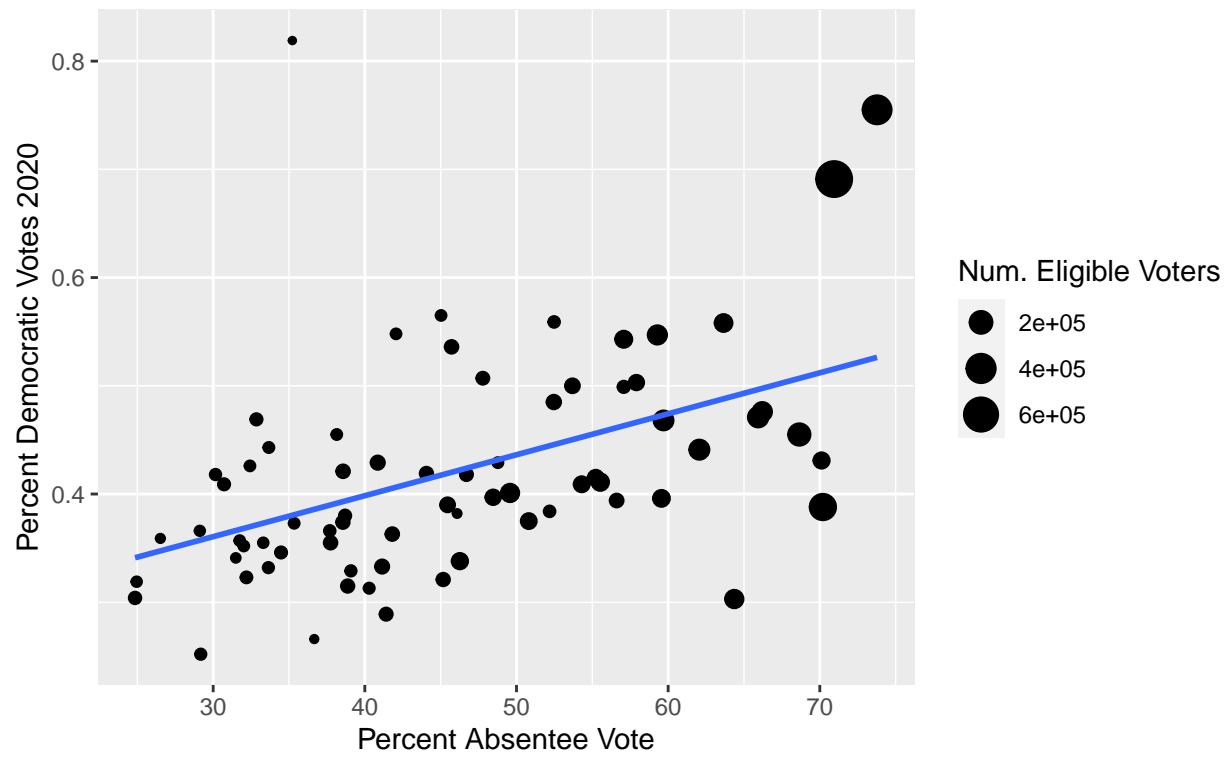30. win_margin_20: Same as *win_margin_16*
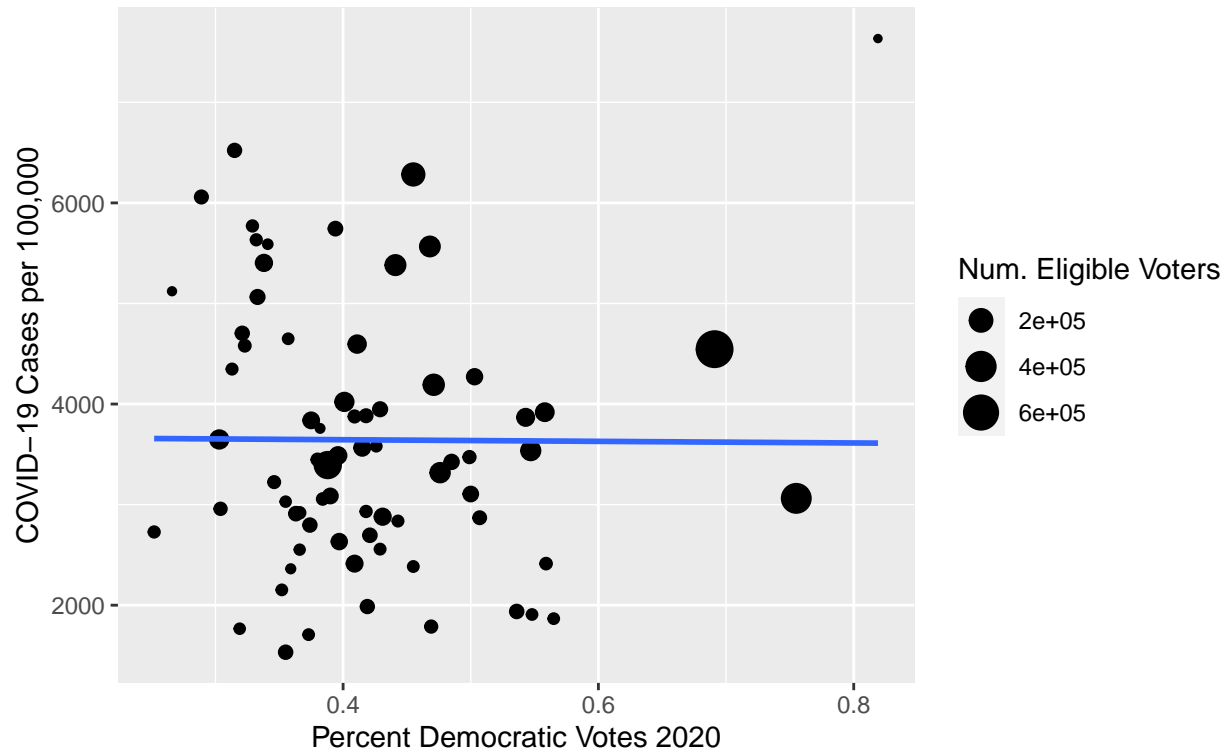

