

# Do voters in Community College Board of Trustees elections vote along party lines?

Devin Oommen

## College of DuPage Board of Trustee elections

- There has never been a non-white candidate elected to be a COD board trustee
- What factors do candidates that have been elected all have in common?
- Do candidates who raise more money get more votes?
- Are there any relationships common to candidates that get more votes than others?

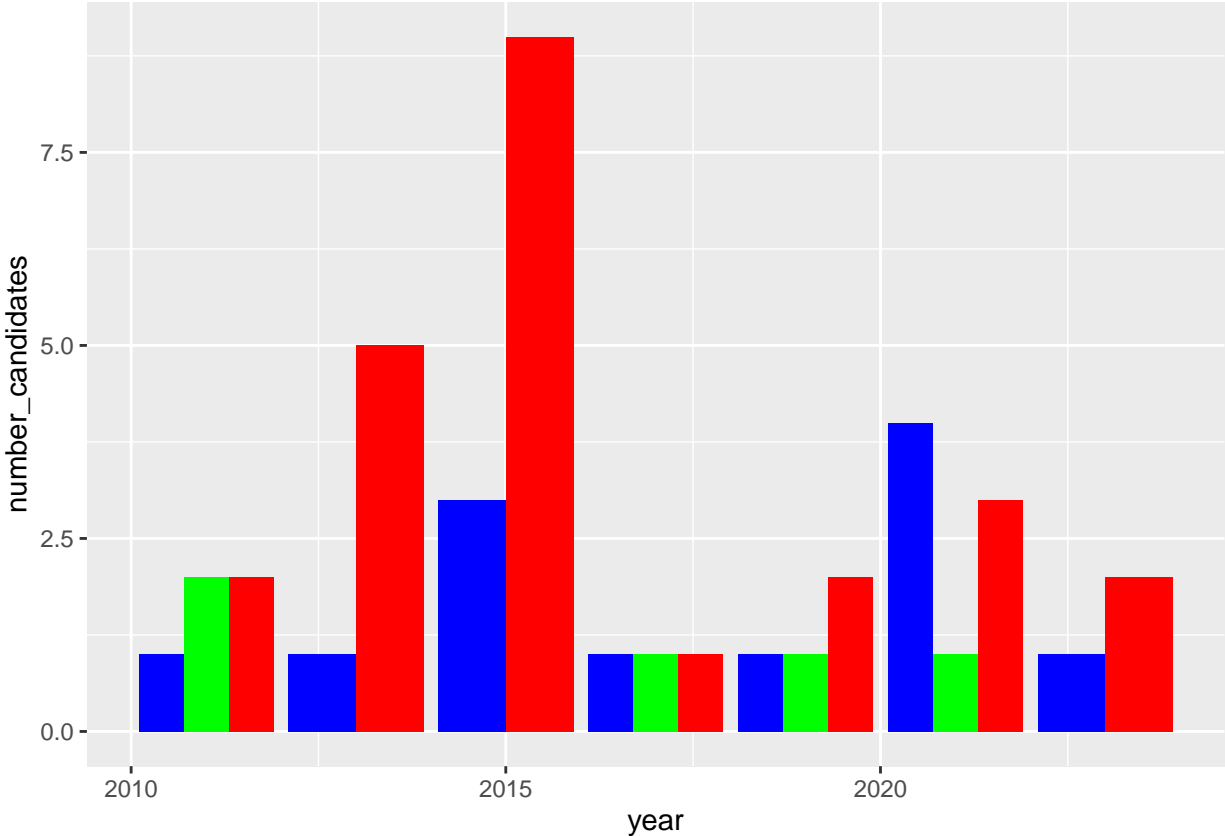
## Previous Research

- (Einstein, Palmer, and Glick 2018)
- (Gimpel et al. 2020)
- (Andes 2017)
- (College Board, 2020)

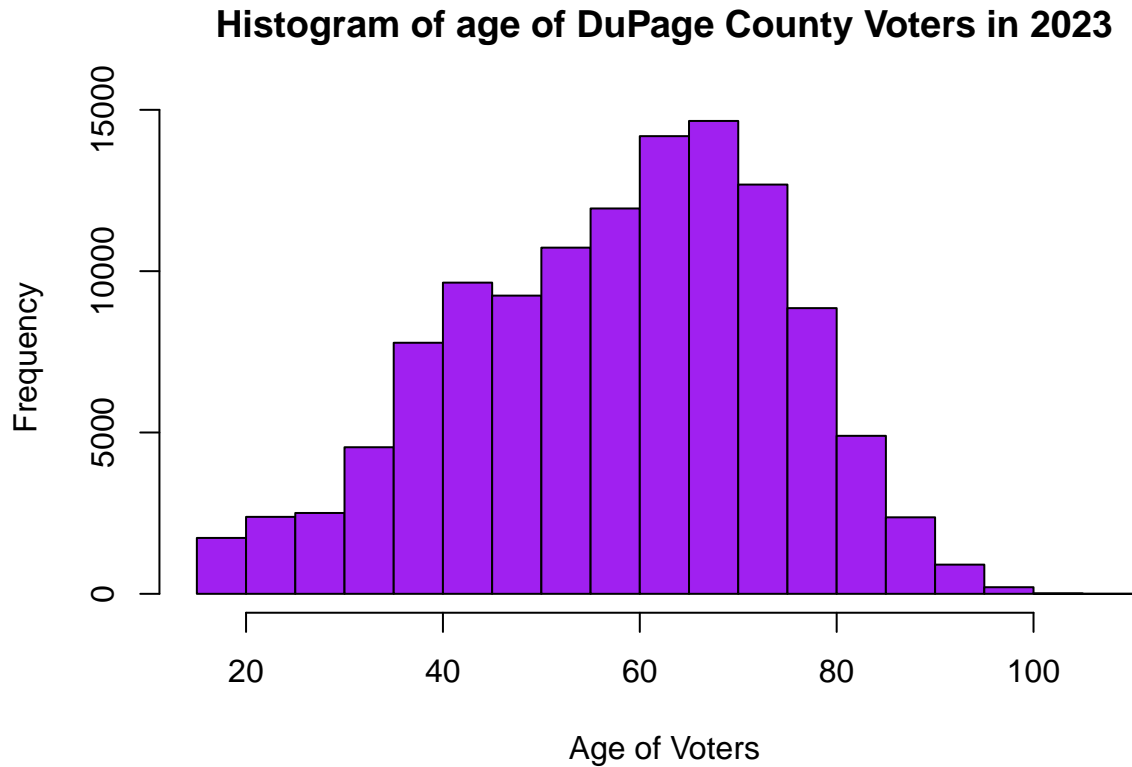
## Number of candidates associated to each party that won since 2011

