Some talk: Money in politics. A (partial) review of the literature

THOMAS STRATMANN

Department of Economics, George Mason University, Fairfax, VA 22030 USA
(E-mail: tstratma@gmu.edu)

Abstract. The financing of political campaigns is an area of active scholarly study. I review some of the recent literature and discuss important methodological issues that arise in empirical research on campaign expenditures and campaign contributions. The effects of campaign expenditures and advertising on candidate and ballot-measure elections are summarized, as are the impacts of contributions on contributors' welfare. Many states have changed their campaign finance laws in the past few years, and I describe work that exploits variations in these laws. A discussion of the strategies used by interest groups to allocate their campaign contributions provides insights into contributors' motives.

1. Introduction

In the past decade, campaign contributions and campaign expenditures have been growing rapidly. In 1996, the race for the White House cost President Bill Clinton and Republican challenger Senator Robert Dole $80 million altogether. Four years later, candidates George W. Bush and Albert Gore spent $307 million campaigning for the presidency and in 2004 the expenditures of incumbent Bush and his Democratic opponent, Senator John Kerry, summed to more than $550 million.[1] The last figure does not include spending by advocacy groups and political parties; including them raises total spending in the 2004 US presidential election to $1.2 billion.[2] The growth in spending is less dramatic, but still worthy of notice, in races for the US Congress. In the 1989–1990 election cycle, candidates running for the US Senate and the US House of Representatives spent $283 million, whereas they spent $670 million in 2003–2004. In real dollar terms, this translates into a 64% increase in congressional campaign spending over a 14-year period. Across all US elections in 2004, the grand total spent is estimated to be about $4 billion.

Patterns of campaign contributions and campaign spending differ sharply between incumbents and challengers. The 404 US House incumbents running for reelection in 2004 collected, on the average, $1.1 million in campaign contributions in the 2003–2004 election cycle. About 54% of those contributions come from individuals and about 42% came from Political Action Committees (PACs) and other political committees not formally associated with political party organizations.[3] Challengers, in contrast, raised an average of $260,000

with about 65% of these contributions coming from individuals and about 16% from other, non-party sources.

In this paper, I review some of the scholarly literature that explores the causes and consequences of money in politics. Much work has been done in this area; space constraints allow me to focus only on a few studies.

2. Campaign Expenditures in Candidate Elections

A number of theoretical models incorporate campaign contributions and campaign expenditures into theories of elections and generate testable predictions. While earlier models of campaign finance did not specify precisely how the sources and uses of money affect voters' choices (for example, see reviews by Morton & Cameron, 1992; Austen-Smith, 1987), recent theoretical work attempts to be explicit about those links. In these models, candidates provide voters with information or signals through their advertisements. In some models, campaign advertising reduces voter uncertainty regarding a candidate's policy position (Austen-Smith, 1987; Hinich & Munger, 1989; Bailey, 2002). In other models, campaign advertising informs voters about candidate quality (Ortuno-Ortin & Schultz, 2000; Coate, 2004a), or transmit signals about candidate quality or policies (Potters, Sloof & van Winden, 1997; Prat, 2002a, b; Wittman, 2004a, b). Recent work by Abrajano and Morton (2004) analyzes conditions under which candidates prefer to advertise "substance" (i.e., supply information about their own record or the record of the opponent), as opposed to "style", which includes non-policy valence issues.

A nice feature of some of these models is that they incorporate interest groups and the possibility of quids pro quo between candidates and contributors. When a candidate's ideological position is assumed to be fixed, one motivation for interest groups to contribute is the expectation of policy favors from the candidate if elected (Coate, 2004b). When a candidate's position is flexible, interest groups may contribute because they want to move the office-seekers's platform closer to their own position (Coate, 2004a; Ashworth, 2003; Prat, 2002a). These models predict that voters are less responsive to campaign messages when they believe that candidates have obtained campaign funds by promising policy favors to contributors. As one might expect, the results in the theoretical campaign finance models depend on assumptions regarding the objectives of candidates, the rationality of voters, the type of electoral competition, the goals of contributors, and the role of advertising in inducing voters to change their voting behavior. Empirical work can help inform this work as to which assumptions are most useful and which ones are not.

