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# Policy Paper

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## **Does Money Buy Elections?**

## *The Impact of Spending on U.S. Congressional Campaigns*

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For many Americans, money is one of the most troubling aspects in modern election campaigns. The reasons voters give are simple: money is seen as a barrier to seeking and winning public office; as a means of undue private influence by special interest groups; and as a distraction to politicians from doing the job for which they were elected. Conventional wisdom holds that money buys elections, if not the candidates themselves, and that politics in Washington are tainted as a result.

Money matters, to be sure, as the following data show. Since 1992, spending on congressional elections has more than doubled to \$1.3 billion, with winning House candidates spending an average of \$1.4 million in 2006<sup>1</sup>. Nine times out of ten, the higher-spending candidate won. The rise in campaign spending has been accompanied by a decline in electoral competition, as measured by near-perfect rates of incumbent reelection since 1998 and a steady rise in the number of uncontested races and share of

incumbent vote. And tales of millionaire candidates flooding the airwaves with negative attacks, to the tune of \$5 million or more, only strengthen the underlying assumption that big money is a determining factor in modern election campaigns.

But the true picture of campaign spending and its implications for electoral

success is more nuanced than the vote-buying hypothesis suggests. Simply put, campaign dollars are not created equal. The force of the first dollar spent in terms of its vote-getting effect for the candidate is considerably greater than that of the millionth. Half a

Nearly 9 in 10 citizens believe that good people are discouraged from seeking office because of the high cost of campaigns.<sup>2</sup>

million dollars in challenger spending goes further in netting actual votes than as many incumbent dollars in a typical congressional campaign. And once a million has been spent, in all but the costliest of districts, additional spending by incumbents and challengers alike means almost nothing at all.

**Methodology** This paper analyzes the marginal effectiveness of campaign spending for incumbent, challenger, and open seat congressional candidates between 1992 and 2006. Panel data for U.S. House of Representatives general elections only are considered, as primary spending figures and vote returns are not available across the time period observed. The reliance on data from House races is appropriate given the large sample size and relative inter-comparability of House districts in contrast with U.S. Senate seats and the Presidency.

Of the 3,480 races and nearly 7,000 general election candidates running for House between 1992 and 2006, only uncontested candidates and those spending \$5,000 or less are excluded from the data. Controls for candidate quality, district partisanship, and national political trends are incorporated in some of the analyses below. All spending figures are adjusted for inflation and represented in 2006 dollars.

Acknowledgment I am grateful to Prof. Gary Jacobson for providing the congressional campaign spending source data used in the analysis and for general guidance.

As the following analysis shows, there is a reasonable level of spending on federal campaigns beyond which money has little or no determining effect. So long as otherwise qualified candidates obtain sufficient resources for the voters to learn who they are, additional spending by themselves or their opponents does not measurably impact the chances of their success<sup>3</sup>. As for those candidates who lack access to sufficient funding for the voters to learn who they are, they are all but guaranteed to fail. The two findings have important implications for the campaign spending decisions of current candidates for federal office and for the viability of various proposed methods of campaign finance reform.

## I. GET KNOWN OR GO HOME

#### The Need for Sufficient Campaign Spending

Candidates require an "adequate" spending threshold in order to compete for public office. Adequate spending is defined as the level at which voters receive sufficient information about the candidate to make an informed choice. Spending thresholds vary for incumbent and non-incumbent candidates and in accordance with the communication costs of the district.

For the typical non-incumbent candidate, pursuing a combination of retail grassroots campaigning and wholesale mass media communication is the only viable means of obtaining the level of name recognition that is required for voters to take note. The availability of sufficient funds means that a candidate can hire a campaign staff, lease and outfit a headquarters, produce literature and a website, travel across the district seeking votes, and communicate en masse via paid mail and print and broadcast media. Each of these activites helps to raise the candidate's profile in the minds of

Figure 1: Average cost of unseating a House incumbent [1992-2006]



Note: 2000 average includes period outlier: \$5 million campaign

## Figure 2: Frequency and cost of unseating House incumbents, rate of incumbent reelect. [1992-2006]

Year	Successful Challengers	Winning Challenger Spending (avg)	Incumbent Reelection
1992	19	\$638,231	95%
1994	34	\$901,761	92%
1996	20	\$1,359,127	95%
1998	6	\$1,424,734	99%
2000	6	\$2,316,829	99%
2002	4	\$1,756,068	99%
2004	5	\$1,793,752	99%
2006	23	\$1,833,334	94%

voters and thereby provide a credible alternative to the incumbent. But few non-incumbent candidates ever reach the competitive threshold.

