

Measuring Campaign Spending Effects in U.S. House Elections

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IT WOULD SCARCELY OCCUR TO anyone who studies modern-day congressional elections in the United States to ask, "Do campaigns matter?" Virtually everything we have learned from forty years of survey research on voting behavior in congressional elections tells us that campaigns *should* matter, and virtually everything we have learned by examining the effects of campaign-specific variables on election results tells us that, in one way or another, campaigns *do* matter. What remains in question is *how* campaigns matter. Here the consensus dissolves, and it has become increasingly clear that progress on the question requires new research strategies.

Campaigns *should* matter if only because congressional election voting decisions are strongly affected by knowledge and evaluations of individual candidates, both of which are highly variable and susceptible to the kind of information supplied by campaigns. Every National Election Study (NES) of congressional election voting since the first in 1958 has confirmed that simple knowledge of the candidates' names is both far from universal among voters and strongly associated with the vote choice. Other things equal, voters tend strongly to prefer candidates whose names they remember, or at least recognize, over unknown candidates (Stokes and Miller 1966; Jacobson 2004). If campaigns do nothing but alter the relative level of public awareness of candidates, they can influence election results. And no one, I think, doubts that campaign advertising can affect the public awareness of candidates. Beyond simple awareness, voting decisions are shaped by evaluations of candidates, and evaluations of candidates are also

subject to the kind of information, priming, and framing that campaigns can provide (cf. Lodge, Steenbergen, and Brau 1995).

That campaigns *do* matter is equally beyond dispute. The strongest evidence comes from studies of the effects of campaign spending on election results. Although scholars disagree vehemently about just how (or whose) campaign spending influences elections, almost no one claims that election results are *not* affected in some important way by how much the candidates spend on their campaigns. The unresolved questions concern how spending matters, how much it matters, and for whom, and these are the questions I propose we attack through an innovative survey design.

Campaign Spending and Campaigns

Questions about how campaign spending matters are really questions about how campaigns matter, for although the point is often left implicit in the literature, the amount of money spent is just a handy surrogate for what is really expected to influence voters, the total campaign effort, its quality as well as its quantity. To be sure, spending measures campaigning with considerable error, but there is no evidence that the error is systematic, and as long as we do not pretend to estimate effects with greater precision than warranted ("spend another seventy-five thousand dollars and you'll get 1,572 more votes"), we are not likely to be led too far astray.¹ Because arguments about the effects of campaign spending are really arguments about the effects of campaigning, any credible claims regarding campaign spending effects must be fully consistent with our understanding of campaign effects. The more we learn about the effects of campaigning, the more we should know about the effects of campaign spending, and vice versa. Despite more than twenty years of research, we still have plenty to learn about both.

Whose Campaign Spending Matters?

The most enduring controversy in the literature on campaign money concerns the relative impact of spending by incumbents and challengers. The issue arose almost as soon as the first reliable campaign spending data began to appear in the early 1970s (as a consequence of the disclosure provisions of the Federal Election Campaign Act of 1971). The data showed that campaign spending was strongly related to congressional election results, but in

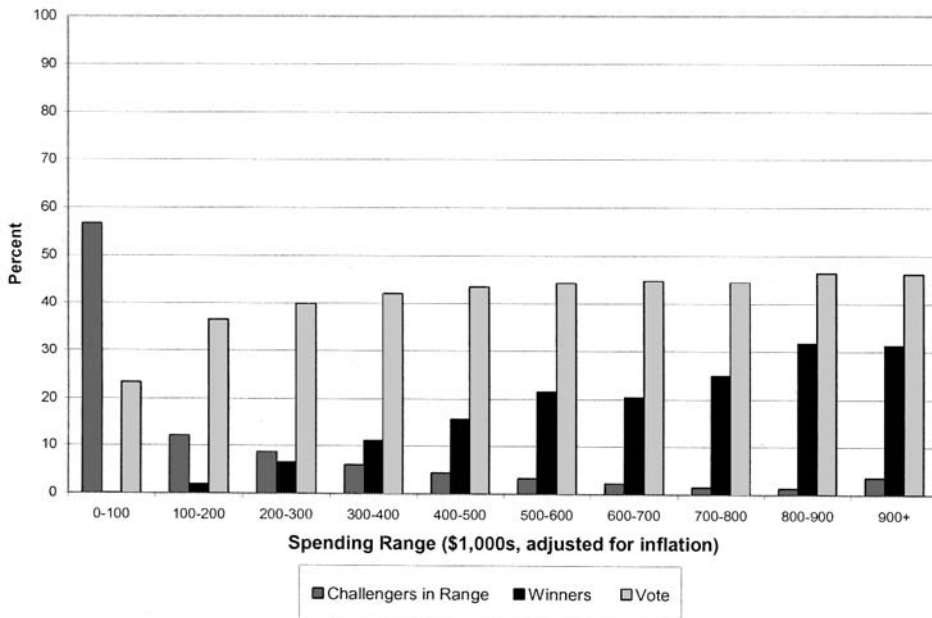


Fig. 1. Challenger campaign spending and House election results, 1972–2002

a peculiar way. The relationship between spending and votes looked very different depending on the candidate's incumbency status. The more candidates who challenged incumbent officeholders spent, the better they did on Election Day; the more incumbents spent, the worse they did. These relationships, which have reappeared in every election since 1972, are displayed graphically for House candidates in figures 1 and 2. For challengers, both the average vote and frequency of victories grow with the level of campaign spending, at least until the total exceeds eight hundred thousand dollars in inflation-adjusted dollars (2002 = \$1.00). For incumbents, votes and victories decline as the level of spending rises.²