It has been found, for instance, that campaign spending has little, if any, effect on vote shares at the national level (Levitt, 1994; Palda & Palda, 1998). Set in the context of some of the recent theoretical models, this empirical

result may imply that "the informational benefit of spending is offset by the policy bias needed to raise contributions" (Prat, 2002a, p. 182).

Experimental results by Houser and Stratmann (2005) support the implication of Coate's (2004a) model that voters' evaluations of candidates are influenced by the sources of the candidate's campaign funds. They find that voters in a Coate-type environment elect the high-quality candidate substantially less often when campaigns are financed by special interests. Moreover, while the incremental change in the margin of victory due to an additional advertisement in publicly financed campaigns is positive and roughly constant, Houser and Stratmann find that it is positive but decreasing in special interest campaigns. The reason for this difference is that voters become skeptical that candidates in privately financed campaigns are engaged in substantial favor-trading.

The Coate and Prat models also imply that the marginal product of contributions is higher when contributions are limited. Stratmann (2004a) reports evidence consistent with this prediction. Exploiting variations in state contribution limits across states and over time, he finds that the marginal product of campaign spending is higher in states that limit contributions than in states with unlimited spending.

The empirical literature on campaign spending in candidate elections is dominated by work that examines whether spending affects the identity of the winning candidate. While incumbents and challengers spend much time on fund-raising and appear to believe that money is an important ingredient for winning elections, academic researchers for the most part have trouble establishing a causal and quantitatively important connection between spending and vote shares. This is reflected in Moon's (2002) view that one of the major puzzles in the campaign finance literature is the apparent ineffectiveness of incumbent campaign spending in congressional elections. To date, no consensus has been reached regarding the effectiveness of campaign spending on vote shares (Milyo, 1999).

With good measures of candidate quality and constituency preferences the regression equation

$$
\begin{aligned}
\text{incumbent vote \%} = {} & \alpha + \beta \text{ incumbent spending} + \gamma \text{ challenger spending} \\
& + \delta \text{ candidate characteristics} \\
& + \theta \text{ constituency preferences} + \epsilon
\end{aligned}
\tag{1}
$$

correctly identifies the marginal impact of campaign spending for both candidates. Lacking good variables for candidate characteristics and district constituency preferences, starting with Jacobson (1978), and with few exceptions, scholars have used incumbents' vote shares in the previous election as a proxy for those missing variables. The findings from OLS estimates show

that incumbent spending by US House incumbents does not have a positive and statistically significant effect – and sometimes even has a negative effect – on their vote shares (see, for example, Feldman & Jondrow, 1984; Ragsdale & Cook, 1987; Levitt, 1994). However, challenger spending in US House elections increases challengers' vote shares.[4]

In contrast, most empirical work on the US Senate finds that incumbent spending has a positive and statistically significant effect on incumbents' vote shares (see, for example, Abramowitz, 1988; Grier, 1989; Moon, 2002). However, similar to the estimates for the House, the marginal product of challenger campaign spending in Senate elections is larger than that of incumbent spending.

From the beginning, scholars have noted that incumbents' vote shares and spending are simultaneously determined: while spending influences the vote share, the expected vote share may influence spending. For example, incumbents who expect a competitive race may spend more to win reelection than incumbents who face no significant challenge. In this case, incumbents' vote shares and spending are negatively correlated, which may lead to the potentially erroneous conclusion that more campaign spending leads to smaller vote shares. One of the causes of this negative correlation between incumbent spending and their vote shares is the failure to control for unobserved incumbent and challenger quality.

Put differently, not including important incumbent characteristics and district partisanship in the regression equation results in an omitted variable bias. For example, a strong constituency preference for a Republican incumbent will lead contributors to donate less money to that incumbent's campaign since he or she is likely to win, regardless of the amount spent in the campaign. In this case, failing to fully control for district partisanship leads to an underestimation of the coefficient on incumbent spending. Similarly, some incumbents may receive high vote shares because they are of high quality, because they are trustworthy, or because they expend a lot of effort on constituency service, all of which raise their chances of winning. If such incumbents decide to spend little on campaign advertising because they are likely to be reelected regardless of advertising, then incumbents' campaign advertising and their vote shares will be negatively correlated. However, without good measures of incumbent quality, trustworthiness, and effort, the effect of incumbent spending on votes is underestimated. Unobserved or omitted variables also impart a downward bias to the estimated challenger spending coefficient.