Incumbents, by contrast, enjoy a range of institutional advantages inherent in their position, including free media, taxpayer-funded travel, and the ability to deliver constituent services and special appropriations to their district. The availability of such resources means that incumbents require relatively less campaign spending than non-incumbents to mount a credible campaign, even as their demonstrated ability to raise funds far exceeds that of the average challenger. Challengers wishing to overcome the incumbency advantage without the assistance of a famous name or high public office of their own are therefore required to raise significant financial resources to compete.

Analysis of campaign spending on the part of challenger and open seat candidates underscores the need for sufficient spending thresholds to credibly compete-and the infrequency with which such funding levels are obtained. Of the more than 5,000 general election

Not since 1974 ger with less to Congress.

challengers seeking election to the House of Representatives has a challen- between 1972 and 2006, only one candidate with spending of less than \$100,000 than \$100,000 was elected, in *in spending* 1974<sup>5</sup>. Approximately half of all been elected challengers fell into this lowest-spending category, and their prospects have only

diminished with time<sup>6</sup>.

Since 1992, only three challengers spending \$300,000 or less have successfully unseated an incumbent. Two of them ran in the swing election of 1994 and the third in the swing election of 20067. Of the sixteen successful challengers with spending of \$500,000 or less, only two ran after 1994; setting those two aside, there is not a single congressional challenger who has unseated an incumbent since 1994 with less than three quarters of a million dollars in spending. Taken together, the average spending by winning challengers for the period 1992-2006 was \$1.3 million, with a steady increase over time: the average \$1 million required to unseat an incumbent in the 1990s rose to \$1.9 million from 2000-2006. By contrast, \$100,000 was sufficient to unseat an incumbent in 1974 and \$519,000 a decade later in 19848.

That incumbents are all but guaranteed to win reelection is due, in no small part, to the paucity of adequately funded challengers in a given election. As Figure 4 shows, the vast

## **Case in Point** The Corzine Conundrum

In 1999, Jon Corzine entered the race for U.S. Senate from New Jersey, vowing to "spend what it takes" to succeed. A political newcomer who had left his mark on Wall Street as head of Goldman Sachs, Corzine was



didate to enter the world of politics, but the scale of his effort was unprecedented. Investing \$62 million of his own money in a highly professionalized, television-driven campaign, Corzine defeated his Republican opponent in the open general election while earning for himself the dubious reputation of having "bought" his Senate seat.

Staggering though the Corzine sum may be, the vote-buying hypothesis is cast into question when considered in light of the vote. For all his recordbreaking spending, the Democrat Corzine in Democratic-leaning New Jersey defeated his Republican opponent Bob Franks with barely 50 percent of the vote-a virtual tie. Congressman Franks, for his part, put up the closest score of any New Jersey Republican running for U.S. Senate since 1972, despite being outspent by \$48 million or a factor of five to one. Indeed, political consultants familiar with the New Jersey terrain have questioned whether Franks's \$12 million in funding for a contested primary and general election was sufficient to mount a fully credible campaign when the cost of advertising in New York City and Philadelphia is considered. Regardless, the evidence would hardly suggest that money equaled votes where Corzine's colossal spending was concerned.