No one has ever been so naive as to take this pattern to mean that incumbents actually lose votes and elections by spending too much money. The consensus explanation is that campaign spending by incumbents rises with the magnitude of the electoral threat they face; the more trouble they are in, the more they spend. Figure 1 suggests that the magnitude of the threat is measured tolerably well by the challenger's level of spending. When this is taken into account (typically by estimating a multivariate model that includes measures of spending by both candidates plus other

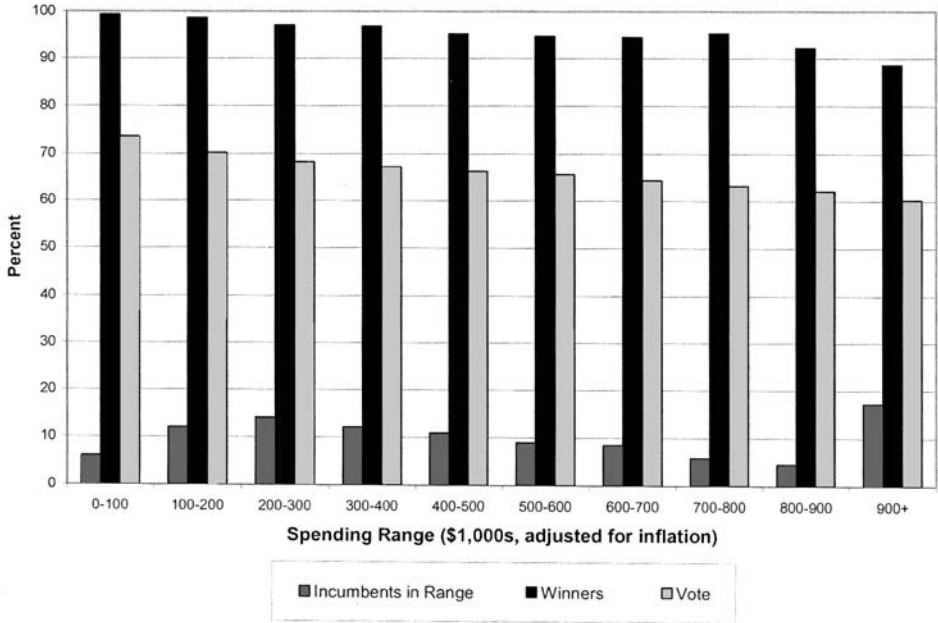


Fig. 2. Incumbent campaign spending and House election results, 1972–2002

variables thought to influence congressional election results), the incumbent's spending no longer (in most models) appears to cost votes; but, almost as disconcertingly, it appears to have little or no effect on the results. Spending by challengers, in contrast, is strongly related to the outcome; under every set of controls examined, the more challengers spend, the better they do in the election.³ Table 1 presents a pair of simple illustrative models, with votes and victories as alternative dependent variables. Controlling for the previous district vote and the national swing, the incumbent's spending appears unrelated to the vote. The incumbent's spending does, however, appear to have a significant positive effect on the likelihood of winning, though the estimated payoff for a given level of spending continues to be much greater for challengers.

These results are not credible either, for there are compelling reasons to believe that they overstate the effect of the challenger's spending and understate the effect of the incumbent's spending. The problem is that candidates and campaign contributors act strategically. Donors resist wasting money on hopeless causes. The better a challenger's prospects, the more contributors are willing to invest in their campaigns. High-quality

challengers have better prospects and are more likely to run when conditions point to success, so they attract the most money. The connection between spending and votes or victories is thus at least potentially reciprocal; money may help win votes, but the expectation that a candidate can win votes also brings in money. To the degree that (expected) votes influence spending, ordinary least squares (OLS) estimates of the effects of challengers' spending on votes will be exaggerated.⁴

Spending by incumbents is also related to the expected outcome, but in the opposite way: the higher the incumbent's expected vote and the greater the likelihood of victory, the *less* money flows into the campaign. Not that secure incumbents have trouble raising money. Quite the contrary; many access-seeking contributors are happy to back sure winners. But raising funds is a time-consuming and, for most incumbents, unpleasant chore that they undertake only to the extent that they think they need the money. Again, the anticipated vote affects spending, but for incumbents, the relationship is negative: the larger their expected vote, the less they raise and spend. To the degree that (expected) votes influence spending, OLS analyses underestimate the effects of incumbent spending on votes.

TABLE I. Single-Equation Models of House Campaign Spending Effects, 1972–2002

	Vote Share (OLS regression)	Probability of Victory (logistic regression)
Constant	71.20*** (1.75)	11.41*** (1.77)
Incumbent's vote in previous election	.40*** (.01)	.06*** (.01)
National swing to or from incumbent's party	.74*** (.03)	.30*** (.03)
Incumbent's spending (log)	-.06 (.10)	.61*** (.11)
Challenger's spending (log)	-2.75*** (.06)	-1.58*** (.12)
Adjusted R^2	.66	
Log-likelihood		-621.28
Percentage correctly predicted		94.7
Null		94.2
Number of cases	4,713	4,713

Note: The dependent variables are (1) the incumbent's share of the two-party vote and (2) 1 if the incumbent won, 0 otherwise; the national swing to the incumbent's party is the difference in the average vote won by all of the incumbent's party's House candidates in the current and previous election; all candidates are assumed to have spent at least \$5,000, the Federal Election Commission's reporting threshold; spending is adjusted for inflation (2002 = 1.00); standard errors are in parentheses.