Percent Republican Vote 2016 vs 2020

R: 0.99
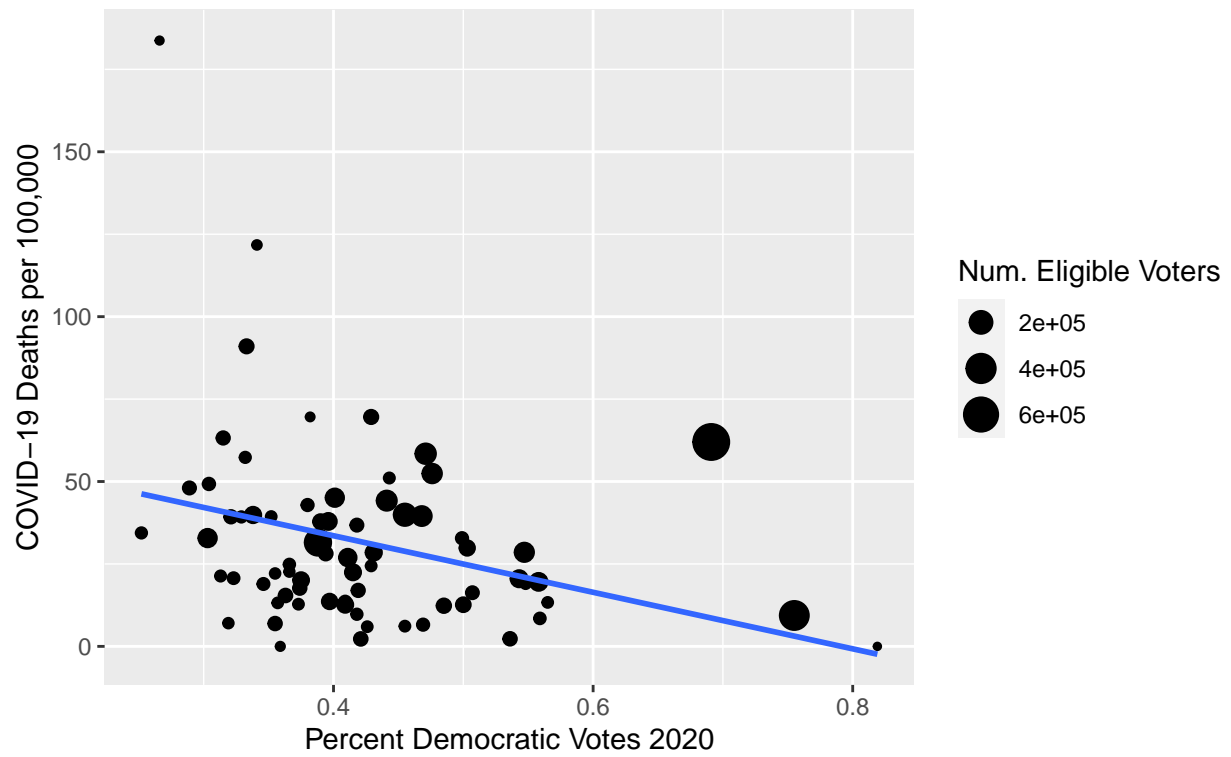
Percent Democratic Vote 2020 vs Absentee Vote

