

Methodology / Nature of Sample

The New York Times Upshot/Siena College Research Institute survey of 3,766 registered voters in Penn., Mich., Fla., Wisc., N.C., Ariz, along with the survey of 1,435 registered voters in Iowa, was conducted from Oct. 13 to Oct. 30.

The survey is a response-rate adjusted stratified sample of registered voters selected from active registered voters on the L2 voter file, with an oversample of registered Democrats in the state of Iowa.

The probability of selection was inversely proportionate to telephone coverage in each strata and the probability of response, based on responses to 2018 Times/Siena surveys. The strata were defined by the interaction between party, race and region. In Iowa, an oversample weight was applied to target Democrats at 50 percent of respondents.

Voters were contacted on cellular and landline telephones. Interviewers asked for the person named on the voter file, and ended the interview if the intended respondent was not available. Interviews were conducted in English and Spanish. Over all, 66 percent of respondents were reached on a cell phone, and 34 percent were reached on a landline.

Each state sample was weighted to match the composition of active registered voters by age, race, region, turnout, party, gender and education. Population parameters for the composition of registered voters for each state were based on active registered voters on the L2 voter file, except education.

Party registration was used for the partisanship weight in the states with party registration. A model of likely partisanship, based on voter file data and past Times/Siena polls, was used in Michigan and Wisconsin.

The estimates for education are based on a model of turnout in the November 2016 voting and registration supplement to the census Current Population Survey, adjusted to match current statewide voter registration figures and estimates for the current demographic composition of the adult civilian non-institutionalized population, based on data from the American Community Survey.

Post-hoc design changes were implemented in the state of Michigan. The results should be treated with an added degree of caution. The target for interviews in Michigan was reduced to 500 from 650 due to low productivity. The standard weights for registered voters yielded a design effect of 1.62, exceeding our maximum threshold of 1.4. As a result of the unbalanced sample, the results in Michigan are highly variable depending on weighting choices.

Michigan weights were consolidated to reduce the design effect: voters were weighted by three categories of age, rather than four; two categories of education,

rather than four; and a modeled partisanship weight, rather than past primary vote history.

A final weight balanced the six state samples to represent one-sixth of the battleground poll. The margin of error on the combined battleground state survey is plus or minus 1.8 percentage points.

| Group | Sample | Weighted |
|--------------------------------------|---------------|-----------------|
| Biden v. Trump | Biden+3 | Biden+2 |
| Warren v. Trump | Even | Trump+2 |
| Sanders v. Trump | Sanders+1 | Even |
| Reg. Dem (or model in Wisc., Mich). | 34 | 33 |
| Reg. GOP (or model in Wisc., Mich) | 33 | 32 |
| Reg. Other (or model in Wisc., Mich) | 33 | 35 |
| 18 to 29 | 14 | 15 |
| 30 to 44 | 20 | 23 |
| 45 to 64 | 36 | 35 |
| 65 plus | 30 | 27 |
| High school or less | 16 | 28 |
| Some college or trade school | 37 | 36 |
| Bachelors' degree | 26 | 21 |
| Postgraduate or Professional Degree | 19 | 12 |
| White | 74 | 73 |
| Black | 9 | 9 |
| Hispanic | 10 | 10 |
| Asian/Other | 5 | 5 |
| Democratic (party ID) | 31 | 31 |
| Republican (party ID) | 30 | 30 |
| Independent (party ID) | 33 | 33 |
| Voted in 2018, and a recent primary | 45 | 44 |
| Voted in 2018, no recent primary | 23 | 24 |
| Voted in 2016, but not 2018 | 15 | 14 |
| Voted neither, previously registered | 11 | 12 |
| Voted neither, registered since 2016 | 5 | 6 |
| Male | 51 | 48 |
| Female | 49 | 52 |

