Ohio 2004 Exit Polls: Explaining the Discrepancy

This is a summary of the first report on the Ohio exit poll controversy by the Election Science Institute. We conclude that the data do not support accusations of election fraud in the Ohio presidential election of 2004. The full report has been submitted to a journal for publication, data and charts will be posted with the 2004 Ohio Exit Polls and Election Results Presentation at www.electionscience.org.

Background

Exit polls conducted for the national media on Election Day 2004 appeared to predict that Senator John Kerry would win Ohio. Had Kerry won Ohio, he would have won the Presidency. To some observers, the discrepancy between the polls and the results suggested that there was a problem at the core of the electoral mechanism: the counting and tabulation of votes after they were cast. The discrepancy gave rise to widespread accusations that votes were shifted from John Kerry to George W. Bush.

ESI evaluated the statistical basis for these accusations, using different methods than have been used previously. Many other important aspects of the election, such as voting equipment distribution and waiting times, will be examined in other reports. This report
is concerned only with the exit poll discrepancy.

The exit poll that fueled the accusations was conducted jointly by Edison Media Research and Mitofsky International (Edison-Mitofsky) for the National Election Pool. The poll compared only the Bush and Kerry vote, ignoring the very small number of voters who supported other candidates. Based on 49 precincts sampled in Ohio, the poll predicted that Kerry would win the Bush/Kerry vote. However, according to the official results, Kerry won only 47% in those precincts and 48.94% statewide (an explanation of the difference between these two figures is part of the full report, which has been submitted to a journal for publication).

Edison-Mitofsky, after studying their own data, acknowledged that the discrepancy was too large to be explained by random chance.

Two explanations for the discrepancy remained.

- The fraud accusation theory assumes that there was substantial and systematic fraud in the counting of the votes, and that such vote-shifting favored President Bush; in other words, the official results were wrong.
- The non-response rate theory assumes that Bush voters were less likely to respond to the interviewers than Kerry voters; in other words, the exit polls were wrong.

It is also possible that irregularities or errors exist within the election system and that the discrepancy resulted partially from this, or a combination of factors.

Edison-Mitofsky came down firmly on the side of the non-response rate theory, but released only part of their full sample for public viewing. Critics regarded this as inadequate, but Edison-Mitofsky insisted that releasing data for identifiable precincts would violate the confidentiality promises made to exit poll respondents. The American Statistical Association’s Privacy and Confidentiality Committee supported Edison-Mitofsky’s contention. (See Edison-Mitofsky’s January 19, 2005 report at www.exit-poll.net.)

Our Study

The Election Science Institute (ESI) commissioned a study to analyze the exit poll data and the official results from 2004 and 2000. Our purpose was to see whether the fraud accusation theory or the non-response rate theory was more likely. Dr. Fritz Scheuren led the study and presented the first report from the study on May 12, 2004 at the annual conference of the American Association for Public Opinion Research in Miami. Dr. Scheuren is president of the American Statistical Association and vice president for statistics at NORC, a research institute based at the University of Chicago.

The ESI study is the only one we know of that uses precinct-level information from the exit polls.

ESI’s analysis is also the only one we know of that uses actual vote totals, suitably protected for privacy and confidentiality, to analyze the discrepancies for the exit poll precincts. In our opinion, this analysis is solidly based on evidence that other studies have not used. Here we summarize our analysis.

ESI looked at the range of non-response rate possibilities in the sampled precincts to see whether the reported vote in those precincts fell inside that range. In 47 of 49
Ohio 2004 Exit Polls: Explaining the Discrepancy

precincts it did (see Figure 1). Therefore we find the Edison-Mitofsky hypothesis to be within the bounds of the data.

We also compared the relationships between the exit polls and the reported votes in 2000 and in 2004 to see whether there was a difference between the precincts where Bush did better in the exit polls and those where he did worse in the exit polls (see ESI Analysis of the 2004 Ohio Exit Polls and Election Results — Data and Charts: Figure 2). Had there been vote-shifting favoring Bush in the precincts where he did better, we should have seen differences between the two types of precincts, but we did not.

Finally, ESI examined whether the proportions of the vote that Bush received in each precinct, in 2000 and in 2004, were related to the difference between the reported vote and exit poll results for those same precincts. If systematic fraud or error in vote counting occurred in 2004 but not in 2000, Bush would have done significantly better in those precincts in 2004, and we would see larger differences between the reported vote and exit poll in those precincts. However, ESI’s calculations showed no correlation between the two (see ESI Analysis of the 2004 Ohio Exit Polls and Election Results — Data and Charts: Figure 3).

EXPLANATION OF FIGURE 1:
The chart above shows the range of possible response rates for the Edison-Mitofsky 2004 Presidential exit poll compared to the official vote percentage by precinct. The gray bar represents total possible response rate, from all exit poll non-respondents voting for Bush and all exit poll non-respondents voting for Kerry. The white color represents the official vote, and the red and blue colors represent the Edison-Mitofsky results. The red color represents results that overstate Kerry’s lead while the blue color represents results that overstate Bush’s lead. The bar without red or blue occurs when the exit poll and official results are the same. Data used to create this chart can be found in the ESI Analysis of the 2004 Ohio Exit Polls and Election Results — Data and Charts: Table 1 (available at www.electionscience.org).
Our Conclusions

Exit polls can predict results much more quickly than other means, and can be useful in helping reporters, social scientists, and political professionals understand why people voted as they did. However, exit polls occasionally predict less accurately than we would like.

In this case, we found a very high correlation between exit poll precinct results in 2000 and 2004. We found no association between the exit poll discrepancies and the percentage voting for Bush in these precincts in 2004. These results strongly indicate that the fraud accusation theory is not supported. The patterns in the data that we would expect to find if there had been substantial vote-shifting did not exist.

Our study indicates that the non-response rate theory is much more likely than the fraud accusation theory to account for most, if not all, of the observed discrepancy between the exit polls and the actual results.

that we need elections to be more transparent, more accountable, and more auditable. The public has a right to know exactly how elections work, and to verify for themselves that the voting and the counting is done right. ESI is working with election officials to help them provide data in a timely manner that will allow the public to confirm for themselves the accuracy of election results.

To rule out important errors or irregularities within the election system, further analysis is needed. In fact, the election records themselves need to be examined, and ESI has been engaged in that effort as well. Election results can be affected by many other factors beyond vote counting. ESI will report on those in future briefings in this series.

The fact that there is debate over this at all shows