| Party | Number of Winning Candidates |
|-------|------------------------------|
| d     | 4                            |
| I     | 1                            |
| r     | 12                           |

Number of candidates from each party that have run in each election



## Histogram of age of voters in 2023



## Hypothesis

- Strong positive correlation between cash raised and votes received
- Candidates who raise more cash get more votes
- I predicted this because candidates who raise more cash are able to spend more on campaign materials and advertising, as a result having higher name recognition

## Population

- The population included candidates that ran in a COD Board of Trustees election
- Candidates who don't raise more than \$5000 are not required to file disclosures

## Measure

- Cash Raised
- Amount of cash raised - data collected from candidate disclosure filings on IL State Board of Elections Website

## Procedure

- Perform a committee search for committee's that contain candidate's last name
- Manually collect data from D-2 Quarterly reports

## Results

$$r = 0.3331801$$

$$H_0 : p = 0$$

$$H_1 : p \neq 0$$

|                        |                       |                      |
|------------------------|-----------------------|----------------------|
| Average of Cash Raised | Median of Cash Raised | Range of Cash Raised |
| 14474.26               | 8390.53               | 0.0                  |
|                        |                       | 108130.7             |

$\alpha = .05$

$df = 39$

critical value = 0.3081306

There is a significant, medium positive relationship between the amount of money a candidate raises and the number of votes the candidate receives

$r(39) = 0.3331801, p = 0.0332826$

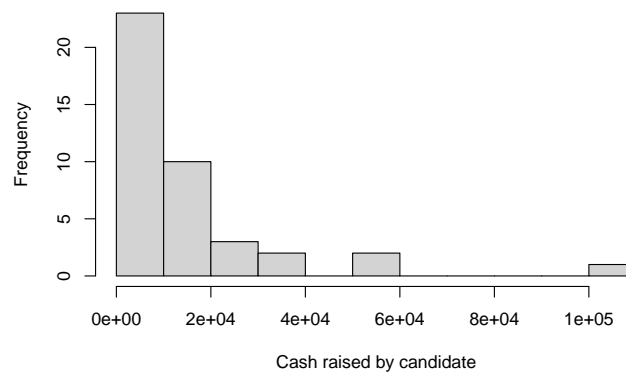
## Discussion

- Candidates that raise more cash generally get more votes

## Histogram showing the amount of money that candidates in Board of Trustees election raise

- The graph below shows amount of cash raised by candidates in increments of \$10,000
- Most candidates in District 502 elections did not raise more than \$10,000

**Distribution of amount of cash raised**



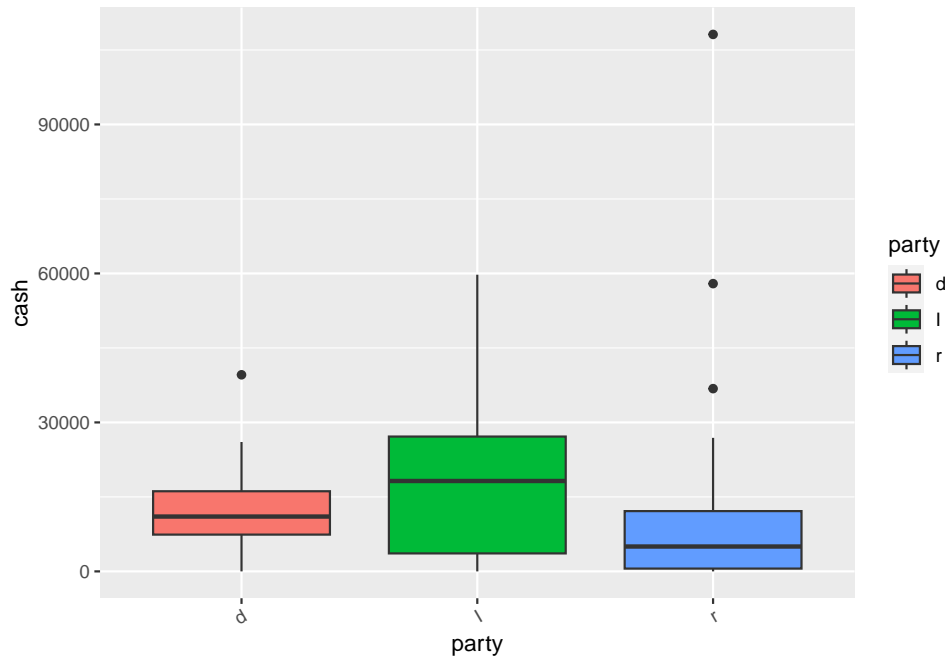
## Cash Raised - Average, Median, and Range

