

SAS® GLOBALFORUM 2015

The Journey Is Yours



Background

Recently, about 30 states have passed laws requiring voters to produce valid photo ID's to vote. To estimate the law's effect on voting behavior, the Chair of American Statistical Association (ASA) Scientific and Public Affairs Advisory Committee, Mary Gray, appealed to professors in states with voter ID laws to field an exit poll.

Cooperating with League of Women Voters, a nonpartisan organization aiming to engage all citizens in voting participation, SMU statistics department conducted a Mid-term Election Exit Poll in Nov, 2014 by hiring student volunteer pollsters. The voting history database maintained by the Dallas County Elections Department was used to determine the sampling plan.

Objectives

To estimate the number and proportion of voters across Dallas County who experienced the following types of difficulties in voting on election day:

- Going to the wrong polling station
- Excessive wait time
- Not having appropriate ID

Especially interested to see if these rates differed by

- Age group
- Gender
- Race/ethnicity



Data Collection Method

A stratified two-stage sampling plan was made.

Two-dimension stratification:

1. Time of day (morning, mid-day, evening)
2. High and low propensity polling office
 - a. Calculated the percentage of youths, elders and Hispanic population in each polling office covered area
 - b. Standardized the percentages and took the maximum
 - c. Ranked the precincts based on the above maximum

This resulted in 12 stratum, and four half-hour time period at different polling offices were randomly selected in each strata. (48 samples in total)

The number of hired student volunteers was enough to sample 38 half-hour time periods on election day. A total of 854 voters were surveyed and 607 responded. The response rate is 71.07%. The average number of voters interviewed per polling place was 16.

Data Preparation

$$Weight_{final} = Weight_{base} \times Weight_{nr}$$

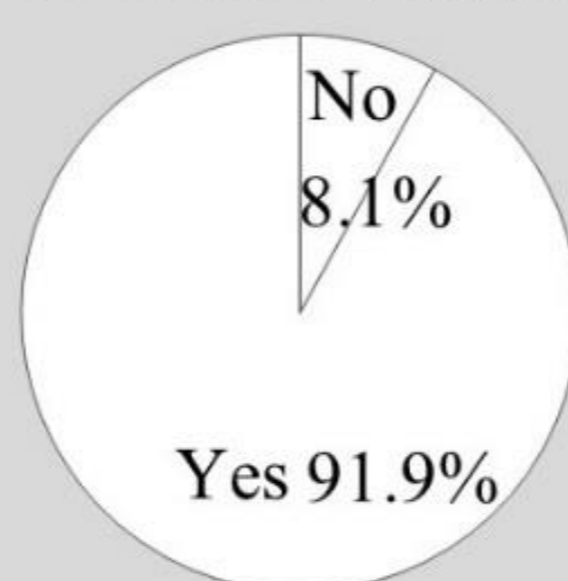
$Weight_{base}$ is the reciprocal of the selection probability of a sampled voter.

$$Weight_{nr} = Weight_{nr,PSU} \times Weight_{nr,SSU}$$

The weighting adjustment for unit nonresponse has two parts: missing on PSU level and on SSU level.