*** $p < .001$

In short, heavy spending by incumbents is a sign of electoral weakness, while heavy spending by challengers is a sign of electoral strength. Campaign spending is endogenously determined by expectations about election results, so unless we can model expectations perfectly in the equation (which we cannot), the estimated coefficients on spending will be biased and inconsistent.⁵ Specifically, the coefficient on challenger spending will be biased upward, the coefficient on incumbent spending, downward.

The problem was recognized early on (Jacobson 1978; Welch 1981), but after more than two decades of work there is no agreed-upon solution. The standard technical fix-up is to use a two-stage procedure, in which instrumental variables "purged" of the effects of the reciprocally related variables or of the component correlated with biasing omitted variables. The success of this exercise in the present case depends on finding exogenous variables that affect spending but not, directly, the vote (Johnston 1972). This has proven difficult, and the results remain inconclusive. Different choices of exogenous variables to identify the equations and compute the instruments produce a bewildering variety of estimates of the relative effects of campaign spending by challengers and incumbents.

Reported results from various two-stage (sometimes three-stage) models of campaign spending effects range from repetition of the OLS findings in which challenger spending has a large effect while incumbent spending has no effect at all on the vote (Jacobson 1978, 1980, 1985) to estimates suggesting that spending by incumbents is as least as productive as spending by challengers (Green and Krasno 1988, 1990; Grier 1991; Ansolabehere and Snyder 1996), with others falling in between (Bartels 1991; Goidel and Gross 1994). Alternative approaches produce an even broader range of results, from evidence that neither candidate's spending matters much (Levitt 1994) to evidence that the incumbent's spending may be much more productive than the challenger's spending (Erikson and Palfrey 1998), with others again taking the middle ground that incumbents do help themselves by spending money on campaigns but with a lower marginal rate of return on their investment than challengers (Box-Steffensmeier 1992; Kenny and McBurnett 1997; Coates 1994). To have matters so uncertain after so much research is disconcerting to anyone hoping for a modicum of scientific progress. Moreover, the issue is far from merely academic, for different results bear profoundly different implications for evaluating the campaign finance reform proposals that spring up like hardy perennials after every election.

Back to Basics

The profusion of disparate models and conflicting results suggests that we need to go back to basics and that we need to consider alternative ways of measuring campaign spending effects. The basic reason for expecting that campaign spending would be more productive for challengers than for incumbents is that there are compelling reasons for thinking that *campaigns* are more important to challengers than to incumbents. Incumbents usually begin the election much better known than their opponents, and, if they retain that advantage, they win handily. Moreover, if they have been properly attentive to constituents, as the overwhelming majority are, they normally go into the campaign period with a cushion of public regard as well. Voters rarely turn on them without a good reason and an acceptable replacement. It is almost always up to the challenger's campaign to acquaint voters with both reason and the replacement. There may be a few instances where voters know the challenger and the reasons for dumping the incumbent before the campaign begins, but they are certainly rare. Even the most attractive challenger with the most compelling case for replacing the incumbent will not get far if voters remain ignorant of the challenger and the case. It matters how much challengers spend because it matters how much they campaign.

Incumbents, in contrast, typically enjoy a wide head start with the electorate and can coast to victory with minimal campaigning if spared a serious opponent, as they frequently are (observe figure 1). Whatever campaigning they do undertake comes on top of continuous, long-term work to cultivate voters, including previous campaigns. Because diminishing returns apply to campaigning, it stands to reason that the marginal returns on their campaign efforts should be smaller than they are for challengers.

This does not, however, imply that incumbents' campaigns should have no effect at all. Although incumbents are, on average, much more familiar to voters than are challengers, no more than about half of the voters surveyed can remember the incumbent's name, though more than 90 percent will recognize it from a list (Jacobson 2004, 124). More important, an incumbent who did not respond to a vigorous challenge would concede the framing of the vote choice to the opposition, a concession likely to be fatal, which is why we so rarely observe an incumbent *not* responding to a vigorous challenge.⁶ Campaigning should also matter whenever incumbents have to get out a *new* message, when, that is, an incumbent is in trouble for some

reason—personal, such as involvement in the House banking scandal in 1992, or political, as with Democrats facing the Republican tide in 1994—and needs to counter with a new pitch. Unless one is willing to argue that the *content* of campaigns is irrelevant, then it is impossible to believe that incumbents' campaigns have no effect.

It is also difficult, as many scholars have pointed out, to understand why incumbents would raise and spend so much money if spending had no benefit. It is not at all difficult, however, to understand why they would spend very large amounts of money in response to a serious challenge even if the marginal returns on spending are small, partly because the marginal returns *are* small and partly because in the tight contests produced by serious challenges even a small proportion of the vote can spell the difference between victory and defeat.