### Average number of voters from each party

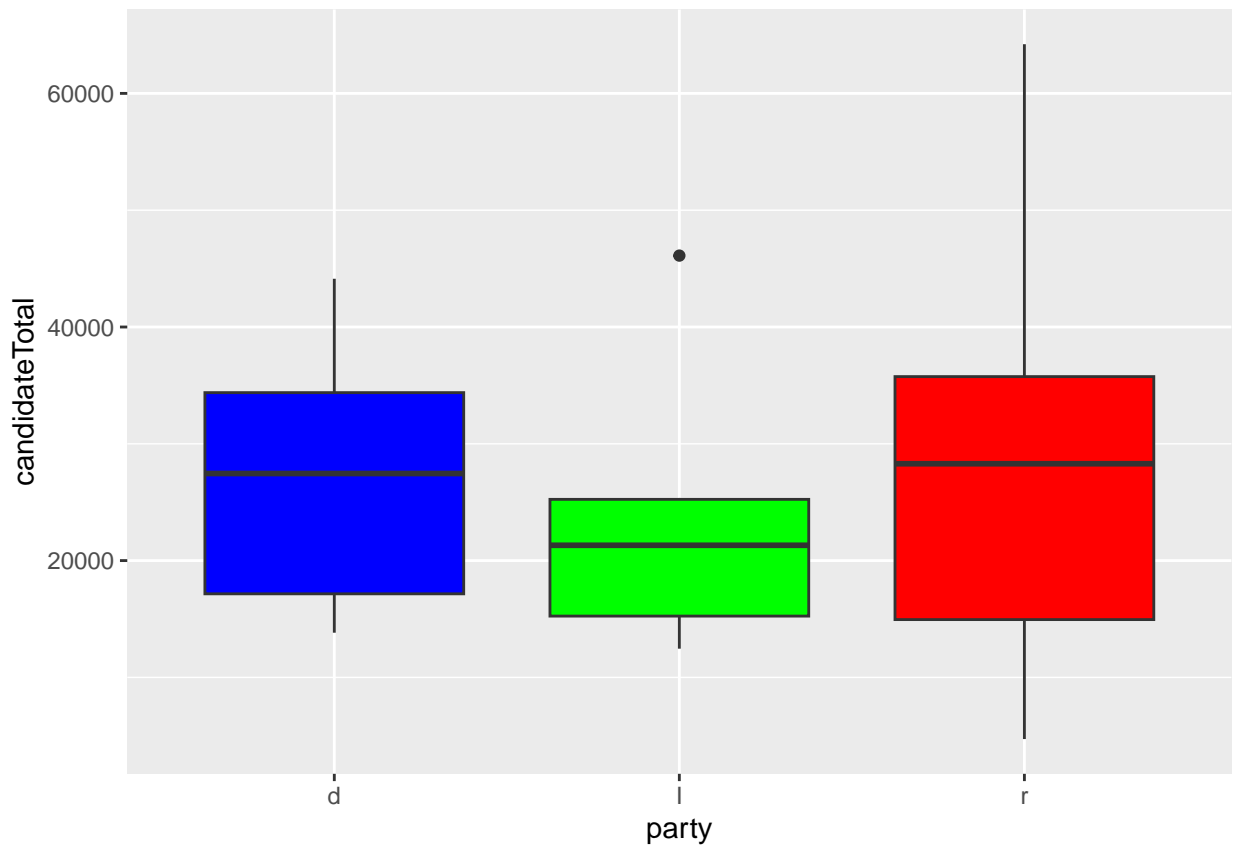
For election data between 2011 and 2023, there is a similar turnout of voters associated with each party, on average

| Party | Average Votes |
|-------|---------------|
| D     | 45885.5       |
| R     | 43684.5       |

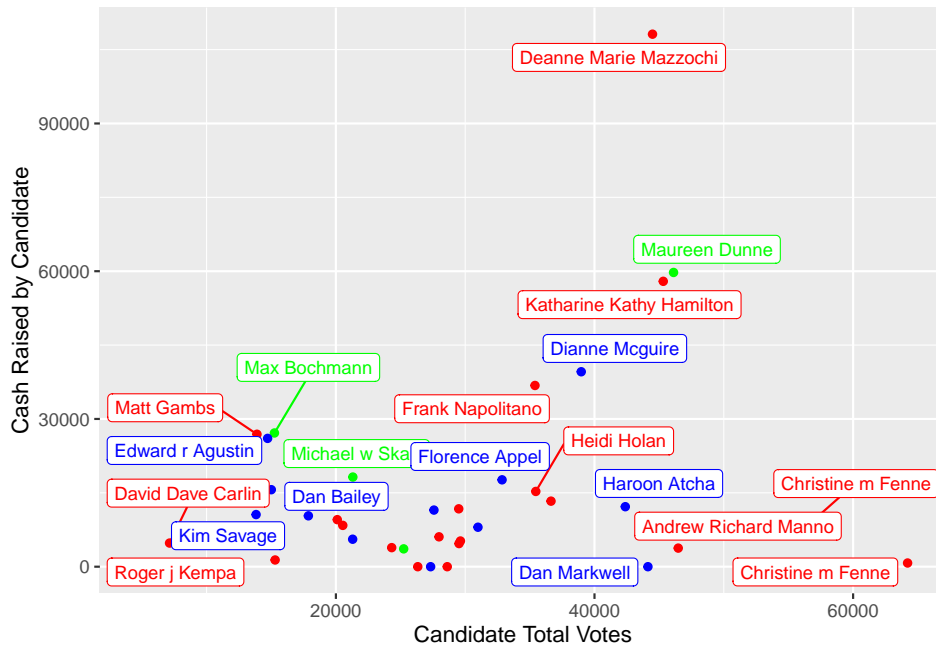
Box plot - cash raised by candidates associated with each party