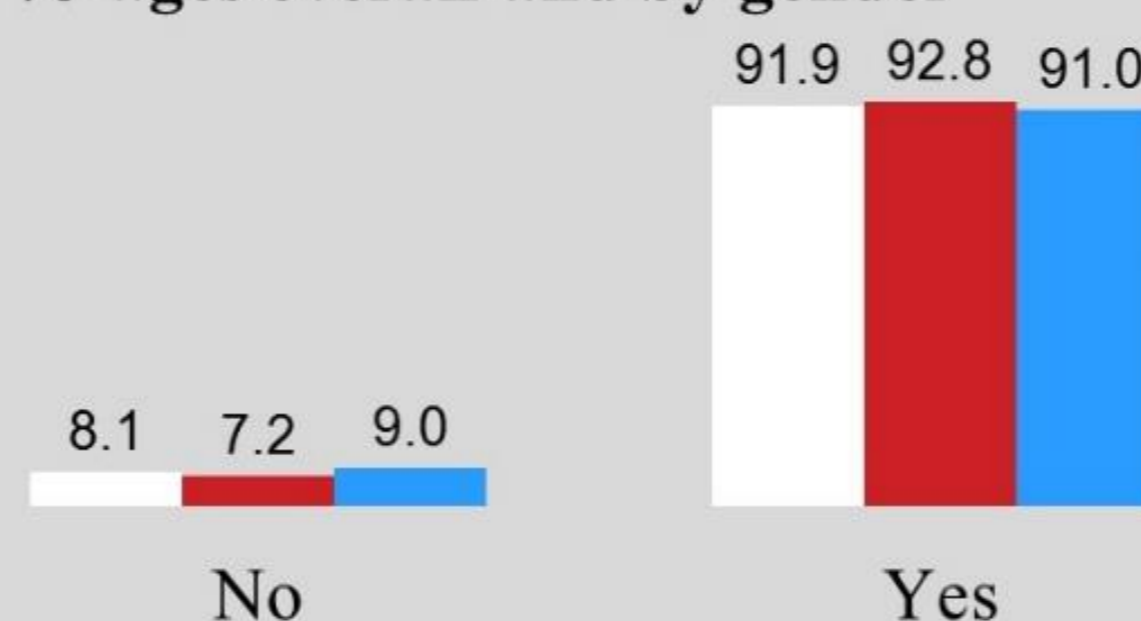
Results

Overall turnout

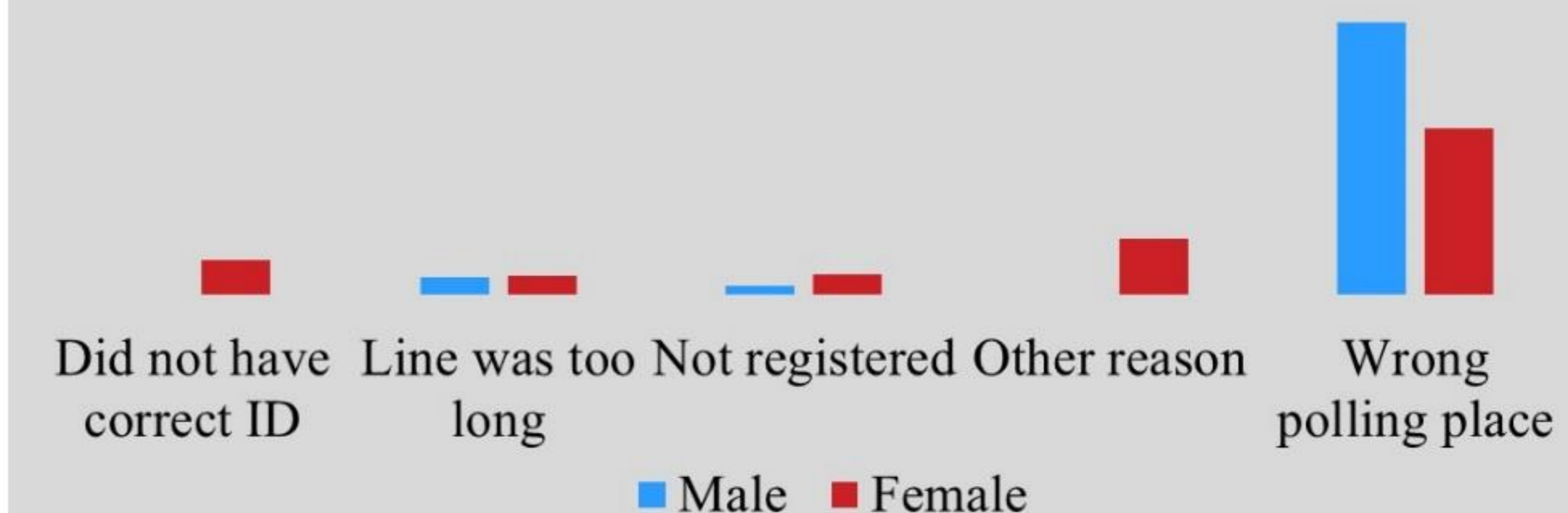


%-ages overall and by gender

- Total
- Female
- Male

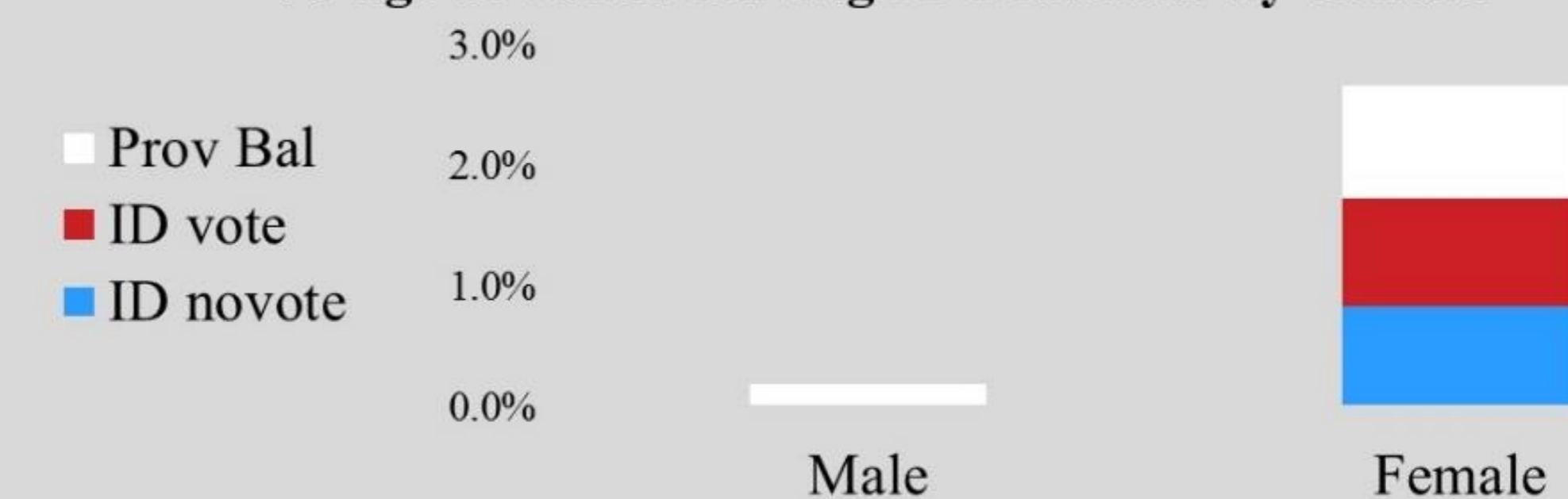


Reasons for failure to vote by Gender



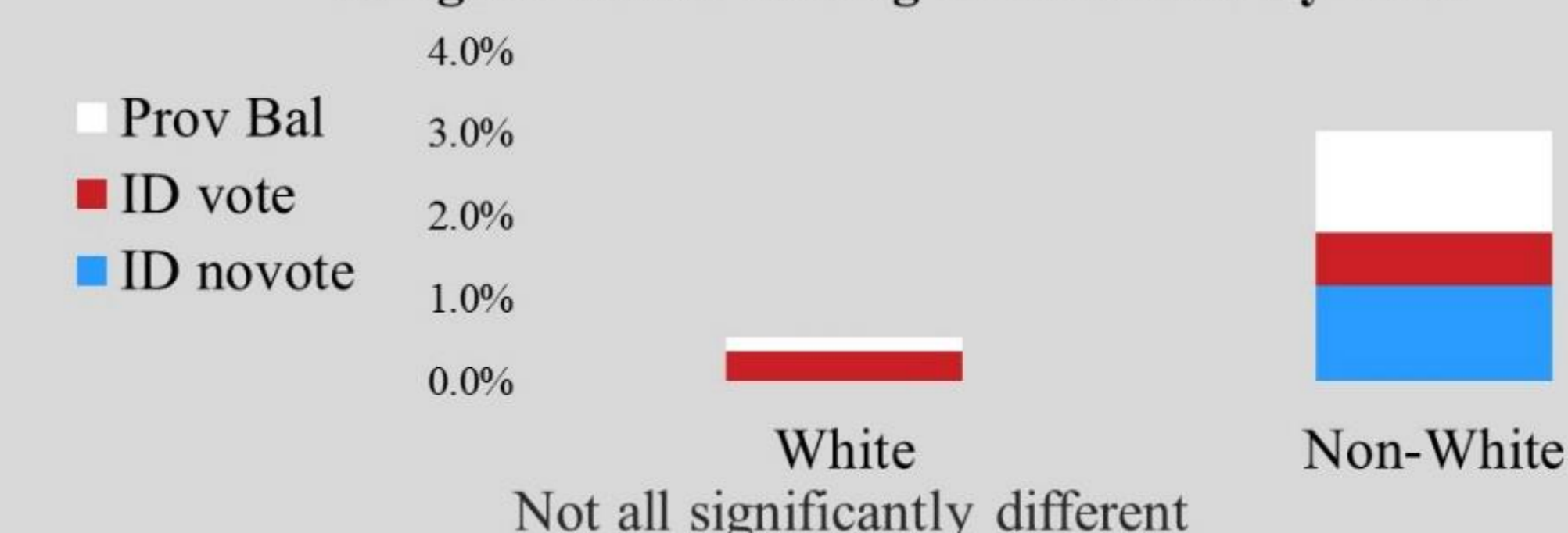
Three categories of ID associated problems	percentage
• Voted, but had to cast provisional ballot (Prov Bal)	0.6%
• Voted, but earlier failed to produce ID (ID vote)	0.5%
• Were not able to vote because of no ID (ID novote)	0.4%
Total	1.5%

%-age of Voters Having ID Problems by Gender



All significantly different

%-age of Voters Having ID Problems by Race



Conclusions

As estimated, 1.5% of the population (30-40 thousand people) experienced ID related issues and the proportion differs by gender and likely by race. There is no evidence that the proportion differs by age. The major reason for failure to vote is not finding the right polling office. Most people wait less than 30 minutes and there is no evidence that it differs by demographics.



April 26-29
Dallas, TX