This bias appears to be larger in regressions for the House than for the Senate, since the impact of incumbent spending is positive and often statistically significant in the Senate, while it is zero and sometimes negative in the House. The difference in the findings between the two chambers may suggest that quality differences between challengers and incumbents are smaller in the US Senate. This could be due to challengers in the Senate typically having

longer track records in public office than challengers for seats in the House. If so, voters are better informed about the quality of Senate candidates than they are about of the quality of House challengers. This informational asymmetry may explain why the omitted variable bias in House races is more severe than in Senate races.

To correct for the omitted variable bias, two stage least square (TSLS) estimation, panel estimation, and better control variables have been proposed.[5] One example of the last approach is the work by Abramowitz (1991), who includes a measure of elite expectations in the regression model. This variable is meant to control for the possibility that the expectation of an incumbent winning leads to low incumbent spending and a large percentage of the popular vote for that incumbent. However, even when this variable is included, incumbent spending in the US House remains statistically insignificant (Abramowitz, 1991). Another example of better controls is the work by Green and Krasno (1988), who introduce an eight-point scale to measure challenger quality. However, the introduction of this quality measure does not change the conclusion regarding House incumbent spending's lack of effectiveness.

To remove a potential bias in challenger and incumbent spending estimates, and to implement a two-stage least squares (TSLS) estimation, one needs to identify a variable that is correlated with incumbent spending along with another one that is correlated with challenger spending, but that has no direct effect on the incumbent's vote share. Green and Krasno (1988) used lagged spending as the instrument for current incumbent spending and found that both incumbent and challenger coefficients have the anticipated signs and are statistically significant. Analyzing US Senate elections, Gerber (1998) instruments for both incumbent and challenger spending, using state population and candidate wealth, and finds that Senate incumbent spending and challenger spending are equally productive.[6]

Recent work on US Senate elections shows that the productivity of spending by incumbents and challengers is equal in contested races, but that the productivity of incumbent spending is larger than that of challengers in races where incumbents' seats are safe (Moon, 2002). One possible explanation for this finding is that a contested race is a race where both candidates are of equally high quality. As such, examining races where both candidates have similar quality attributes addresses the omitted variable bias.

Levitt (1994) has questioned the methodology of some of these studies and casts some doubt on whether they have convincingly established a causal effect. He suggests employing a different method that is not sensitive to the validity of the chosen instruments. To control for unobserved candidate characteristics, Levitt suggests examining races where the same candidates meet more than once, calling such contests "repeat-challenger races". Focusing the analysis in this way, one can control for candidate quality by introducing a candidate-pair indicator variable. Applying this technique, Levitt finds

no statistically significant relation between incumbent campaign spending and incumbent vote shares, and a weak relation for challengers. Moreover, the point estimates are so small that, even if the estimates were statistically significant, extra spending would have a negligible effect on vote shares.

If the effect of money is small, one is left to wonder why candidates appear to invest a great deal of effort in raising funds. Perhaps there is so much fund raising because the cost of raising funds relative to the gain from winning office is low, or because candidates confuse correlation with causation (Levitt, 1994). An alternative view is that scholars should develop a different research design to uncover the effect of campaign spending in races for elective office.

The productivity of campaign spending is an important research question, and answers to this question become even more important when it is observed that incumbency reelection rates are at record highs. One cannot help but wonder whether the fact that incumbents outspend challengers on average by a margin of more than three to one contributes to their apparent electoral advantages. Moreover, the productivity of campaign spending is a critical issue for the campaign finance reform debate. If incumbent spending is ineffective in increasing their vote shares, while challenger spending is effective in reducing incumbents' vote shares, the argument of some reform advocates that limits on spending level the playing field between advantaged incumbents and disadvantaged challengers does not apply.

The previously mentioned studies assume that the same campaign dollar buys the same amount of advertising whether it is spent in a low-advertising cost or high-cost area. In Montana, the cost-per-point for a 30-second, prime-time television spot that reaches the entire constituency is less than $100, while the equivalent message would cost more than $1,500 in the Los Angeles area (Stratmann, 2004b). Thus, total spending may not be an accurate measure of how much candidates are effectively campaigning. The same amount of campaign spending buys a different number of television advertisements in different regions of the country, and differences in costs per point across jurisdictions lead to different amounts of advertising even though candidates may spend the same total amount.