As Jennifer Steen of Boston College observes, Corzine is but one in a long line of multi-milliondollar self-financiers for whom big spending does not often translate into big votes3; his narrow victory made him an exception to the rule. According to the evidence, a more fitting conclusion from the New Jersey race would be that Corzine gave the greatest gift in Senate campaign history to the broadcasters of New York and Philadelphia, and to his consultants: tens of millions in arguably unnecessary spending on an open seat long held by his own party. Big spending bought credibility and the opportunity to become known, but it could hardly guarantee the success of Corzine's campaign.

majority of challengers from 1992-2006 spent \$500,000 or less on their campaigns, and a majority did not even reach the \$100,000 threshold. Such amounts are insufficient for a challenger to become known and thereby present a credible alternative to the voters.

Incumbents, by contrast, outraised their opponents by a factor of five to one<sup>9</sup>. As Figure 3 shows, only a small minority of incumbents between 1992-2006 spent less than the \$500,000 threshold while the typical incumbent had \$1 million or more. Open seat races, which typically attract more experienced candidates and increased attention and funding from the national parties, showed a greater range of candidate spending, with a large majority surpassing the \$500,000 mark.

Political scientists have speculated as to the paucity of well-funded challengers in House general elections, alternately citing district lines which clearly favor one party or the other in all but a handful of districts, a challenger selection bias whereby higher quality potential candidates opt not to run until the incumbent retires, and the recurring difficulty most challengers face in raising sufficient funds<sup>10</sup>. To be sure, challenger quality and challenger spending are interrelated variables, with higher quality challengers attracting greater resources, thereby improving their chances of success. Although these theories cannot be elaborated here, the data clearly show that challengers who raise sufficient funds to make themselves known receive substantially more votes, on average, than those who do not incumbency advantage notiwithstanding-and that the prospects of challenger success improve with increased spending – to a point.

As the foregoing analysis has shown, having the resources to become known—or being known already, as in the case of incumbent or celebrity candidates—is a necessary but not



Figures 3-5: Number of House candidates (winners inset) per \$100,000 spending [1992-2006]

\* Outlying set of winners in the \$300,000-\$400,000 spending range ran in 1992 and 1994 only

sufficient condition for electoral success. What level of spending is required, and the impact of additional spending on netting actual votes, is the next topic of concern.

### **II. ENOUGH IS ENOUGH**

#### **Diminishing Returns to Campaign Spending**

For candidates with sufficient resources to communicate their message to the voters, the benefits derived from additional spending are negligible. Most candidates in this highly competitive category are incumbents, who begin the campaign season, by default, with a level of funding and other resources far exceeding those of the typical challenger and sufficient for their message to be heard. Open seat candidates are also more likely than challengers to reach the competitive spending threshold, for reasons detailed below, although the spending levels required for open-seat candidates and challengers far exceed the level that is required for incumbents. The finding is sharply contrasted with spending below the competitive threshold, for which the marginal benefits of each additional unit are clear and measureable in terms of the percentage of votes received. The data for incumbent, challenger, and open seat candidates for U.S. House between 1992-2006 are considered in turn.

#### Incumbents

Since 1992, spending by congressional incumbents has been inversely correlated with the percentage of votes received in the general election. Although incumbents are strongly favored to win in any election, those spending less than \$1 million over the period were more likely to win, and with larger shares of the vote, than those spending \$1 million or more, for Figure 6: Avg. spending of winning House incumbent, challenger, and open seat candidates. [1992-2006]



reasons elaborated below. A simple plot of campaign spending and general election votes [see Figure 7], where each dot represents a House incumbent during the period 1992-2006, shows a slow but steady decline in the share of votes received for each additional unit of campaign spending, in direct contradiction to the conventional "money-equals-

votes" assumption.

Although incumbents at all levels of spending maintain a high likelihood of success, those in the higher spending and lower votegetting range are typically faced with a higher quality and better funded challenge. Considered at the level of For candidates with sufficient resources to become known to the voters, the benefits from additional spending are negligible.

individual races, a simultaneity bias emerges whereby incumbents increase their spending not for the sake of spending alone but in direct response to more competitive funding on the part of their opponent. Since incumbents are consistently better equipped than nonincumbents to raise additional money, their tendency to reactively adjust on the basis of challenger quality is observed in the data, with high spending incumbents far more likely to be opposed by a well-funded challenger than their lower spending counterparts. In the rare



Figure 7: House incumbent share of general election votes by millions spent [1992-2006]