It is no mystery, then, why scholars have never been comfortable with any of the analytical results suggesting that incumbent campaign spending (that is, campaigning) has no effect on election results. But there are equally compelling reasons for doubting recent results suggesting that the returns on spending are equal for challengers and incumbents, let alone that incumbents may get more bang for the buck than challengers. If incumbents get as much out of their campaign spending as do challengers, then it is difficult to understand how any of them ever loses. More than two-thirds of the losing incumbents in elections from 1980 through 2002 outspent the winning challenger; on average, losers outspent their opponents by \$133,000 (\$862,000 to 729,000).⁷ If we accept equal marginal returns, we have to conclude that these successful challengers would have done even better had both candidates limited their spending to, say, \$100,000. But when we observe that *none* of the 2,196 challengers who did not spend more than \$100,000 won during this period, this conclusion seems, to put it mildly, implausible. Taken further, the results suggest that, because incumbents almost always outspend challengers (by an average of more than \$436,000 in elections from 1980 through 2002), elections would be more competitive and more challengers would win if neither candidate spent anything on the campaign and the campaigns were therefore virtually invisible. Knowing what we do about the incumbent's usual head start in voter familiarity and regard, a product of the perpetual, taxpayer-financed effort to cultivate constituents undertaken between elections, this conclusion also seems wildly implausible. When the most sophisticated and thorough econometric work in the literature (Ansolabehere and Sny-

der 1996) carries such an implication, it is time to consider some alternative way of getting at the problem.

A Focus on Change

One solution to at least some of the difficulties in measuring campaign spending effects is to focus on *changes* over the course of the campaign in support for the candidates. To the degree that challengers win votes by campaigning, the more they spend, the more votes they should gain over the course of the campaign. To the degree that the strong, positive relationship between spending and support for challengers simply reflects the reality that challengers with the most initial support raise the most money, spending levels should be strongly related to initial support but unrelated to subsequent changes in support. Similarly, if incumbents in trouble spend more money and their more extensive campaigns shore up support, we should find that high-spending incumbents begin with lower levels of popular support and that, other things equal, the extent to which they gain or lose votes will depend on their level of campaign spending. In short, knowing where candidates stand with voters before the campaign begins and observing how their standing changes during the course of the campaign should help us to distinguish the effect campaign spending has on voter support from the effect voter support has on campaign spending.⁸

There are two basic ways to measure changes in voters' views of candidates over time: panel surveys, in which the same respondents are interviewed at two or more junctures in the campaign, and a series of separate cross-sectional surveys taken at intervals before, during, and after the campaign (or, equivalently, a rolling cross-section). Fortunately, we already have some evidence of the possibilities and pitfalls of both methods. The evidence suggests that they have complementary advantages and disadvantages and that the ideal study would use them in combination. The evidence also suggests that the intuitions about campaign spending effects derived from considering the different campaign circumstances faced by incumbents and challengers are on target.

The 1996 American NES

The American NES for 1996 (Rosenstone 1997) incorporated both sequential cross-section and panel elements that can be used to investigate

congressional campaign spending effects. For the first time, the NES's pre-election wave included some content on the congressional races, including a vote preference question and the usual questions testing the ability of respondents to recall or recognize the candidates' names.⁹ The preelection sample was divided into four subsample replicates that were released approximately two weeks apart beginning nine weeks before the election.¹⁰ Post-election interviews were conducted in November and December, with most (86 percent) completed within three weeks of Election Day. The postelection interviews repeated the name recall and recognition questions as well as asking how respondents had voted. Interviews were completed with 1,714 respondents, of whom 888 reported voting in a race pitting an incumbent against a major party challenger, and this subset is the focus of my analysis.¹¹

The preelection wave is less than ideal for examining the effects of campaigning (campaign spending) on changes in voters' knowledge and evaluation of candidates because the interviews were taken after most campaigns had been under way for some time, with nearly half of them coming within thirty days of the election. And the postelection responses are, as we shall see, contaminated by the preelection questions. Yet the substantive results make intuitive sense in light of our understanding of how campaign spending should matter in House elections, adding to our confidence that, in combination, these are productive approaches to studying campaign spending effects.

Consider, to begin, the relationships between campaign spending and changes in the knowledge of House candidates over the course of the period covered by the NES surveys. Some elementary patterns are displayed in figures 3 and 4. Figure 3 shows how levels of name recall vary by the date of the interview and whether the candidate spent more than four hundred thousand dollars on the campaign (a threshold chosen to approximate what it costs to run a minimally competitive campaign in 1996). Figure 4 does the same for name recognition.

Figures 3 and 4 illustrate several points:

High-spending challengers and incumbents are more familiar to voters than their low-spending counterparts in every time period, but the difference is much greater for challengers than for incumbents.¹²

Knowledge of all types of candidates—challengers and incumbents, high and low spenders—rises during the campaign period.

Among challengers, the increase in familiarity is greater for high-spending challengers than for low-spending challengers. For example, high-spending challengers raise their recall rate by 19 percentage points from the earliest to the latest preelection period, compared to only 9 percentage points for low-spending challengers. Similarly, recognition rates rise 31 percentage points for high-spending challengers, compared to 18 percentage points for low-spending challengers.

The knowledge gap between high- and low-spending incumbents is modest to begin with and narrows over the course of the campaign.