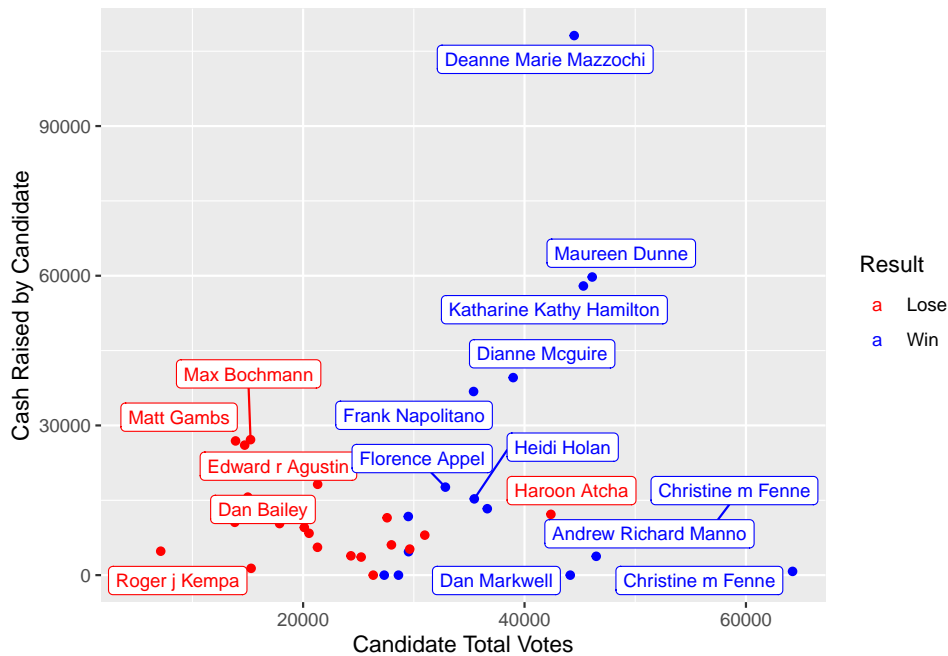
Vote Totals - Box plot



Plot showing the candidate total votes vs How much money that candidate raised



Plot showing the candidate total votes vs How much money that candidate raised with result coded as color



### Hypothesis

- Strong positive relationship between number of donations a candidate receives and candidates who win
- Candidates who receive more donations may have a higher number of political connections or political power
- I predicted this because the number of donations a candidate receives can be an indicator of a candidates political power

## Population

- The population included candidates that ran in a COD Board of Trustees election
- Candidates who don't raise more than \$5000 are not required to file disclosures

## Measure

- Individual contributions = unique contributions reported by candidate

## Procedure

- Perform a correlation test between number of individual contributions and candidate election result (win/lose)

## Results

$$r = -0.2173928$$

$$H_0 : p = 0$$

$$H_1 : p \neq 0$$

$$\alpha = .05$$

$$df = 39$$

$$\text{critical value} = 0.3081306$$

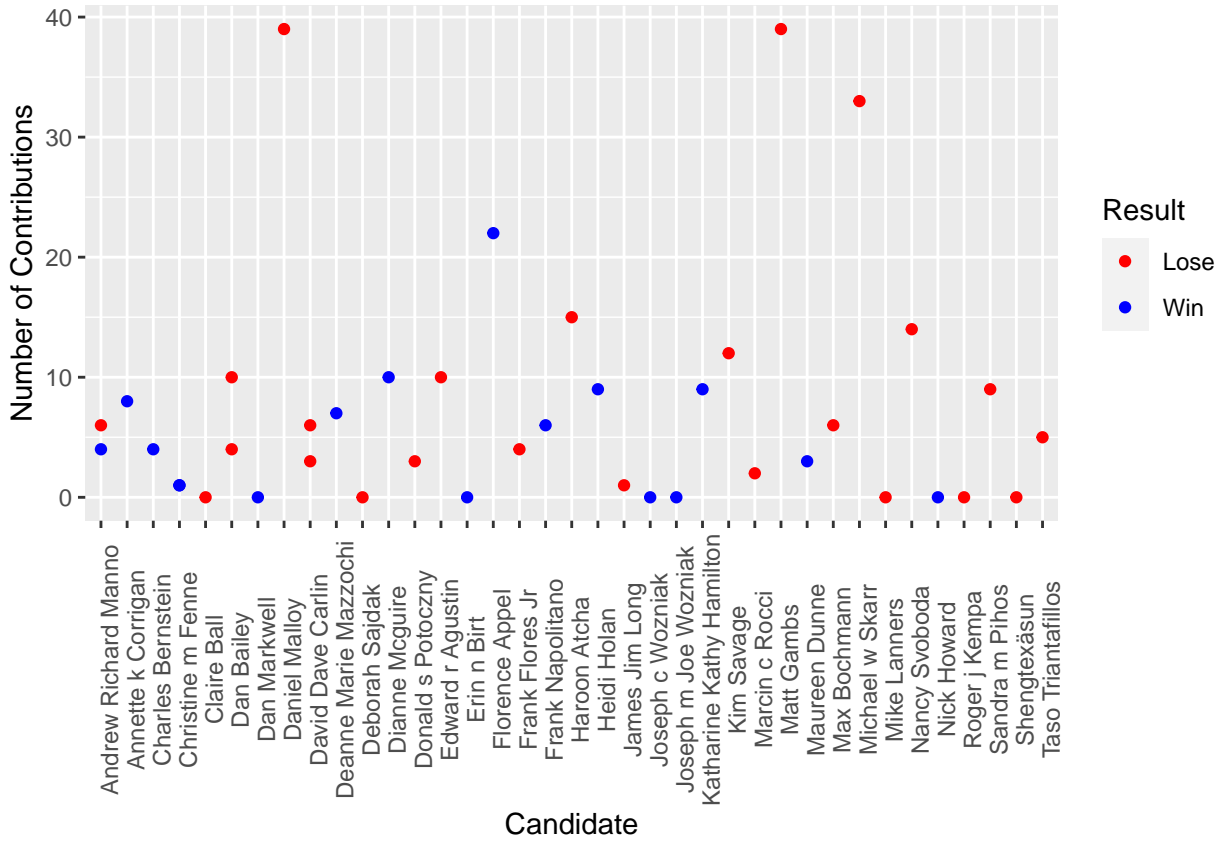
There is an insignificant negative relationship between the number of contributions a candidate received and if the candidate won or lost. There is possible some variable in common between candidates that have a low number of contributions and win that is creating this relationship.

