CITIZEN DATA

MICHIGAN ABSENTEE VOTING PROJECTIONS

Background

Citizen Data is currently working to project expected absentee voting behavior this November, with the primary goal of supporting election administrators with strategic resource allocation in light of these unprecedented national circumstances. Citizen is developing statistical models to predict the likelihood that individuals in key states — including Ohio, Florida, Georgia, Michigan, Wisconsin, and more — will vote absentee for the general election this year.

Michigan was chosen for this project because the state:

- typically sees only around 25% of votes cast by absentee ballot in presidential general elections;
- has both large metropolitan cities and rural areas; and
- held its presidential primary election in March (meaning the state's presidential primary voter turnout data is available to be incorporated in predicting its population's likelihood to vote by absentee ballot)

This memorandum outlines the preliminary findings for our Michigan model, as well as our next steps for additional weighting and research.

Data and Method: Overview

Our Michigan absentee model combines historical data with recent survey responses to understand how Michiganders have acted in the past and how they intend to in the future in light of COVID uncertainties. Citizen conducted a large-sample (N=4,000) survey and matched the results of that survey to its in-house national voter file. Then, Citizen weighted the dataset against the historical data to predict absentee vote turnout in the 2020 Michigan general election.

Context

In the 2016 general election, approximately 25.1% of Michigan votes were absentee, out of the total 4,482,130 votes cast. In the 2020 presidential preference primary, approximately 39% of votes were cast absentee.

Results

As of late July, Citizen's modeling projected:

- 4,777,619 of 7,191,963 (66.4%) registered Michigan voters are likely to vote in the November election
- 2,054,291 of 4,777,619 (43.0%) likely voters in Michigan are projected to vote absentee, either by mail or by returning their ballot at a secure dropbox in the November election

Michigan absentee turnout projections vary significantly by party:

- ➢ 61.1% of Democratic Michigan voters are projected to vote by mail or by returning their ballot at a secure dropbox
- ➢ 24.3% of Republican Michigan voters are projected to vote by mail or by returning their ballot at a secure dropbox
- ➢ 17% of non-partisan Michigan voters are projected to to vote by mail or by returning their ballot at a secure dropbox

Michigan absentee voting rates are significant across racial strata:

- ➢ 62.4% of Asian voters;
- ➢ 41.4% of White voters;
- ➢ 56.5% of Black voters; and
- ➢ 39.6% Hispanic voters are likely to vote by mail or by returning their ballot at a secure dropbox

Rates of voting absentee are projected to be highest among the highest earners in Michigan:

- ➢ 58.1% of those earning more than $200,000 per year are projected to vote absentee; and
- ➢ 35.2% of those earning between 50,000 to $100,000 per year are projected to vote absentee

Modeling and Methodology Details

Survey Data Collection

Citizen conducted a large-sample (N=4,000) survey among Michigan active voters between 7/21/2020 and 7/24/2020. Voters in the sample were required to have voted in at least one election since and including the 2016 general election or to have been newly registered. The survey respondents were selected to closely match the age and other demographic distribution of the Michigan electorate, and were sampled evenly across Congressional Districts. After the survey was completed, Citizen matched each respondent to its dynamic in-house national voter file.

Likely Voter Modeling

Before modeling the likelihood that an individual is likely to vote by mail or dropoff, we first had to predict whether the individual was likely to vote at all. To do this, Citizen generated a dataset that reflected what the voter file would have looked like in 2016 prior to the general election. We trained a model to predict voter likelihood in the 2016 election using an ensemble of machine learning methods. We then applied that predictive model to the 2020 voter file and generated a likelihood between 0 and 1 that each voter would vote.

Likely Absentee Voter Modeling

Citizen generated usable data points and tags from the survey responses that we could use for modeling an individual's likelihood of voting absentee. Specifically, we accepted individual's answers that they were "Likely" or "Very Likely" to vote by mail or dropoff as an intention to vote absentee and considered all other voters as unlikely to vote absentee. We

then eliminated all individuals from the survey file who responded that they had voted in the preceding primary election, but in fact had not.

Using an ensemble of machine learning methods, we ultimately trained a model that predicted whether an individual would vote absentee against the dataset resulting from the survey. We then applied that predictive model to 2020 "Likely Voters" as determined by the first stage of the model and generated a likelihood between 0 and 1 that each voter would vote absentee.

Key Takeaways and Future Model Updates

At 4,777,619 Michigan voters, we project 2020 general election overall turnout to be slightly higher than the 2016 general election's overall turnout of 4,439,970 — we also project significantly higher rates of absentee turnout. These increased rates of absentee turnout are reflected across racial and income demographic strata. The rate of turnout is likely to vary dramatically by party, and is predicted to be slightly higher among older populations than younger populations.

Though we weighted the responses to account for reasonable levels of response bias, it's important to note that this prediction was reached by surveying voters, who sometimes overestimate their voting intentions.

While Citizen is confident in its projections given the data inputs, the situation is fluid and dynamic, and future updates and improvements to the model will be necessary. This is an unprecedented and anxious time for Americans, and many factors that will affect how Michiganders turn out to vote absentee, including but not limited to:

- the varied language people use to reference understand vote by mail;
- unpredictable public-health related uncertainty;
- future projections of the unemployment rate in Michigan; and
- many other factors (see Appendix A for a full list of research questions in progress).

While these factors were incorporated into this initial model, Citizen will continue to update its projections for Michigan as these factors evolve with even greater emphasis. Further, Citizen will continue to improve its method as it receives additional input from experts in the field.

Conclusion

Due to the health and economic impacts of the COVID-19 pandemic, Michigan election administrators should anticipate notably higher degrees of voting absentee by mail and dropoff in 2020 than in previous elections. Still, our country's current situation is unprecedented and evolving, meaning that Citizen's model projections will need to be updated dynamically in coming weeks.

APPENDIX A: Research Questions in Progress

- *What percentage of survey respondents who self-reported that they are likely to vote did not vote in the 2020 primaries?*
- *How polarizing is voting by mail along party lines, and how might that impact potential voter turnout?*
- *What programs for voter education and mobilization could affect voter turnout based on various levels of funding?*
- *What role may anti-vote-by-mail efforts have on voter turnout?*
- *How several variables could impact voter turnout, including:*
    - *the level of coronavirus apprehension*
    - *the restrictions implemented by social distancing measures*
    - *Any changes in state policy*
    - *Any USPS delays in mailing and receiving absentee applications and ballots*
    - *Lack of voter confidence that their ballot will be received and counted*
    - *An unprecedented unemployment rate*
    - *The lack of universal education and understanding of the nuances of absentee voting by mail*