

Rethinking Social Inquiry

Diverse Tools, Shared Standards

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Data-Set Observations versus Causal-Process Observations: The 2000 U.S. Presidential Election

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The outcome of the 2000 presidential election in Florida produced major political, legal, and scholarly disputes. This appendix addresses one of these disputes, first by summarizing a time-series cross-sectional regression analysis based on data-set observations, and then by challenging these findings through analyzing a string of causal-process observations.¹

The approach I adopt is a form of detective work. It uses Fenno's (1977: 884) "soaking and poking" to gather information, as well as George's (1979b: 113–14) "process tracing," to establish the "physical and social processes through which purported causes affect outcomes" (Bennett and George 1997: 3).

¹For definitions of these two types of observations, see chapter 13 and the glossary in the present volume.

The Option of Regression Analysis

John R. Lott argues that, in the 2000 U.S. presidential election, at least 10,000 votes were lost for George W. Bush in the ten panhandle counties of Florida.² The votes were lost because the networks declared Al Gore the winner in Florida after the polls had closed in eastern Florida but before the polls had closed in the panhandle counties, which are on Central Standard Time. Lott's conclusion was widely discussed in the aftermath of the 2000 election and led to a series of congressional hearings.

To get his result, Lott employed a "difference-in-differences" form of regression analysis, based on data-set observations.³ He obtained turnout data on all sixty-seven Florida counties for four presidential elections (1988, 1992, 1996, and 2000), and he estimated a time-series cross-sectional regression with fixed county and time effects and with a "dummy variable" for the ten panhandle counties. In effect, Lott looked at the difference between one set of counties that got a "treatment" in the year 2000 (the ten panhandle counties whose polls were still open when the election was "called") and those that did not (the remaining fifty-seven Florida counties in the eastern time zone), while controlling for differences reflected in the data from previous elections. Lott (2000) concluded that:

By prematurely declaring Gore the winner shortly before polls had closed in Florida's conservative western Panhandle, the media ended up suppressing the Republican vote. . . . An examination of past Republican presidential votes by county in Florida from 1988 to 2000 shows that while total votes declined, the Republican voting rate in the western panhandle was significantly suppressed relative to the non-Republican vote. The 4 percent greater reduction in Republican votes averages about 1,000 votes per county, [yielding] 10,000 Republican votes for all 10 counties in the western Panhandle. This holds true even after accounting for the average differences in voting rates across counties as well as the changes in voting rates from one election to another.

²This discussion is based on three sources. The first is Lott's article in the November 14, 2000, *Philadelphia Inquirer* (Lott 2000) in which he provides a general description of his methodology and claims that 10,000 votes were lost. Second, Lott's econometric analysis is described in Mason, Frankovic, and Jamieson (2001: 77–78). Third, Congressman Billie Tauzin subsequently held hearings on the elections and collected different analyses and interpretations of the vote. Congressman Tauzin's office provided me with an annotated computer printout of Lott's analysis, which reflects a methodology identical to that described both in Lott's article and in Mason et al.

³"Difference-in-differences" estimators are widely used in economics, and they are now a staple of introductory econometrics textbooks such as Stock and Watson (2003: 385–88) and Wooldridge (2000: 414–19).

Turning to Causal-Process Observations

A researcher accustomed to the exclusive use of data-set observations might stop at this point, convinced that an adequate inference had been made. However, researchers oriented toward the use of causal-process observations would ask whether the result makes any sense. Is Lott's estimate reasonable, given the number of voters who had not yet voted when the media called the election for Gore? How many of these voters heard the call? Of these, how many decided not to vote? And of those who decided not to vote, how many would have voted for Bush? Researchers can obtain answers to these questions by consulting diverse data sources and constructing a more intricate characterization of events on election day.

An inquiry to the networks established that the media calls were made ten minutes before the panhandle polls closed at 7:00 p.m.—twelve hours after the opening time of 7:00 a.m. If we assume that voters go to the polls at an even rate throughout the day, then only 1/72nd (ten minutes over twelve hours) of the voters had not yet voted when the media call was made. Alternatively, an analysis of Census data from 1996 on time of voting suggests that no more than about one-twelfth of the voters in Florida come to the polls in the last hour. If we assume that voters go to the polls at an even rate in this last hour, then (once again) only 1/72nd (one-sixth of one hour times one-twelfth) of the voters had not yet voted when the media call was made. Of the 379,000 voters in the panhandle, about 20 percent were absentee voters—leaving about 303,000 voters who voted on election day. One seventy-second of this figure is, in round numbers, 4,200 voters. The major assumption in this calculation is that voters come to the polls uniformly during the day or during the last hour. Interviews with Florida election officials and a review of media reports suggest that, typically, no rush to the polls occurs at the end of the day in the panhandle.

Only 4,200 people could have been swayed by the media call of the election, if they heard it. How many heard it? Research on media exposure suggests that an audience of 20 percent of adults for all media outlets would be very large. To be very conservative, I will assume that 20 percent of the 4,200 voters who intended to vote in the last ten minutes, or 840 people, heard the early call—though this is undoubtedly an overestimate because not all media were reporting the elections. Moreover, many of these prospective voters were Democrats or Independents who would not have voted for George W. Bush. In the panhandle, the Bush vote was about two-thirds of the total. If we assume the same proportion among those who were still to vote, it yields a total of 560 Bush voters who might have been affected.