$$r(39) = -0.2173928, p = 0.1721466$$

## Discussion

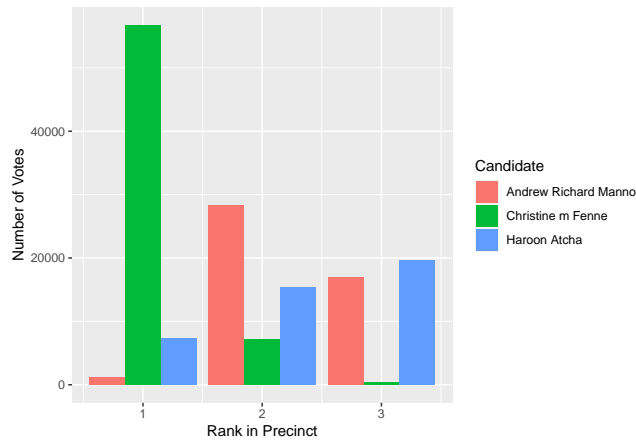
- For COD BoT elections over the past 10 years, candidates who have less individual contributions have been more likely to win
- These candidates are possibly independently wealthy with 1 or more donations that are equal to or greater than the sum of all other candidates donations
- These candidates are running as a slate
- It is possible there are other variables that can explain this

## Results visualized



## Table showing votes by rank in 2023

- The graphs below show the sum of votes candidates received as a sum for precincts they ranked 1st, 2nd, etc in total votes in that precinct



| Candidate            | 1     | 2     | 3     |
|----------------------|-------|-------|-------|
| Haroon Atcha         | 7376  | 15336 | 19670 |
| Andrew Richard Manno | 1154  | 28342 | 16979 |
| Christine m Fenne    | 56749 | 7126  | 337   |



## Hypothesis

- Strong negative relationship between difference in votes candidate received and # of votes affiliated with a party
- In precincts that have a higher population of white voters, non-white candidates will receive less votes from that party
- I predicted this because the College of DuPage Board of Trustees has never had a non-white trustee

## Population

- Population included all registered voters in District 502
- The demographic for a precinct is based on a weighted estimate
- Voters that have voted in primary elections have a party associated with their record

## Procedure

- Election results were downloaded from the DuPage county website
- Voter Roll for 2023 was requested from the State election board
- Summarized the voter roll and calculated a sum in every precinct for the amount of voters associated with a party that voted in the 2023 election
- Between the election results and the voter roll, the precinct and township was used as a primary key to join the datasets

## Procedure - Continued

- By taking a weighted estimate of census block demographic data, I used an estimate of precinct demographics to plot estimated % white population on the x-axis and Candidates vote total in that precinct - the total of voters that were affiliated with that candidates party in that precinct