By the end of the campaign period, high-spending challengers have sharply reduced the incumbent's familiarity advantage, while low-spending challengers remain far behind.

Familiarity increases sharply between the pre- and postelection waves as well (except for recognition of incumbents, which is already so high as to leave little room for improvement). This cannot, however, be taken as an accurate measure of the campaigns' additional effects on information about the candidates, because the postelection respondents had undergone an intensive civics lesson in the form of a lengthy (seventy minutes on average) preelection interview. There is no question that this experience enhanced their subsequent awareness of the candidates. For example, recall rates of both incumbents (64 percent) and challengers (39 percent) exceed their 1978–94 means (46 percent and 22 percent, respectively) by more than four standard deviations. Clearly, changes in candidate familiarity during the campaign are measured more accurately by sequential cross-sections than by panels.

To develop a fuller picture of how time and campaign money combined to affect voters' knowledge of the candidates, I computed logit estimates of recall and recognition of challengers' and incumbents' names in the preelection poll as a function of how much the candidate spent (in logarithmic form¹³) and how many days before the election the interview was conducted. The results are reported in table 2. They show that spending by both incumbents and challengers has a substantial positive effect on the probability that a voter will recall the candidate's name when asked or will recognize it on a list prior to the election. They also show that, controlling for campaign spending, familiarity with the candidates increases significantly as

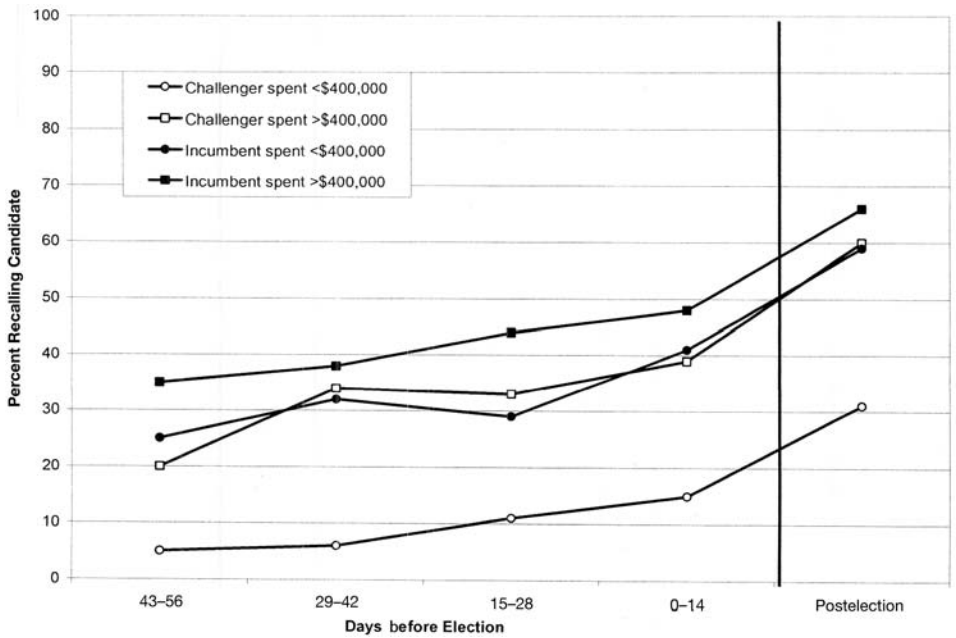


Fig. 3. Time, campaign spending, and recall of House candidates

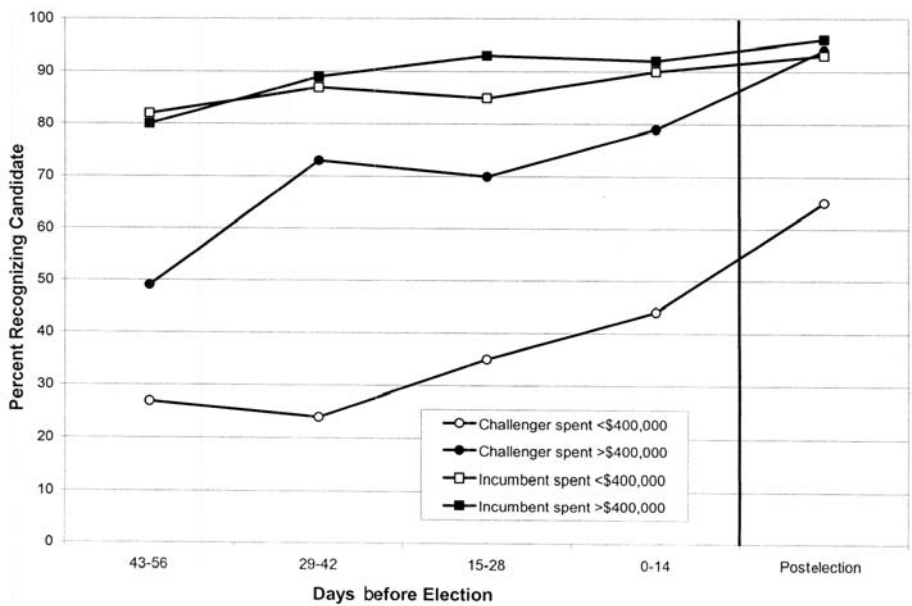


Fig. 4. Time, campaign spending, and recognition of House candidates

Election Day approaches. The coefficient on time is twice as large for challengers as it is for incumbents, consistent with the idea that the campaign period is more crucial to challengers for reaching voters. The magnitudes of the spending effects appear to be similar for both kinds of candidates, but challengers actually get considerably more for their marginal dollar because incumbents are so much more familiar to voters initially.

