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Abt Associates conducted the survey of registered voters in Massachusetts' 3rd Congressional District on behalf of the University of Massachusetts Lowell. The survey included telephone interviews with a representative sample of n=1,361 registered voters of Massachusetts' 3rd Congressional District. Telephone interviews were conducted by landline (n=1,081) and cell phone (n=280). Interviewing was conducted from April 12th to April 17th, 2018.

Sampling

The survey design used a "Registration-Based Sampling", or RBS, with a list of Massachusetts' 3rd Congressional District registered voters (RV), provided by Aristotle, as the sampling frame. This RV list contains some information that people who register to vote in Massachusetts' is asked to provide, including their landline or cellphone number. About 77% of the registered voters in Massachusetts' 3rd Congressional District provide either their landline or cellphone number. Therefore, it is important to also interview registered voters that do not have a telephone appended in the RV list to avoid a potential coverage problem. For this reason, we also selected from the RV list a sub-sample of records without a telephone appended and sent them to a third-party company for a phone lookup using their address, which is another information appended to the list. We were able to successfully append a telephone number to about 15% of these records.

For the landline samples, interviewers were asked to speak with the registered voter selected in the RV list with the corresponding telephone number. For the cell samples, interviews were conducted with the person who answered the phone. Interviewers verified that the person was an adult and in a safe place before administering the survey. At the end of the interview, we obtained confirmation if the respondent was the individual selected in the RV list. Those who did not matched were sent to Aristotle for a post-data collection lookup.

All cooperating respondents were asked to confirm their voter registration status. To determine which respondents were eligible to vote in the upcoming Democratic primary, all registered voters were asked for their party registration. Finally, all eligible Democratic Primary voters were asked about their intention to vote in the upcoming Democratic primary, as well as attention to the race, and history of voting in similar primary elections.

Weighting

The final weights (Weight) produced for this survey aligned the sample to match population parameters of the registered voters in the 3rd Congressional District of Massachusetts. To construct the weights, we used the full sample of n=1,361 registered voters. The full sample was calibrated (raked) to benchmark demographic distributions for the 3rd Congressional District of Massachusetts registered voter population, as described below.

The weighting balanced sample demographics to registered voter population parameters for the 3rd Congressional District of Massachusetts. The sample was balanced to match the registered voter population parameters for age by gender, education by gender, education by age, race/Hispanic ethnicity and party identification. The population parameters were computed from the RV list of the 3rd Congressional District of Massachusetts purchased from Aristotle.

The weighting was conducted using an operation known as raking ratio estimation, or "raking". Raking is used to reduce the risk of biases due to nonresponse and non-coverage in sample surveys. The raking procedure uses an iterative technique that simultaneously calibrates the sample to target population distributions defined by socio-demographic parameters. After the raked weights were generated, we examined the distribution of values. The final weights were trimmed at the 2.5 and 97.5 percentiles to prevent individual interviews from having too much influence on the final results.

An additional weight (Weight_Pres2016) was computed using the same procedure described above, but adding among the raking variables the 2016 presidential election vote choice (Trump, Clinton, Other or did not vote). The population parameter for such variable was obtained from the Secretary of the Commonwealth of Massachusetts website[1].

Margin of Error

The margin of error for an estimate is a measure of uncertainty that reflects the fact that the estimate is derived from a sample drawn from the population. If one were to draw a second sample in the exact same manner, the estimate would be different from the first simply due to the fact that the sample contains different members of the population. A third sample would be different from the first two, and so on. The margin of error measures how different estimates could be based on drawing different samples from the same population.

The error margin for the sample of 490 Democrats Primary likely voters is +/-5.5 percentage points. This includes a "design effect" of 1.6 for the likely voter sample. The design effect is the amount of variability introduced by the weighting.

[1] http://electionstats.state.ma.us/ Accessed on April 16th, 2018.