## Fenne Hypothesis test - Correlation

$$r = -0.0183917$$

$$H_0 : p = 0$$

$$H_1 : p \neq 0$$

$$\alpha = 0.01$$

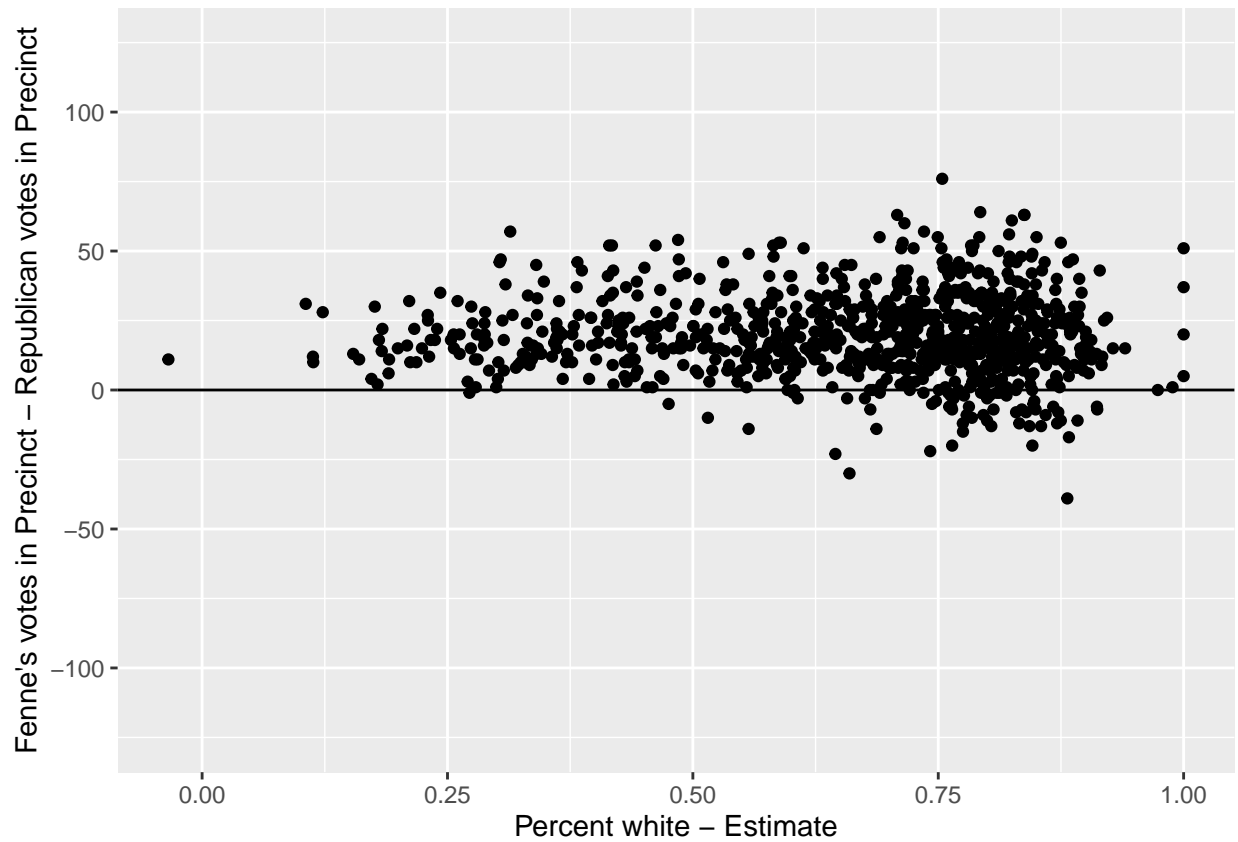
$$df = 884$$

$$\text{critical value} = 0.0864966$$

The correlation indicates close to no relationship in votes over or under received in a precinct for Christine Fenne from republican voters in precincts with a higher estimated white population

$$r(884) = -0.0183917, p = 0.5849987$$

## The number of votes Christine Fenne got from known republican voters



### Manno Hypothesis test - Correlation

$$r = -0.3777901$$

$$H_0 : p = 0$$

$$H_1 : p \neq 0$$

$$\alpha = 0.01$$

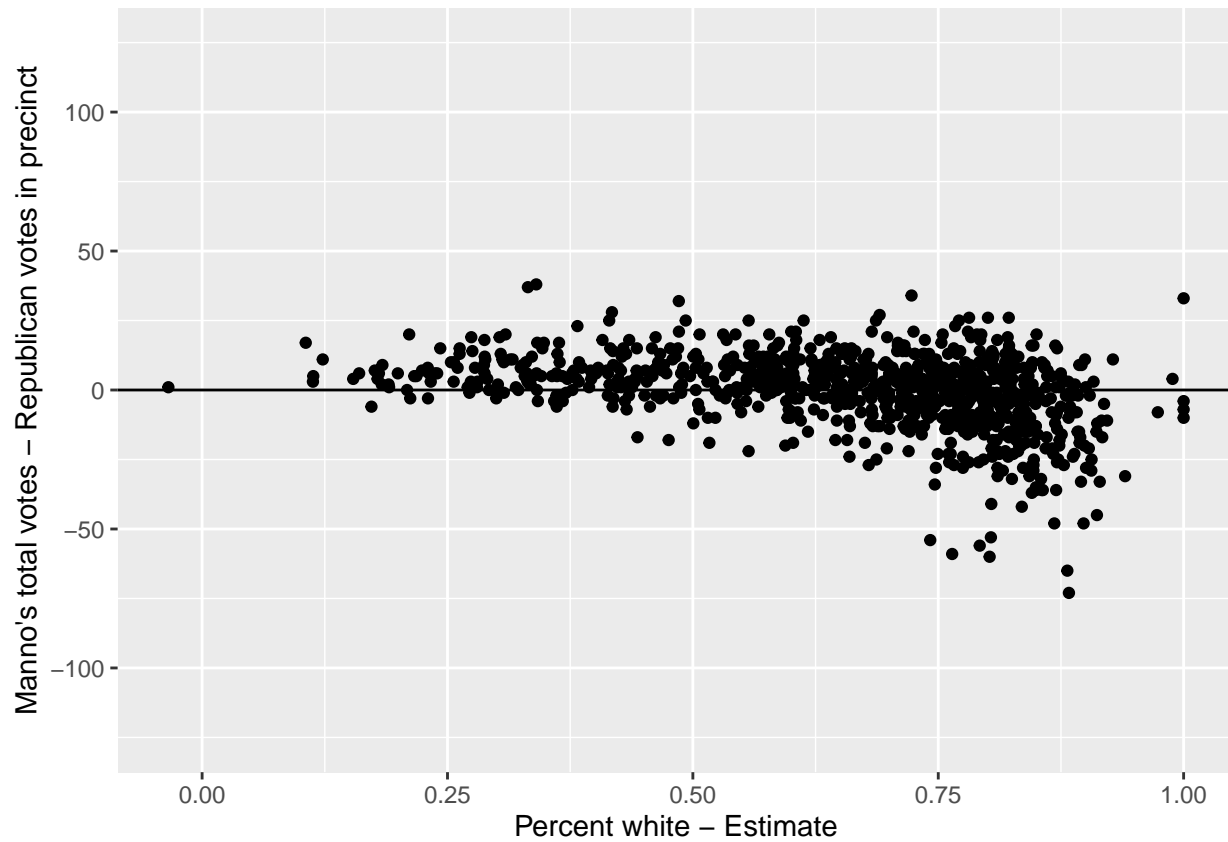
$$df = 884$$

$$\text{critical value} = 0.0864966$$

The correlation indicates a significant, medium negative relationship between amount of votes over or under received in a precinct for Andrew Manno from Republican voters in precincts with a higher estimated white population