Figure 8: Incumbent votes against competitively financed challengers by millions spent\* [1992-2006]



\*Competitive challengers defined as those spending \$500,000 or more

instance of a highly competitive, well-financed challenge, where the incumbent is unlikely to receive a large majority of votes under any circumstance, spending rises to the maximum without a gain in votes. The subset of races in which an incumbent faced a challenger with competitive spending of \$500,000 or more yields a static vote share of around 55 percent for the average incumbent, regardless of the spending level deployed. By controlling for challenger quality, this latter finding in Figure 8 provides a more accurate indication of the real effect—or lack thereof—of additional incumbent spending in terms of votes. Both findings nevertheless support the hypothesis that incumbents do not earn additional votes as the level of campaign spending is increased<sup>11</sup>.

The intuition is clear: incumbents begin the campaign season with high levels of name recognition and considerable institutional advantages which place them on a competitive electoral footing even before the level of campaign spending is considered. A more accurate accounting of the financial resources of incumbents relative to challengers would therefore take into consideration the availability of taxpayer-funded travel, franking privileges, free media, and the like to produce an effective communication value equivalent to several hundred thousand dollars in challenger spending<sup>12</sup>. Although incumbents depend upon a certain degree of funding in the event of challenger attacks, the evidence suggests that they are considerably less reliant upon spending, per se, than their non-incumbent counterparts.

Why the big spending if the results do not add up? One theory put forward by political scientists is that incumbents, with their virtually unlimited ability to mobilize campaign funds via existing funding networks, raise money as a sign of strength in the interest of deterring a significant challenge<sup>13</sup>. Assuming a primary objective is to win reelection, no strategy is more effective than to discourage a potential challenger from entering the race at all, as is the case in approximately one fourth of congressional contests today ("token" challengers with spending below \$5,000 excluded). Short of that, discouraging more qualified candidates, whose rational appreciation for the hurdles they face by virtue of their status is greater than that of less experienced challengers, from running is a prudent goal14. Incumbent fundraising "war chests" serve this deterrant function by producing a sense of inevitability in the minds of potential challengers and their backers. The inflationary spending effect is compounded by perverse incentives surrounding consultants, the drivers of campaign strategy, whose individual profits are pegged to increased spending on paid advertising, direct mail, and the like. As a result, a pattern of over-spending relative to the requirements of a competitive campaign has emerged on the part of incumbents, with average incumbent spending for the House of Representatives exceeding \$1.2 million in 2006.

## Challengers

Where incumbents, on average, receive static or declining vote shares as spending totals rise, challengers profit handsomely from increased campaign funds—to a point. The intuition is

straightforward enough: since most challengers begin the campaign season with little or no name recognition, the more money challengers have to spend the better able they are to communicate their message and give voters a reason to prefer them over the incumbent. Research in

So long as a competitive funding threshold is reached, challengers are defined less by money than by the myriad other factors of concern to voters.

political psychology has shown that voters, with the exception of party enthusiasts, are less likely to go to the polls in support of a candidate whose name is unfamiliar to them, as demonstrated by the reduced turnout and wider vote

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#### Figure 9: House challenger share of general election votes by millions spent [1992-2006]

margins in financially uncompetitive races<sup>15</sup>. Indeed, the considerable differential in voter turnout between presidential election years—in which considerably more resources are mobilized by candidates, parties, and independent groups to attract the attention of voters—compared with mid-term elections, is taken to support the contention that money matters when it comes to building a baseline of voter support. As a result, the "growth potential" in expected votes per unit of additional challenger spending is very great.

For the period 1992 to 2006, congressional challengers spending \$1 million or more received a full 50 percent more votes than the majority of their counterparts with spending of \$100,000 or less. Below \$100,000, the average challenger received barely a third of total votes cast—roughly equal to the percentage of partisan voters expected to turn out for a given party in a typical congressional election. For each additional \$100,000 spent, however, candidates received

tangible gains of approximately 1.5 percent, up to 47 percent of the vote for the average challenger with spending of \$1 million. The steadily increasing trend line is consistent with the hypothesis that challengers benefit from the added name recognition that each additional unit of campaign spending provides, until the point at which market saturation has been achieved.