Stratmann (2004b) adopts Levitt's (1994) methodology of examining a sample of repeat-challenger races, but instead of looking at the effects of total campaign expenditures on vote shares, he employs a measure of television advertising. Using this new measure, campaign advertising has a qualitatively and quantitatively important effect for both challengers and incumbents. In one of the specifications, a 15% increase in incumbent advertising relative to the mean increases the incumbent's vote share by 1.2 percentage points and a 43% increase in challenger advertising relative to the mean increases the challenger's vote share by 2.1 percentage points.

One promising avenue to a better understanding of campaign advertising involves examining the types of messages candidates send. Abrajano and

Morton (2004) analyze whether candidates' television advertising emphasizes valence issues, something they call "style", or whether they instead send truthful, credible policy messages, something they call substance. Analyzing data from the 2000 US House elections, they find evidence for strategic advertising. When a candidate's position is close to that of the median voter, candidates reveal substance about their records. The farther their policy positions are away from the median voter's ideal point, the more likely candidates are to emphasize style issues in their television advertising.

3. Campaign Spending on Ballot Measures

When one does not control for the endogeneity of candidate spending in elections, most studies find that spending by one side is effective, while spending by the other side is not. This finding has a parallel in the campaign finance literature on ballot initiatives. Here, when not controlling for the endogeneity of advertising, most studies also find an asymmetry in its effectiveness.[7]

As in elections involving candidates for political office, campaign spending on ballot initiatives has been steadily rising. In 1992, $117 million was spent in 21 states by groups supporting and opposing various ballot measures; in 1998, interest groups spent close to $400 million in 44 states. California led the nation in this regard. Interest groups spent $522 million between 1992 and 1998 on that state's ballot measures, including $256 million in 1998 alone. As for more recent years, Stratmann (2005) documents that in California between the 2000 primary and the 2004 primary, interest groups spent $494 million on passing or defeating ballot measures (in real March 2004 dollars). Of this total, the supporting side spent $344 million and the opposing side spent $149 million.

The older literature on the effects of campaign spending on initiatives looked at whether the side that spent more also was more likely to obtain a majority vote for its cause. Lowenstein (1982), for example, examines ballot measures with "spending on either the affirmative or the negative side that exceeds $250,000 and that is at least twice as high as the spending on the opposing side." Using this selection criterion, he finds that the supporting side was successful in passing 67% of the measures on which they outspent opponents, whereas the opposing side succeeded in defeating measures 90% of the time when they outspent supporters.

This asymmetry holds up when regression techniques are employed. In her empirical analysis, Gerber (1998) finds that contributions from economic groups lower the probability that a measure will pass, but that contributions from citizen groups have no impact on passage rates. Taking these results literally, economic interest groups could improve a measure's chances of passing by not spending anything. Related work by Bowler and Donovan (1998) reports that campaign expenditures have little effect on voters' opinions

regarding ballot measures. Asymmetry in the effectiveness of spending is also found in the regressions of Garret and Gerber (2001). They report that total expenditures by supporters have a positive but statistically insignificant effect on ballot measure vote shares, whereas opponents' total expenditures have a negative and statistically insignificant effect. These results pose some puzzles. Why would the supporting side spend money when it is ineffective and sometimes even reduces voter support (Matsusaka, 2000)? This question raises the issue of whether previous studies have accounted for all of the relevant factors that determine spending on ballot measures and election outcomes.

Endogeneity may plague regressions designed to explain the impact of ballot initiative advertising on passage rates, just it does in the case of candidate vote shares. If an interest group that opposes a ballot measure knows that voters prefer the status quo and thus also are opposed to the measure's passage, the group may spend few resources campaigning against it. This is because the group expects the measure to be defeated even if little effort is made to push its point of view. In this case the effect of negative advertising is overestimated. However, the supporting side nevertheless may spend large sums to inform voters about the benefits of supporting the measure; thus, unobserved or unmeasured voter preferences favoring the status quo will lead to an underestimation of the effect of spending by supporters.