The greater benefit of spending to challengers is apparent from the data in table 3, which displays the estimated effects of several levels of spending on knowledge of candidates at two points in the campaign, on September 3 (when the first surveys were taken) and on Election Day (that is, with "days before the election" set at zero). The minimum assumed for any candidate (\$5,000) applies only to challengers. The least the incumbent in any district in the data set spent was \$110,500, hence that is the level at which their estimates begin. Comparisons are also made for spending at the \$400,000 and \$800,000 levels. The data confirm that higher-spending

TABLE 2. Campaign Spending and Knowledge of House Candidates—Preelection (logit estimates)

Dependent Variable	Incumbents	Challengers
<i>Recalled candidate's name</i>		
Constant	-6.408*** (1.544)	-9.092*** (1.052)
Campaign spending (log)	.477*** (.115)	.669*** (.084)
Days before the election	-.013** (.004)	-.024*** (.006)
Log-likelihood	-571.69	-308.43
Percentage correctly predicted	63.7	85.8
Null	62.6	85.9
Number of observations	888	888
<i>Recognized candidate's name</i>		
Constant	-3.877 (2.172)	-4.733*** (.055)
Campaign spending (log)	.478** (.164)	.436*** (.047)
Days before the election	-.014* (.006)	-.023*** (.004)
Log-likelihood	-327.10	-533.37
Percentage correctly predicted	87.5	70.3
Null	87.5	60.8
Number of observations	888	888

Note. The dependent variable takes the value of 1 if the candidate's name is recalled (recognized), 0 otherwise; standard errors are in parentheses.

* $p < .05$, two-tailed test ** $p < .01$, two-tailed test *** $p < .001$, two-tailed test

candidates of both kinds are better known to begin with, but they also show that the bigger spenders make bigger gains in familiarity over the course of the campaign (unless they have already reached very high levels of familiarity, as with recognition of incumbents). The gain in familiarity over time associated with a given level of campaign spending is notably larger for challengers than for incumbents; the higher the level of spending by both candidates, the narrower the incumbent's information advantage at the end of the campaign.

From what we can tell from the sequential cross-sections in the preelection wave, it appears that spending increases voter familiarity with both incumbents and challengers, but with challengers getting a larger payoff for each marginal dollar. The panel component of the survey offers another perspective on these relationships, for it allows us to measure the relationship between spending and changes in individuals' knowledge of the candidates between the pre- and postelection waves of the study. The fact that the interview itself sharply increased the respondents' awareness of House candidates is not a problem if the interview effect is uncorrelated with other variables (only the intercept would be affected), but this may not be the case. The preelection interview and campaign advertising may interact positively: respondents primed by the preelection questions may be more responsive to campaign advertising than respondents who are not primed, exaggerating the estimated effect of spending. Priming could also lead to underestimates of campaign spending effects by reducing the proportion of voters whose knowledge of the candidates depends on the level of cam-

TABLE 3. Estimated Effects of Campaign Spending on Preelection Knowledge of House Candidates (probabilities)

	Incumbents			Challengers		
	September 3	Election Day	Change	September 3	Election Day	Change
<i>Recall candidate</i>						
\$5,000				.01	.03	.02
\$110,500	.15	.29	.14	.06	.21	.15
\$400,000	.25	.43	.18	.12	.38	.26
\$800,000	.32	.52	.20	.18	.49	.33
<i>Recognize candidate</i>						
\$5,000				.00	.02	.02
\$110,500	.69	.84	.15	.25	.58	.33
\$400,000	.80	.91	.11	.36	.70	.34
\$800,000	.85	.93	.07	.44	.76	.32

Source: Equations in table 3 are based on estimations in table 2.

paigned advertising (as opposed to having been interviewed). Thus these data should be viewed with some caution.

Table 4 reports the results of logit estimates of postelection recall and recognition as a function of the candidate's spending for those respondents who were unfamiliar with the candidate in the preelection wave. Here, the effects of spending are clearly different for incumbents and challengers. The amount spent by incumbents had no significant effect on postelection recall or recognition among these respondents, while the challenger's spending had a significant and substantial effect on the likelihood that initially uninformed respondents would learn their names. Again, it is evident that the challenger's ability to grab the attention of voters is more sensitive than the incumbent's to the level of campaign spending.

Spending and Candidate Preference

The electoral bottom line is, of course, the vote decision. Table 5 reports three bare-bones logit models of the 1996 House preference (preelection

TABLE 4. Campaign Spending and Knowledge of House Candidates among Initially Uninformed Voters (logit estimates)

Dependent Variable	Incumbents	Challengers
<i>Recalled candidate's name</i>		
Constant	-1.697 (1.781)	-4.731*** (.585)
Campaign spending (log)	.123 (.135)	.348*** (.050)
Log-likelihood	-384.54	-448.73
Percentage correctly predicted	51.3	67.4
Null	52.0	68.5
Number of observations	556	763
<i>Recognized candidate's name</i>		
Constant	-2.438 (4.669)	-3.466*** (.615)
Campaign spending (log)	.270 (.358)	.356*** (.057)
Log-likelihood	-62.40	-342.51
Percentage correctly predicted	74.8	64.6
Null	74.8	59.8
Number of observations	111	540

Note: The dependent variable takes the value of 1 if the candidate's name is recalled (recognized), 0 otherwise; standard errors are in parentheses; data include only voters who did not recall (recognize) the candidate in the preelection wave.