Equally significant is the lack of additional gains in the share of challenger vote once the competitive funding threshold is reached. At \$2 million in spending between 1992-2006, challengers were no more likely to succeed than those spending half that sum, while at \$3 million the share of votes even declined to a modest degree. Indeed, any amount of spending beyond the competitive threshold of approximately \$1 million did not correlate to additional votes, nor did the ratio of winning challengers improve. So long as the competitive funding level is reached, in other words, challengers are defined less by money than by the myriad other factors of concern to voters in deciding for whom to vote: policy positions, past experience, honesty and integrity, to name a few.

The relationship between challenger spending and general election votes has been consistently observed over time, with analysis by political scientist Gary Jacobson and others in the 1980s demonstrating a positive vote-getting effect of increased challenger spending up to a competitive threshold<sup>16</sup>. According to Jacobson's analysis of congressional campaign spending for the period 1972-1982, the estimated effect per additional \$100,000 in challenger spending was approximately 3 percent up to \$400,000, a modest improvement over the 1992-2006 estimate of 2.5 percent per \$100,000 spending, and one that is consistent with the lower overall cost of campaigns. Consistent with the diminishing returns hypothesis, Jacobson observed already in 1985 that "the proportion of victories does not increase systematically with increasingly higher levels of spending."

The findings are consistent with the data on incumbent spending, above. Since challengers, by definition, tend to face highly qualified and competitively resourced opponents, they are no more likely to see gains in campaign spending beyond the competitive threshold than are the minority of incumbents whose challengers have adequate funds. Even as the large majority of million dollar challengers were outspent by their incumbent rival, the share of votes received did not measurably change. Indeed, the average challenger-incumbent vote margin of 8-10 percent for the subset of competitively financed campaigns closely comports with longstanding estimates of the intrinsic electoral advantage enjoyed by incumbents.

Using a variety of regression models to estimate the value of incumbency while

controling for spending and other key variables of electoral success, economist David Lee has found "striking evidence that incumbency has a significant causal effect on raising the probability of subsequent electoral success<sup>17</sup>." Building on Lee's premise, political scientists Gelman and King estimate the precise value of incumbency at 11 percent in expected increased vote share for the average officeholder<sup>18</sup>. And Ansolabehere et al confirm the 11 percent finding and estimate that it represents a 9 point increase in the benefit associated with incumbency 50 years ago<sup>19</sup>. Although these findings provide little encouragement to the average challenger, they are consistent with the hypothesis that challenger spending matters to the point at which voters can make an informed choice, and not beyond. Rather than ensuring electoral success, competitive spending enables the challenger to compete on the basis of more substantive criteria with which the voters are most concerned.

## **Open Seat Candidates**

Like challengers, candidates seeking election to an open congressional seat from 1992-2006 experienced substantial improvements in their prospects of success as spending totals increased to the competitive threshold, but not beyond. Where unfunded challengers received an average 30 percent of the vote, those at the maximum competitive level of \$1 million in spending saw gains of 25 points to a winning 55 percent. The average 2.5 percent increase in votes per \$100,000 spent was even more pronounced in the lower spending range, with candidates at \$500,000 in spending receiving a full 20 percent more votes than their unfunded counterparts, putting them over the top. Indeed, for any open seat candidate with half a million to spend, the odds of winning office were in their favor, while those at \$1 million enjoyed the highest prospects of all. Consistent with the challenger trend above, however, spending beyond the \$1 million threshold did not net additional votes and even exhibited a modest decline for the highest spending and most hotly contested races.

It is important to note the considerable spread in data for open seat elections. Since open seat races are inherently more competitive than those in which an established incumbent defends stands, the caliber of candidates when measured by previous experience in elective office, fundraising potential, etc. is greater than that of

When both candidates for an open congressional seat surpass the competitive funding threshold, the higher spending candidate is no more likely to succeed.

the average challenger. Increased candidate quality, in turn, results in a higher percentage of races in the financially competitive column where money ceases to play a determining role. Likewise, the incentives for party and interest group involvement, independent of the candidate's own spending, are considerable,

thereby limiting still further the predictive power of individual candidate spending on election outcomes. Nevertheless, for the minority of open seat candidates who fail to achieve a level of competitive spending, the outcome is clear.