One way of addressing this causality issue is to estimate a regression that has controls for individual propositions and for the geographic area in which voters cast their ballots (Stratmann, 2005). In Stratmann's paper, the unit of observation is the vote share in a county for a ballot measure, and this vote share is linked to the degree of voter exposure to ballot initiative advertisements on television. This approach captures unobserved voter preferences in a county as well as statewide preferences for or against a particular initiative. Stratmann further divides initiatives into those favored by liberal voters and those favored by conservative voters and allows county preferences to differ for both initiative types. The results from this study differ from the findings in previous studies. Using this research design, the estimates show that supporting spending is at least as productive as opposition spending. For example, in examining the effect of advertising on the percentage of votes favoring passage, 100 extra supporting television advertisements increases the ballot's vote share by 1.2 percentage points, and the same number of opposition advertisements decreases this share by 0.6 percentage points. If one calculates the magnitude of these effects based on the actual number of advertisements, the impact of advertising does not appear to be large. For example, to obtain a 1.2 percentage point increase in the fraction of voters favoring passage, the supporting side has to increase its advertising by 23% relative to the mean. The opposing side must increase its advertising by 53% to obtain a 0.6 percentage point reduction in voter support.

4. Campaign Contributions and Policy Decisions

Do incumbents who receive money from special-interest groups cater to their wishes because they received campaign contributions, or do they receive contributions because they were already committed to the interest group's point of view? In the latter case, groups contribute to assure their preferred candidate's reelection and to show their appreciation for the incumbent's positions.

Many theoretical models assume or predict that interest groups buy policy favors with their campaign contributions (see, for example, Grossman & Helpman, 1994, 1996, 2001). The evidence for this prediction appears mixed.[8]

As in the other areas of campaign finance research, there is the issue whether campaign contributions are endogenous. A simple correlation between contributions and voting behavior does not help to address whether the causality goes from incumbent's positions to contributions, or from contributions to incumbent's positions. Ordinary least square estimates will overestimate the effect of contributions on voting behavior if interest groups donate to their friends. These estimation techniques also underestimate the effect when interest groups focus their contributions on potential foes. Thus, it is difficult to determine whether OLS estimates are biased downwards or upwards.

Recent research shows that campaign contributions have not had much of an effect on legislative voting behavior, as summarized by popular voting indexes, such as those produced by the AFL-CIO's Congress on Political Equality (COPE), the liberal Americans for Democratic Action (ADA), and the defense-industry oriented National Security Council (NSC). Bronars and Lott (1997) examine whether retiring legislators, who are not threatened by retaliation in the next election cycle, change their voting behavior, measured as a change in voting score, when there is a change in contributions from relevant PACs. They find only modest evidence that changes in these contributions change voting behavior. Ansolabehere, de Figuieredo and Snyder (2003) examine the effect of labor and corporate contributions on voting scores assigned by the US Chamber of Commerce and likewise find no evidence that contributions affect voting in the predicted directions once one allows for member or district fixed effects, or uses instrumental variables estimation.

One way of analyzing the link between campaign contributions and legislative votes is to examine votes that occur repeatedly in Congress and to ask whether changing contributions are associated with changing legislative voting behavior. If the underlying constituency characteristics do not change (i.e., if voter preferences do not change), then it can be argued that if contributions from a special-interest group increase between the first and the second vote and legislators switch from opposing to favoring the group's interests, then this change in voting behavior constitutes evidence that the interest group influenced legislation with its campaign contributions.

Stratmann (2002) conducts such an analysis by examining two pieces of financial services legislation at different points in time. In 1991, the US House of Representatives took a vote on a bill to repeal the Glass-Steagall Act. The 1991 bill was defeated, and another vote on the same issue was taken in 1998. The House passed the latter measure. Banking interests favored repeal, while the insurance and securities industries opposed it. Stratmann (2002) regresses the change in a representative's vote from 1991 to 1998 on the changes in contributions from those three groups. He finds that these contribution changes have a statistically significant effect on a representative's voting decision. In particular, Stratmann finds that an extra $10,000 in banking contributions increases the likelihood of a House member voting in favor of repeal by approximately eight percentage points. Stratmann also finds that the influence of campaign contributions on voting decisions was larger for junior members of the House than for their more senior colleagues.

