# Do We Really Care about Online vs Phone Based Polling?

* We should have some final little story after all our articles highlighting the overarching goal of our narrative I think – there are many possible reasons why polls were wrong, and it’s unclear which is correct

Looking back at the recent 2016 Presidential election there are many surprising events to reflect on. Of course, the unexpected victory of Donald Trump (Republican) over Hilary Clinton (Democrat), despite her clear lead throughout polls, tops said list. This outcome is also covered by my colleagues, so I’ll seek to gain a different perspective and explore the differences in results based on polling technology. That is, the predictions of online polls versus phone-based polls – note, this will also be referenced as differences in medium.

A graph with numbers and a bar

Description automatically generatedFirst, some background. Polling methods can be split into three main categories: Live Phone, Online, and IVR. IVR means Interactive Voice Response, an automated form of polling conducted over the phone[[1]](#footnote-1). To compare results by medium, Live Phone and IVR are both considered when talking about Phone polling, leaving 90 Phone polls and 51 Online polls.

A graph of different colored squares

Description automatically generated with medium confidenceTrump won the election because he won specific battleground states. Notably, other than Virginia, he won every battleground state with 10 or more electoral college votes.

These states are Arizona, Florida, Michigan, North Carolina, Ohio, Pennsylvania, and Wisconsin[[2]](#footnote-2). Because of a lack of trustworthy data, Michigan and Wisconsin are dropped in favor of the others and the U.S. in general.

A graph of different colored bars

Description automatically generated with medium confidenceA graph of different colored bars

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Clinton Polling vs Election Vote

Trump Polling vs Election Vote

Trumps actual popular vote share was far above any value estimated by pollsters, whether Online or by Phone, but the Phone value was always closer. Similarly for Clinton, almost all predicted vote shares are smaller than actual popular vote gained, but on average the margin is much smaller for her than Trump, and in North Carolina, her polled share was even higher than her actual gained share. So why are actual numbers higher than polled numbers in both cases? Likely because of how the polls are designed. Since these values are averages of the percentages of all relevant polls, and polls typically allow ‘No Response’ for some questions or responses like ‘Unsure’ or ‘Undecided’, we end up with results that are lower than a general election, where ballots are counted only if they are filled for one of the candidates, and spoiled ballots are not considered (ballots that are not countable as supporting a candidate).

Considering this realization, Clinton’s results are more concerning. If we scale the averages of Clinton’s polling numbers so together with Trump’s they add to 100%, we see how badly her polling missed.

A graph of different colored bars

Description automatically generated with medium confidence

Clinton Polling vs Election Vote (Percentage of Vote Gain Compared to Trump)

For every single battleground state above, Clinton’s election vote percentage was between 2% and 5% lower than what Online polls predicted and between 1% and 2% lower than what Phone polls predicted. Clearly, Clinton was favored more in Online polls than Phone polls, but phone polls also overestimated her support.

Now moving on, there’s the main observation to circle back to – in all relevant states, Trump polled higher, sometimes much higher, in results taken through Phone polling than results taken through Online polling. As some theories suggest, perhaps those being polled were nervous about showing their support for Trump – a hypothesis called the ‘shy Trump supporter’[[3]](#footnote-3). If we follow this theory, lower predictions in Online polling are somewhat unexpected, given that Online polling is relatively anonymous compared to Phone polling.

Another consideration is Trump supporters tend to skew older, topping 50% of the population above 50 years old[[4]](#footnote-4). Seeing as these same age groups are less likely to be online at the current day (2016) and are more likely to still have a home phone/centralized line listed in a geographic based directory, this could explain why Trump appears to poll much better on Phone polls. Phone polls are more likely to include his voter-base.

A final and interesting note to leave you thinking about this topic. What happens to the disparity between Phone and Online polls if we limit to only polls that are highly graded by FiveThirtyEight, an award-winning polling analysis website. Since polls are graded on a scale from A+ to C-, consider those graded B and above.

A graph showing the difference between the average and the average

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First, there is a large drop in number of polls, but the drop is relatively uniform for both Phone and Online.

*With fifty-one Phone polls and twenty-one Online polls, how do results change?*

A graph of different colored bars

Description automatically generated with medium confidence

Comparing with the results of only high graded polls, Trump support in Phone polls falls, which is unexpected because it was already far below his final vote percentage. Also, his support in Online polls either stays relatively the same or rises. It is possible, knowing Trump’s voter base skews older, the better polls are adjusting for this in an attempt to produce more representative results. Also, seeing that the Phone polls lose more percentage than Online polls gain, it appears that including the poorly graded polls provides a better prediction for actual results, especially when looking at Phone polls. Including the poorly graded polls gives a better prediction of final election results.

A graph of different sizes of bars

Description automatically generated with medium confidence

As for Clinton, the changes are different. For Phone polls results are relatively consistent, either staying the same or falling slightly. However, for Online polls, Arizona shows a drop in predicted votes, while Ohio shows a large gain. Clinton performed worse in Ohio than any of the other four states studied and including the bad Online polls almost exactly predicted her result (43% popular vote), however, using only the good Online polls results in a prediction that is almost 2% too high (45%), which again, presents issues with the medium by which polls were conducted.

Overall, it appears like good pollsters had theories on polling methods benefiting specific candidate, with Online polls benefiting Clinton and Phone polls benefiting Trump. In both cases, we see that whatever adjustments were made to produce the results of these polls, they are less accurate than when including lower graded polls. Maybe next time, as a reader, consider how the poll you are reading is conducted and whether it could help to consider multiple outlets with multiple methods of polling.

**Will (possibly) add a tie-together section at end here once read everyone else’ part to make sure there is a flow and a clear common purpose interpretable to the marker.**

1. http://www.custom-ivr.com/ivr-polls.htm [↑](#footnote-ref-1)
2. https://ballotpedia.org/Presidential\_battleground\_states,\_2016 [↑](#footnote-ref-2)
3. DOI 10.1515/spp-2016-0005 [↑](#footnote-ref-3)
4. https://www.pewresearch.org/politics/2018/08/09/an-examination-of-the-2016-electorate-based-on-validated-voters/ [↑](#footnote-ref-4)