Like challengers, the instance of open seat candidates winning office with less than the competitive spending threshold is extremely rare. Of the 365 successful open seat candidates seeking office since 1992, only one candidate had spending of less than \$100,000 while 90 percent spent \$500,000 or more. Indeed, for the latter category of well-financed candidates, the availability of additional funds did not measurably improve their chances of success: when both candidates in an open congressional race raised \$2 million or more, the higher spending candidate was no more likely to win office than his lower spending counterpart; for races of \$1 million spending or more on the part of each campaign, the higher spending candidate enjoyed only marginally higher prospects of success. Meanwhile, the average cost to win an open congressional seat was \$1.2 million.

Although the spread in data for open seat candidates is greater overall than that of either incumbents or challengers, it is noteworthy to observe the relative closeness of fit for the first \$500,000 in spending. As demonstrated in Figure 10, the vast majority of low spending candidates for open congressional seats between 1992-2006 received less than half the vote, and only once the \$500,000 spending level came into view did the correlation between money and votes decline. For candidates with more than half a million to spend, meanwhile, the likelihood of a landslide result (with less than 40 percent or greater than 60 percent of the vote) was relatively high and is not closely correlated to spending. The conclusion, consistent with the findings on challenger spending, above, is that spending is highly correlated to votes up to a "sufficient" competitive threshold of not more than \$1 million, but not beyond.

## Limitations

The trends in campaign spending and vote totals detailed above apply to congressional races aggregated across the period 1992-2006. They have limited predictive power when applied to any single congressional race in a given election. Case study analysis of individual campaigns reveals that adequate funding is one ingredient



Figure 10: Share of general election votes by millions spent, House open seat candidates [1992-2006]

in a basket of necessary goods—from candidate quality and experience to party-competitive districts—which together enable an openly competitive campaign. Indeed, big spending by incumbents or non-incumbents alike can hardly guarantee electoral success, and the instances of individual candidates performing outside of their predicted range based on spending are sufficient to prove the point.

Given the variety of competing variables and the considerable variation in communication costs across congressional districts, estimates of the "sufficient" threshold in campaign spending for incumbents, challengers, and open seat candidates must be customized to the district and year. The \$1 million estimated point of diminishing returns for challengers and open seat condidates must therefore be taken as a rough approximation of the average competitive cost when aggregated across the period 1992-2006, not an indication of the necessary spending threshold for a given congressional district.

Nevertheless, the empirical findings are supported at statistical significance when controlling for common electoral factors such as candidate quality, district partisanship, and level of candidate spending. Restricting the field of candidates to those in whose districts the presidential vote spread was 10 percent or less-to ensure that results are not biased by the instance of one-party control-produces a trend that is fully consistent with the full data on House elections. Likewise, races in which a challenger with previous elective office experience (a proxy for candidate quality) took on the incumbent showed similar increases in vote share alongside increased spending, except with a more even distribution of challengers along the horizontal line. Incumbents, in turn, saw similar declines as the financial competitiveness of races improved, while limiting the field of candidates to those with funding at \$500,000 or more in open seat races only reduced the standard deviation of candidate spending and votes from the mean.

### **III. POLICY IMPLICATIONS**

#### Campaign Finance Reform: Getting to "Enough"

As the foregoing analysis has shown, candidates for federal office require substantial resources to make themselves known to the voters of their district, even as the benefits of such funding are subject to diminishing marginal returns. For candidates who have reached the competitive spending threshold-appropriate to the state or district in which they are running-more spending by themselves or their opponents does not meaningfully impact their chances of electoral success; that is, elections can't be bought. Even so, it is the rare exception to the rule when non-incumbent candidates obtain the level of resources needed to mount a credible campaign. The findings have important implications for campaign finance reform.