The timing of interest group contributions can provide some clues as to whether special-interest groups attempt to influence legislative voting behavior. Stratmann (1998) investigates whether roll call votes on agricultural subsidies in the US House of Representatives and significant actions by the House Agriculture Committee coincide with an influx of contributions from agricultural interests. He finds that the number of agricultural contributions spike around these events and that few contributions are made when the House is in recess. In addition to spikes around important events in Congress, Stratmann (1998) also documents an increase in contributions in the two months prior to the general election. One interpretation of these results is that contributions and votes are exchanged on a spot market.[9]

To examine whether this pattern of giving also holds for groups other than agricultural PACs, I collected data on the number of weekly roll votes and number of weekly contributions between the 1991–1992 and the 2000–2001 election cycle. I summed the votes, by week, over all six election cycles. Figure 1 shows the results of this exercise. The overall correlation coefficient between number of votes and number of contributions is 0.48 and it is 0.40 for votes and contribution amounts. Using the PAC classification of the Federal Election Commission, the highest correlation between votes and number of contributions is for corporate and trade PACs (0.50), and the lowest correlation is for ideological PACs (0.38), defined as PACs that are neither corporate, trade, or labor PACs. This finding is in similar spirit as the paper by Snyder (1992), who argues that some PACs focus on influencing elections, while others focus on influencing outcomes in the legislature.

One little explored channel of influence is the effect of contributions on the behavior of bureaucracies. Gordon and Hafer (2005) build a model predicting that large contributors are less likely to comply with regulations than smaller ones. This prediction is based on the assumption that contributions are a signal of a firm's willingness to fight an agency. Using plant-level
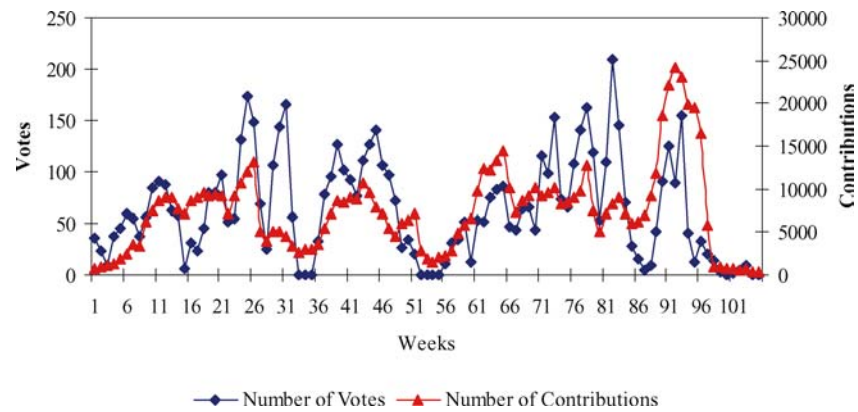
Figure 1. Weekly votes and weekly contributions: 1991–1992 to 2001–2002.

data from the Nuclear Regulatory Commission, they find support for their prediction.

Ansolabehere, de Figuieredo and Snyder (2003) surveyed articles in the economics and political science literatures that estimated the effects of campaign contributions on roll call votes. Of the nearly 40 articles surveyed, they find that the estimated contribution coefficients are either statistically insignificant or have the wrong sign in roughly 75% of the cases. If one were to ask whether money influences votes based on whether the median contribution coefficient shows a statistically significant effect, one would be forced to conclude that it does not.

Djankov and Murrell (2002) suggest using meta-analysis to determine whether an effect of money on legislative voting behavior is supported by the weight of the evidence. This type of analysis considers the sign and significance level of each of the coefficients that have been reported in the literature. Specifically, "it is readily apparent that a set of analyses with small positive *t*-statistics could be significant in the aggregate even with non-significance in each individual analysis" (Djankov & Murrell, 2002, p. 749).[10] Using their methodology, I have conducted a meta-analysis of the papers surveyed in Ansolabehere, de Figuieredo and Snyder (2003).

Those articles vary as to how coefficient estimates are reported and whether predictions are made concerning the direction of the effects of the included campaign contribution variables. I omitted coefficients for which authors made no prediction as to the expected sign. Kau and Rubin (1981), for example, estimate the effect of campaign contributions on passage of minimum wage legislation, and include separately contributions from agricultural, environmental, and other interests. Since they use these variables as controls, they made no a priori predictions for them; accordingly, these coefficients are not included in my meta-analysis. Also not included are estimates where I could

not impute a *t*-statistic. Some authors report that a coefficient is insignificant or significant, but do not state the level of statistical significance. These selection criteria result in the analysis of 265 contribution coefficients.