$$r(884) = -0.3777901, p < .001$$

## The amount of votes Andrew Manno got from known republican voters



### Markwell Hypothesis test - Correlation

$$r = -0.1745071$$

$$H_0 : p = 0$$

$$H_1 : p \neq 0$$

$$\alpha = 0.01$$

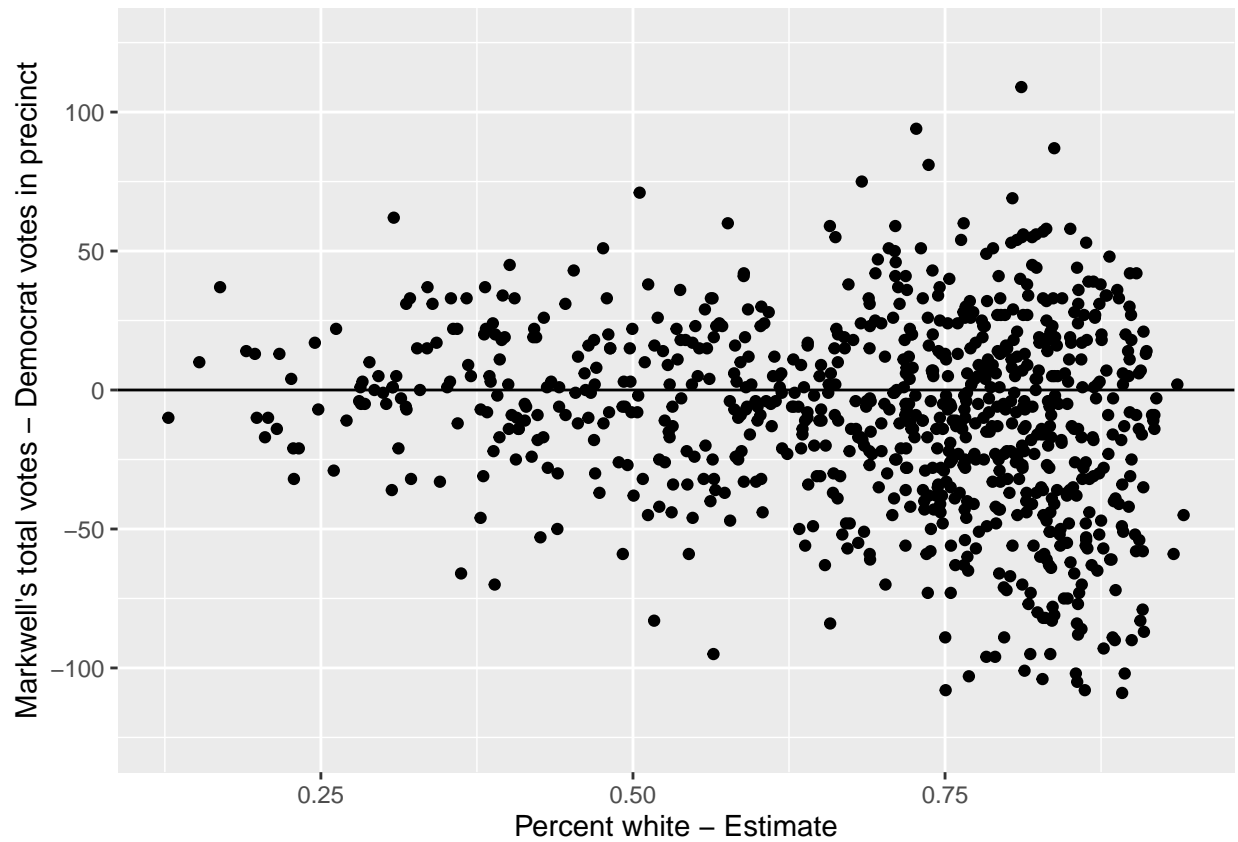
$$df = 884$$

$$\text{critical value} = 0.0864966$$

The correlation indicates a significant, small negative relationship between amount of votes over or under received in a precinct for Dan Markwell from Democrat voters in precincts with a higher estimated white population