First, improving the funding prospects of qualified challengers is expected to meaningfully increase the level of competition in congressional campaigns. Not only does adequate funding improve candidate prospects across the board, but the greater availability of funds is likely to attract higher quality potential challengers who choose not to run today based on a rational assessment of the incumbency advantage and financial limitations they face. To the extent public funding is considered as a means of overcoming the candidate selection bias and bridging the financial gap between challengers and incumbents, funds should be structured to encourage and enable high quality candidates to take part; identifying the appropriate qualifying mechanism for distribution of funds to viable challengers is therefore vital from a competitiveness standpoint.

Second, the resources of qualified candidates should be *adequate* – but they need not be equal – to provide a vigorous campaign that is not defined by money. Although parity in candidate funding is a common objective in public financing reforms, there is little evidence that candidates who outspend a competitively-funded opponent are more likely to win. Funding levels should therefore be established in accordance with the threshold costs of a given district, so as to enable unknown candidates to be heard; they need not match high levels of spending by privately funded candidates.

Finally, reforms aimed at limiting candidate spending or restricting access to funds are likely to have an adverse effect on challengers, for whom the need for funding is most pronounced, and may even harden the incumbency advantage to the detriment of competition.

#### Endnotes

<sup>1</sup> All data are from analysis of Federal Election Commission (FEC) disclosures, except where otherwise noted

<sup>2</sup> Newsweek Poll, conducted by Princeton Survey Research Assoc., Oct. 21-22, 1999. N=755 adults nationwide, MoE +/- 4.
<sup>3</sup> Spending by independent groups for the election or defeat a candidate is not addressed in this study but is expected to follow similar trends to candidate spending; it is a subject of future research.
<sup>4</sup> Steen, J. "Self Financing Usually Doesn't Work." Washington Post Op-Ed, June 24, 2000.

<sup>5</sup> Jacobson, G (2001) *The Politics of Congressional Elections* (5th ed.). New York: Longman; adjusted for inflation (in 2002 dollars)
 <sup>6</sup> Estimate based on percentage of challengers from 1992-2006 spending less than \$100,000 (57%)

<sup>7</sup> Winning House challengers spending less than \$300,000 ran in the Illinois 5th and Kansas 4th congressional districts in 1994, and in New Hampshire's 1st congressional district in 2006; all figures are adjusted for inflation (2006 dollars)

<sup>8</sup> Center for Responsive Politics "Cost of Beating a US House Incumbent." URL: http://www.opensecrets.org

<sup>9</sup> ibid.

10 Jacobson (2001)

<sup>11</sup> Alan Gerber ("Estimating the Effect of Campaign Spending on Senate Elections Outcomes Using Instrumental Variables" APSR 92(2): 401-11, 1998) finds positive marginal effects to incumbent spending in Senate elections when the endogeneity of candidate spending levels is taken into account. The applicability of Gerber's findings to House elctions is not clear.

<sup>12</sup> Lee, D (2001) "The Electoral Advantage to Incumbency and Voters' Valuation of Politicians' Experience" National Bureau of Economic Research, Working Paper no. 8441, Abstract

<sup>13</sup> Gelman, A and King, G (1991) "Systematic Consequences of Incumbency Advantage in US House Elections." American Journal of Political Science 35: 110–38.

14 Krasno, J and Green, D. (1988). "Preempting Quality Challengers in House Elections." Journal of Politics 50: 920-936

 $^{15}$  Taebel, D (1975) "The Effect of Ballot Position on Electoral Success." American Journal of Political Science 19: 519-26

<sup>16</sup> Jacobson, G (1985). "Money and votes reconsidered: Congressional elections," 1972-1982. *Public Choice*, *47*(1), 7-62.
 <sup>17</sup> Lee (2001)

<sup>18</sup> Gelman, A and King, G (1991) "Systematic Consequences of Incumbency Advantage in US House Elections." American Journal of Political Science 35: 110–38.

<sup>19</sup> Ansolabehere, S, Stewart, C and Snyder, J (2000) "Old Voters, New Voters, and the Personal Vote." American Journal of Political Science 44, p. 17.