R: 0.47

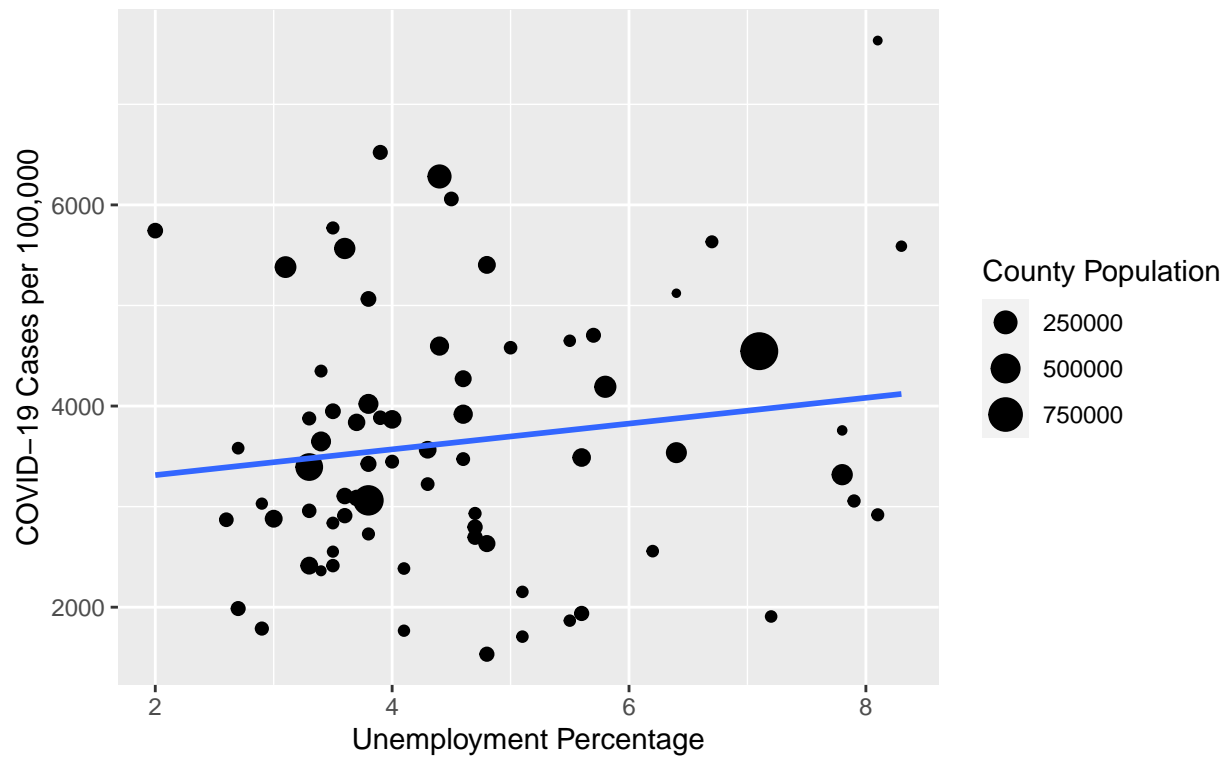## Percent Democratic Vote 2020 vs COVID−19 Cases