Giving studies that corrected for the simultaneous determination of contributions and voting decisions the same weight as those that did not, and following the methodology in Djankov and Murrell (2002), the meta-analysis tests indicate that the hypothesis that campaign contributions have no effect on voting behavior is rejected at the 1% level. Next, I gave the 196 coefficients that were estimated by correcting for simultaneity twice the weight as those that did not include such corrections. Again, the null hypothesis is rejected, lending support to the claim that contributions affect legislative voting behavior. Finally, I examined the studies that applied simultaneity techniques separately and the null hypothesis likewise is rejected.[11]

This meta-analysis reverses the finding reported in existing studies that campaign contributions have no effect on legislative voting behavior. The meta-analysis performed here suggests that money does indeed influence votes. However, one needs to be careful in not overstating this result. Whether one believes that contributions matter depends on whether one also believes that all of the studies underlying the meta-analysis properly have controlled for the potential simultaneous determination of contributions and votes. Future meta-analyses could drop some of the studies that one deems to be lacking in this respect.

One of the few studies that examine the effect of campaign contributions by corporations on the fortunes of the contributing firms is the innovative work by Jayachandran (2004). Using the unexpected departure of Senator Jim Jeffords from the Republican party in May 2001, resulting in a shift in the Senate majority, Jayachandran examines the effect of this change on the market value of firms contributing soft money to the Republican and Democrat parties. This event study shows that in the week after Jeffords switched, firms lost 0.8% of market capitalization for every $250,000 contributed to Republicans. The stock price gain to firms with Democratic contributions is smaller, but not statistically different in magnitude.

5. Determinants of Campaign Contributions

Theory predicts that contributors give money to candidates whose position is closest to their own, to those who are likely to change their position to the one preferred by the contributor, and to those candidates who have a high probability of winning (Mueller, 2003). Further, the predicted determinants of contributions differ, depending on the assumptions regarding contributor objectives. Do contributors consider contributions as pure consumption, as investment in policy, as a means of gaining access to the legislator, or as a way of influencing elections?

One of the most robust findings in the literature is that money flows to incumbents in close races (see, for example, Poole & Romer, 1985; Kau, Keenan & Rubin, 1982; Jacobson, 1985; Stratmann, 1991).[12] There is much evidence supporting the proposition that groups donate to their friends in Congress. This can also be readily seen in the pattern of contributions by labor unions and organizations such as the National Rifle Association. Systematic evidence for this hypothesis is provided by Poole and Romer (1985), who find that conservative PACs tend to contribute most to conservative candidates and that liberal PACs contribute most to liberal candidates. Many other studies have supported these findings (see, for example, Kau, Keenan & Rubin, 1982; Grier & Munger, 1991; Kroszner & Stratmann, 1998).

Snyder (1992) documents persistence in giving and suggests such behavior is consistent with the hypothesis that PACs establish long-run investments relationship with legislators. McCarty and Rothenberg (1996) point to the commitment problems that make establishing a long-term relationship between contributors and legislators difficult. They report a less than 50% probability that PACs donating to federal legislators in 1977–1978 were still supporting the same legislators in 1985–1986. Kroszner and Stratmann (2000, 2005) suggest that long-run relations can be sustained by reputation. They examine whether politicians who follow a strategy of developing reputations for reliability are rewarded with high levels of corporate campaign contributions. Clear and consistent policy positions could help reduce uncertainty about a candidate and lead to high campaign contributions from favored interests. Alternatively, such clarity could alienate those from disfavored interests and hinder the politician from raising contributions from groups on both sides of an issue. Using data on corporate PAC contributions to members of the US House during the seven election cycles from 1983–1984 to 1995–1996, Kroszner and Stratmann (2005) find that high reputational development is rewarded with more generous PAC contributions.

A number of studies have documented that incumbents serving on powerful congressional committees raise more funds (see, for example, Grier & Munger, 1991; Romer & Snyder, 1994; Milyo, 1997). One interesting avenue of work investigates changes in the pattern of giving when legislators switch committees. Romer and Sndyer (1994) examine changes in a representatives's committee and leadership assignments on changes in PAC contributions. One of the advantages of examining changes in contributions, as opposed to levels, is that this helps control for other factors. Their careful examination of the data shows that PACs reallocate their contributions when legislators move off or move onto a committee. Their data show that PAC giving is about representatives' committee assignments as well as their committee experience.