$$r(884) = -0.1745071, p < .001$$

## The amount of votes Markwell got from known democrat voters



### Haroon Atcha Hypothesis test - Correlation

$$r = -0.2201867$$

$$H_0 : p = 0$$

$$H_1 : p \neq 0$$

$$\alpha = 0.01$$

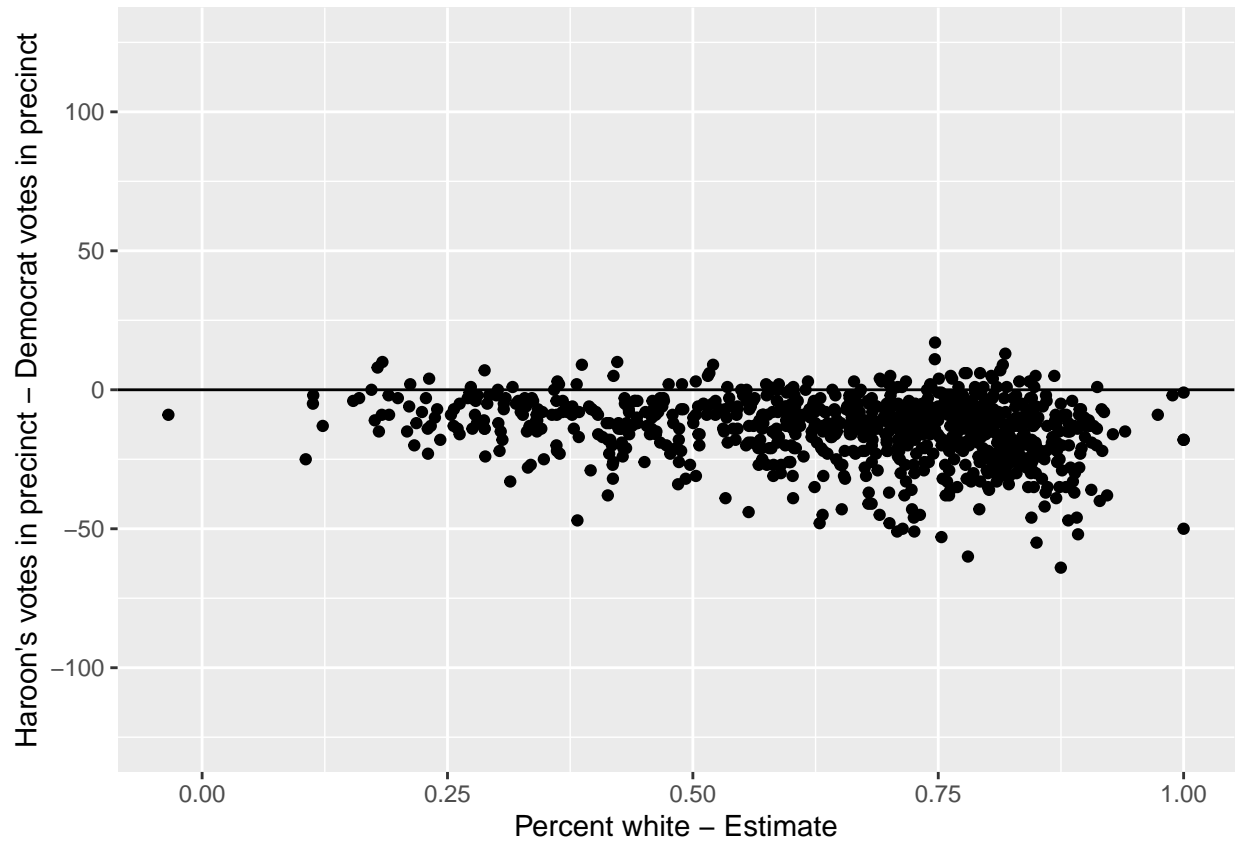
$$df = 884$$

$$\text{critical value} = 0.0864966$$

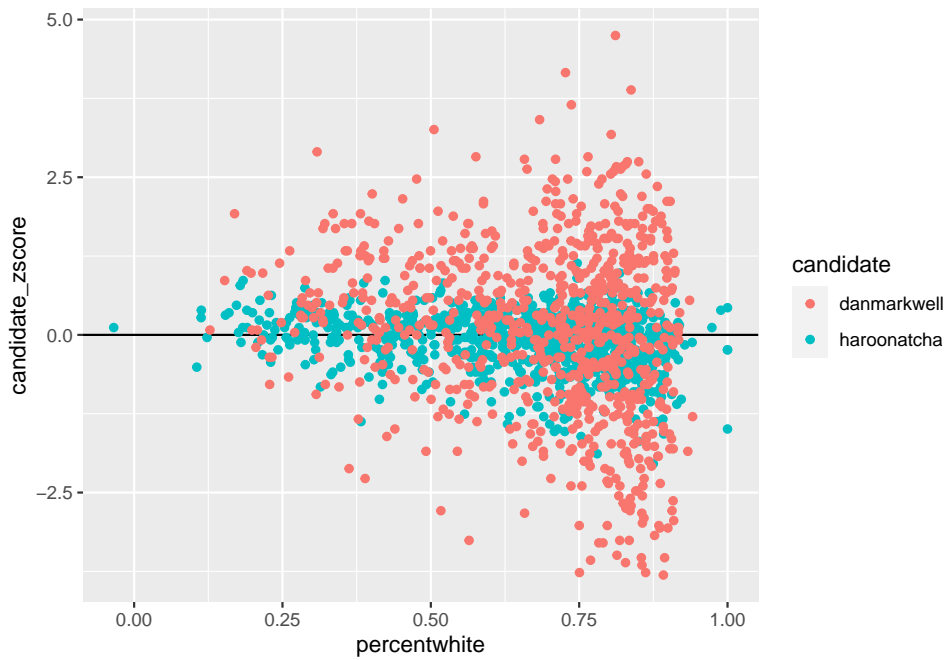
The correlation indicates a significant, medium negative relationship between amount of votes over or under received in a precinct for Haroon Atcha from Democrat voters in precincts with a higher estimated white population

$$r(884) = -0.2201867, p < .001$$

### Haroon Atcha - Votes over/under - Known Democrat voters



### Z-scores for over/under between Haroon Atcha and Dan Markwell



## Discussion

- Between the candidates examined no candidates except Christine Fenne were getting the same number of votes in each precinct as there were votes cast by voters affiliated with their party
- Dan Markwell's vote total was below the number of known Democrat votes in 55% of precincts
- Andrew Manno's vote total was below the number of known Republican votes in 42% of precincts
- Haroon Atcha's vote total was below the number of known Democrat votes in 91% of precincts

## Limitations

- Limited amount of time for analysis
- Limited amount of data
- Data that is unrecorded: Amount of volunteers, Amount of precincts a candidate walked
- Possibility for better modeling /use of tests that measure the patterns more accurately

## Implications / Conclusions

- Candidates that have a low number of contributions that win are possibly independently wealthy and/or have other variables interacting with their election result
- The result of the 2023 election suggests that race of the candidate may be a factor for voters when voting for candidates.

## References

- Andes, Scott. 2017. "Hidden in Plain Sight: The Oversized Impact of Downtown Universities." *Brookings Institution*, 4.
- Einstein, Katherine Levine, Maxwell Palmer, and David M. Glick. 2018. "Who Participates in Local Government? Evidence from Meeting Minutes." *Perspectives on Politics* 17 (1): 28–46. <https://doi.org/10.1017/s153759271800213x>.
- Gimpel, James G., Nathan Lovin, Bryant Moy, and Andrew Reeves. 2020. "The Urban–Rural Gulf in American Political Behavior." *Political Behavior* 42 (4): 1343–68. <https://doi.org/10.1007/s11109-020-09601-w>.