Of these 560 Bush voters who might have heard the media call, how many decided not to vote? A review of past work on the impact of early calls (Jackson 1983) and a general knowledge of voting behavior suggests a figure of 10 percent for the fraction of voters who decided not to vote once they knew the call was made for the presidential election. After all, voters select other officials as well, and they vote for reasons other than the likelihood that their vote will be decisive.

Ten percent of 560 yields fifty-six Bush voters who might have been deterred from voting.

This estimate of Bush's vote loss still probably exceeds the actual net effect. It seems just as likely that a Gore voter, rather than a Bush voter, might have decided not to vote. After all, for both candidates, the vote is no longer relevant to the presidential election once the call has been made. If 10 percent of the 280 Gore voters did not vote, then the net effect would be 28 Bush votes—56 Bush voters minus 28 Gore voters. This suggests a range of 28 to 56 Bush votes lost depending upon whether Gore voters were affected by the call. Even if we forget the offset for Gore voters and quadruple the estimate of 56 Bush voters who might have decided not to vote, the resulting upper-bound estimate of 224 voters is far short of the 10,000 that Lott claims.

My detective work leads to the inference that the approximate upper bound for Bush's vote loss was 224 and that the actual vote loss was probably closer to somewhere between 28 and 56 votes. Lott's figure of 10,000 makes no sense at all. This simple case-study analysis based upon information that goes beyond the turnout data used in the difference-in-differences model suggests a figure that is two orders of magnitude smaller than Lott's result.

Although this case study of late voting uses quantitative data, it employs inferential tools typically associated with qualitative research. It draws upon multiple sources of information, utilizing inferences based on common sense, to establish an argument. It tries to approach the problem in several different ways, cross-checking information at every turn, and asking if the posited causal effect is probable, or even possible, given what we know from many different sources. In short, it investigates causal processes in close detail, and it tries to get beyond the results of an elaborate quantitative analysis of data-set observations.

Where Did Lott Go Wrong?

The difference-in-differences method is widely used in economics and other social science disciplines as a way to adjust observational data for confounding factors that can lead to incorrect inferences. In this case, the method assumes that turnout in 2000 can be predicted by turnout in past years after adjusting for idiosyncratic factors of two types: those factors that affect each county in the same way over the entire time period but vary from county to county (county fixed effects), and those factors that affect all counties in a given year but vary over years (time fixed effects).

This method does badly when idiosyncratic factors vary both by county and over time. For example, in 2000, organized labor put significant effort into increasing turnout in Florida, and it seems likely that it put its effort into mobilizing Democratic voters. As a result, turnout would be increased, compared to prior years, in counties with more Democrats (namely those outside the panhandle). The difference-in-difference method would not control for this. In fact, it would presume that the higher turnout outside the panhandle in 2000 should be translated

into higher turnout inside the panhandle as well. To the extent that this higher turnout was not realized, Lott's equation would pick it up as a negative coefficient on his dummy variable for the panhandle counties that he interpreted as the effect of the early media call. Instead, his coefficient might simply reflect labor's success in mobilizing voters outside the panhandle.

In addition, quantitative methods are most believable when researchers are conservative about their inferences. Instead of using the standard .05 level of significance, Lott chose to use a .10 level, and he chose to employ a one-sided test that made his t-statistic of 1.285 just significant at this 10 percent level. This lenient approach to hypothesis testing allowed him to claim that his regression detected a significant effect. However, if Lott had decided to provide a 10 percent one-sided confidence interval for his estimate instead of a point estimate of 10,000, his confidence interval would have gone from zero to 20,000, thus providing little confidence in his assertions.

Even if these problems in Lott's analysis were cleaned up by getting data on labor union activity and other factors, the analysis of such data would not necessarily supercede the inference based on causal-process observations. Even after putting aside the practical problems of collecting suitable data, it would be hard to collect data that could rule out all of the possible confounding effects. Consequently, rather than seeking additional data-set observations, in my judgment it would be more productive to do further in-depth analysis of causal-process observations drawn from these ten Florida panhandle counties, finding out what happened there, for example, by interviewing election officials and studying media reports.

Conclusion

Causal-process observations demonstrate that it was highly implausible for the media effect suggested by Lott's analysis to have occurred. Thus, what from a technical perspective could be seen as a less sophisticated tool of analysis demonstrates that his quantitative conclusions based upon regression analysis cannot be valid.

In this sense, I have sought to demonstrate the value of causal-process observations in what could be seen as a "least-likely case," that is, a data-rich domain of mass political behavior. Even in this domain, this strategy of causal assessment provides valuable inferential leverage that supplements, and in this instance contradicts, the conclusions based on the analysis of data-set observations. Indeed, the lesson for quantitative researchers is the necessity of paying attention to the causal processes underlying behavior. Otherwise, regression analysis is likely to go off the rails.