R: −0.01

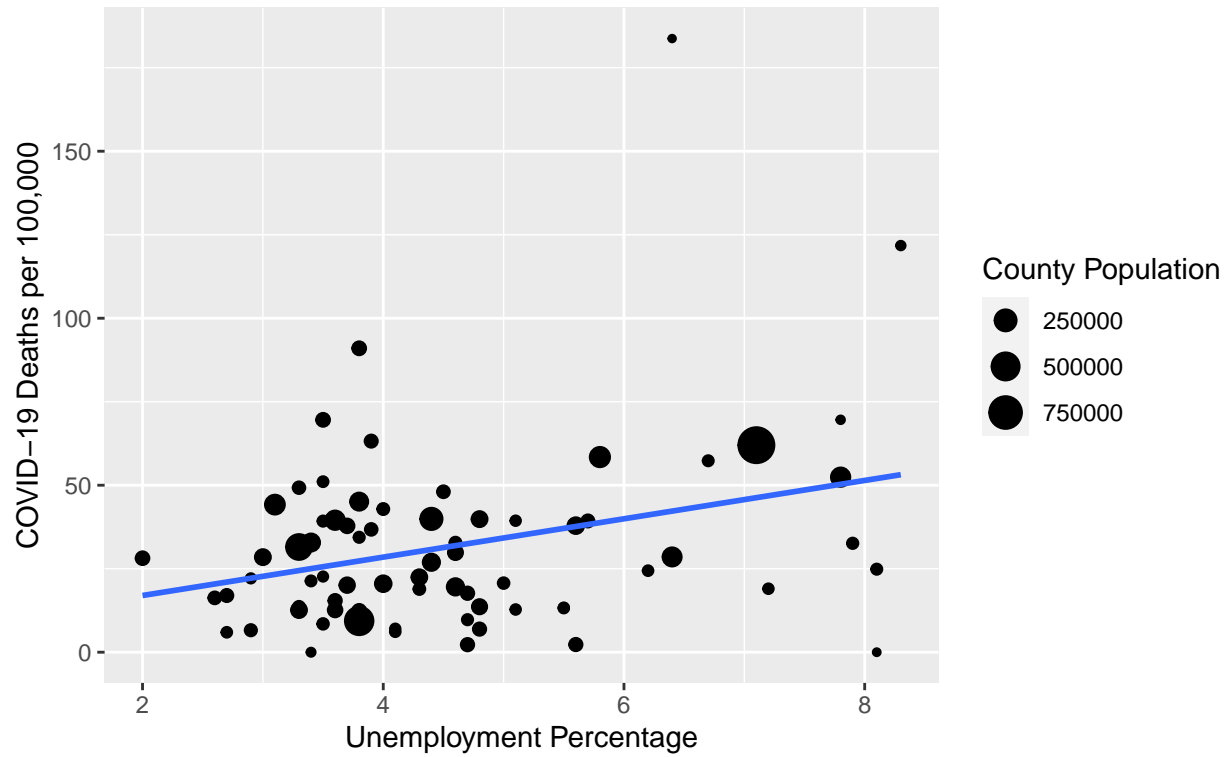Percent Democratic Vote 2020 vs COVID−19 Deaths

R: −0.31

Unemployment vs COVID−19 Cases
R: 0.15

Unemployment vs COVID−19 Deaths

R: 0.3

Absentee Vote Change vs COVID−19 Cases
R: −0.26

Total Votes vs Number of Absentee Votes

Number of 3rd Party Voters vs Winning Margin