* $p < .05$, two-tailed test ** $p < .01$, two-tailed test *** $p < .001$, two-tailed test

wave) and vote choice (postelection report). The first two equations treat the respondent's support for the incumbent as a function of party identification, campaign spending, the party of the incumbent, and the respondent's presidential preference. The third measures the effects of these variables on changes in respondents' preferences by including the preelection candidate preference (if any) on the right-hand side. Together, the three equations tell an interesting story.

The first two equations suggest that challengers helped themselves by spending money while incumbents did not. These models are, of course, subject to the biases thought to afflict all such single-equation cross-sectional models of campaign spending effects. The preelection equation illustrates the problem nicely, as the coefficient on incumbent spending is large (although its *t*-ratio of -1.44 leaves it a bit below conventional levels of statistical significance) and displays the wrong sign, un-

TABLE 5. Campaign Spending and the House Vote (logit estimates)

	Initial Preference (preelection wave)	Vote (postelection wave)	
Constant	9.099** (3.119)	3.446 (2.562)	1.680 (2.967)
Incumbent's spending (log)	-.387 (.268)	.050 (.221)	.093 (.258)
Challenger's spending (log)	-.177+ (.097)	-.188** (.077)	-.158+ (.089)
Democratic incumbent	.111 (.271)	-.784*** (.232)	-1.153*** (.250)
Party identification	1.121*** (.198)	1.109*** (.152)	.903*** (.174)
Favored incumbent's presidential candidate	.962 (.530)	2.026*** (.403)	1.807*** (.438)
Favored challenger's presidential candidate	-1.494*** (.433)	-.795** (.311)	-.967** (.351)
Preferred incumbent—preelection			2.191*** (.303)
Preferred challenger—preelection			-.895** (.300)
Log-likelihood	-218.07	-331.61	-263.45
Percentage correctly predicted	84.3	85.4	88.5
Null	74.8	72.5	72.5
Number of observations	624	888	888

Note: The dependent variable is 1 if the respondent reported preferring or voting for the incumbent, 0 if for the challenger; "party identification" is 1 if respondent identified with incumbent's party, -1 if with the challenger's party, 0 if independent (leaners are classified as partisans); standard errors are in parentheses.

+*p* < .10, two-tailed test **p* < .05, two-tailed test ***p* < .01, two-tailed test ****p* < .001, two-tailed test

derlining the reality that incumbents in trouble spend more money. The postelection equation reiterates the customary OLS finding that spending by challengers matters while spending by incumbent does not. It also indicates an electoral bias against Democrats that was not evident during the preelection period.

The third equation examines the effects of these variables on the vote choice conditional on the respondent's initial vote preference. The negative effects of the challenger's spending on the likelihood of voting for the incumbent is reduced slightly but remains marginally significant ($t = -1.78$). The coefficient on the incumbents' spending increases a bit and displays the correct sign, but it continues to be measured with so much error that it cannot reliably be distinguished from zero. Substantively, the coefficient on the challenger's spending indicates that, for example, if the other variables made the estimated probability of voting for the incumbent .75 with the challenger spending \$5,000, it would fall to .65 if the challenger spent \$100,000, to .60 if the challenger spent \$400,000, and to .57 if the challenger spent \$800,000. Money spent by the incumbent would be projected to have a smaller effect; for example, if the other variables made the estimated probability of voting for the incumbent .50 if the incumbent spent \$100,000, it would increase to .53 at \$400,000 and to .55 at \$1 million. Unfortunately, we have little reason to believe that this coefficient is accurate. This seems to be the appropriate point to plead for more research.

The equations in table 5 tell us one more thing about campaign effects: national campaigns may matter too. Democrats suffered a significant loss of support between the pre- and postelection waves of the survey across the board. In preelection preferences, Democrats were the choice of 51.9 percent of respondents who preferred either a Republican or a Democrat, but only 48.1 percent reported voting for a Democrat in the postelection wave. This swing to Republicans was not simply the result of the comparable decline in support for Bill Clinton between the pre- and postelection waves,¹⁴ for this is already registered in the equation (through the presidential support variables). It may have had something to do with the desire among some voters to keep the House in Republican hands once Clinton's victory was no longer in doubt—another campaign effect, because strategic voting of this sort depends on news coverage of the "horse race" aspect of presidential contests. Whatever its source, the swing almost certainly preserved the Republican House majority.

What Next?

Despite the fact that neither of these surveys was designed to study the effects of campaign spending in House elections, they demonstrate that examining the relationship between spending and changes in voters' information and preferences over the course of the campaign is a promising research strategy. They also suggest that an ideal study of campaign effects would combine serial cross-section and panel components. The serial cross-section component would have to carry most of the analytical burden, for panel respondents, having endured an intense civics lesson by lengthy interview earlier in the campaign, are no longer representative of ordinary citizens. We do not know if or how this experience affects their vote choice, but it certainly heightens their awareness of the candidates. A fresh postelection cross-section is thus essential.

Interviews for the cross-sectional component should begin well before September. Just how much earlier is difficult to say, for the primary election calendar extends from March through early October. Assuming we are using national samples, the ideal strategy would be to do the first cross-section before any primary (say, in January) to gauge the incumbent's electoral standing, then take repeated cross-sections at fixed intervals until after the election, picking up nominees as they are added when states hold their primaries, with the primary election date entering analyses as a control variable.

Regardless of when the first cross-section is taken, the last cross-section (an extra large one) should come after the election. This would be matched by a panel (a sample or all of the respondents interviewed in the earlier cross-section) so that we could get the fullest possible picture of how the volume of campaigning, as measured by campaign spending, is related to changes in individuals' views of candidates. To the extent that the same effects show up in repeated cross-sections and in repeated interviews with the same respondents, we can have much greater confidence that they are real. The panel component would also give us a better fix on how susceptibility to campaigns varies with the individual characteristics of voters (Jacobson 1990).

The content of the surveys could be built on the familiar NES questions: name recall and recognition, vote preference, perhaps likes and dislikes, along with the usual political and demographic controls. A special effort should also be made to learn if active campaigns can change how

voters think about the vote decision, what they think the House vote is *about*. We know that campaigns compete to frame the choice in terms that favor their side. To what degree does success depend on how much they can spend trying to impose their frame? To do this, of course, we would have to have at least rudimentary information about the major themes used by the candidates. This is probably easier now than it has been for decades, because House candidates of both parties have been drawing on common sets of partisan themes (developed by the national party organizations) in recent campaigns. The survey instrument should also be designed to pick up on national themes and issues that may emerge or evolve during the course of the campaign.

It would also be useful to get as detailed as possible a breakdown on the timing of campaign spending. We would also want to include measures of campaign activities beyond the candidates' own campaigns—the “independent” and “voter education” campaigns conducted by parties and interest groups that have become prominent in recent elections (Magleby and Monson 2004). The more fully we can measure campaign components the better. But for the central task of figuring out how campaign spending is related to election results, we would still learn a great deal if our only measure of campaigning was the total amount of money spent on the campaign.

The research strategy I propose, then, is to use evidence on changes over time in knowledge and evaluations of House candidates as leverage on the question of how campaign spending—which is to say, campaigning—affects election results. Knowing where the candidates stand with voters before they begin campaigning and observing how their relative standings change as they spend money on campaign activities will help us to distinguish the effect that campaign spending has on voter support from the effect that voter support has on campaign spending. This is, to my mind, the most promising way to resolve some of the enduring scientific and policy controversies surrounding the relative effects of campaign spending by challengers and incumbents.

NOTES

1. For a more detailed discussion, see the longer version of this essay, delivered as a paper at the colloquium upon which this volume is based (available from the author).
2. Among candidates for open seats, votes and victories rise with campaign spending, although more steeply for Republicans than for Democrats.

3. See, e.g., the OLS models in Glantz, Abramowitz, and Burkhart 1976; Jacobson 1978, 1980, 1985; Green and Krasno 1988; Bartels 1991; Erikson and Palfrey 1998; and Ansolabehere and Gerber 1994. The results also hold for U.S. Senate races; see Jacobson 1978, 1980; Abramowitz and Segal 1992.

4. At least if the OLS equation fails to include a complete set of variables covering every measure of the candidate's prospects, which all of them almost certainly do.

5. As Ansolabehere and Snyder (1996) point out, the bias stems from omitted variables, not classic simultaneity bias, but the problem and solution are essentially the same.

6. In House elections from 1980 through 2002, 726 of 762 incumbents (95.3 percent) facing challengers who spent more than \$400,000 themselves spent more than \$400,000 (in inflation-adjusted dollars, 2002 = \$1.00).

7. In inflation-adjusted dollars (2002 = \$1.00); the respective medians are \$712,000 and \$607,000, a difference of \$105,000.

8. For a discussion of some issues this approach does not resolve, see the longer version of this essay, delivered as a paper at the colloquium upon which this volume is based (available from the author).

9. As usual, the feeling thermometers were used as an unobtrusive way of ascertaining name recognition.

10. The distribution of preelection interviews by the date they were actually taken for the subset of respondents analyzed here is as follows:

Weeks before the Election	Number of Respondents
0-2	127
3-4	251
5-6	176
7-8	228
9	106

11. Approximately 79 percent of these respondents were part of a panel surveyed in 1994; the rest were from a fresh cross-section drawn for 1996. I found no difference in the behavior of the two groups in any of the analyses I performed. I excluded respondents who moved between the pre- and postelection waves of the survey.

12. For challengers, the difference is significant at $p < .002$ or greater for every comparison and time period; for incumbents, none is significant for any time period.

13. Candidates who spend less than five thousand dollars are not required to report their spending to the Federal Election Commission; for purposes of this analysis, all candidates are assumed to have spent at least five thousand dollars.

14. Clinton's support fell from 55.0 percent to 50.7 percent between the pre- and postelection waves; Dole's support increased slightly from 40.3 percent to 41.0 percent, and support for Perot and other minor party candidates increased from 4.7 percent to 7.1 percent among respondents included in this analysis.

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