Also focusing on committees in the US Congress, Kroszner and Stratmann (1998) examine the contribution behavior of PACs from competing segments of the financial services industry, namely commercial and investment banks,

securities firms, and insurance companies. Their empirical investigation is guided by the theory of a long-run exchange relationship between committee members and interest groups. Consistent with their model, Kroszner and Stratmann find that these PACs contribute most to members on the House banking committee and that each group concentrates its contributions on particular committee members. They also document that contributions to banking committee members fall when their committee service ends and that members who are not successful in raising large contributions from interested groups tend to leave the committee.

Suppose that the goal of PACs is to influence legislative outcomes. Stratmann (1992) tests this by conjecturing that agricultural PACs want to assemble a congressional majority favoring farm subsidies, and to investigate the implications of this hypothesis. Given that agricultural PACs have limited funds, they may not find it worthwhile to contribute to incumbents representing farm districts in North Dakota or Montana, who predictably would support agricultural subsidies regardless of the amount received. Instead, the PACs will contribute to legislators with only a few farmers in their district or those who are undecided. Stratmann (1991) documents this pattern of giving by showing that the largest farm contributions flow to the legislators with the median rural constituency. Strategic giving also gains support when it is observed that liberal PACs give most to conservative Democrats and that conservative PACs give most to liberal Democrats (Stratmann, 1996). This evidence suggests that failing to find a significant correlation between contributions and voting behavior does not mean that PACs are not successful in influencing legislator's actions.

Much of the observed pattern of political giving is consistent with the motive of buying access as well as with the motive of influencing votes. Legislators may be more willing to listen to lobbyists representing large contributors than small ones. The motive of purchasing access is reinforced by the finding that large contributors also invest heavily in lobbying activities (Wright, 1990; Asolabehere, Snyder & Tripathi, 2002).

One of the few attempts to explain the growth of campaign expenditures is by Lott (2000). He takes the view that rent seeking is an interest group's primary motive for contributing to political campaigns and hypothesizes that when more rents are available, groups have stronger incentives to invest resources in obtaining them. Using state government size as a proxy for rent availability, he finds that campaign expenditures are higher in states where governments are bigger, ceteris paribus.

A different line of research has examined the characteristics of contributors. Pittman (1988), Zardkoohi (1988), and Grier, Munger and Roberts (1994) examine the characteristics that determine whether an industry has established a PAC and how much each contributes. They find that industry size, concentration, and whether it faces government regulations helps explain variations

in both measures of business political activity. Using firm-level data from the high-tech sector, Hart (2001) finds that larger sales or being regulated by the government increases the probability that a firm forms a PAC.

6. Campaign Finance Reform

Money's growing importance in politics led, at least in part, to recent federal campaign finance reform legislation, the Bipartisan Campaign Reform Act (BCRA) of 2003. Differences in campaign finance laws at the state level usefully can be employed to study the effects of regulating money in politics. State reforms have included the introduction of contribution limits, a tightening of existing limits on contributions by individuals, corporations, labor unions, PACs, and parties, as well as the adoption of public financing combined with expenditure limits. The variation in the data allows one to analyze how a number of political outcomes are affected by changes how campaigns are financed.

Theoretical work by Che and Gale (1998) suggests that, in a rent-seeking environment, contribution caps can increase aggregate effort levels by making a larger number of races more competitive, and that there are reasons to expect overall contributions to increase after a cap is imposed. Riezman and Wilson (1997) present a theoretical model exploring the effects of campaign finance reform on lobby formation. Drazen, Limao and Stratmann (2004) show that a not-too-stringent limit on contributions can improve interest groups' bargaining positions relative to politicians, thus increasing the payoff from contributing. In this case the limit increases the equilibrium number of contributors. Testing the bargaining model with data on contribution limits adopted at the state level from 1986 to 2000, Drazen, Limao and Stratmann report empirical evidence indicating that caps have increased the number of lobbies between 7% and 8%.

The Coate (2004a) model generates testable implications regarding the effects of campaign contribution limits on the closeness of elections. Although contribution limits result in less campaign spending and reduce voters' information about their voting options, limits may decrease the number of favors candidates promise to contributors. In particular, the probability that a voter will switch his vote to the advertising candidate will increase with limits if the beneficial effects of limits (i.e., fewer policy favor promises) outweigh their negative effects (i.e., the information loss). This reasoning implies further that if campaign contributions are only position-induced, then contribution limits lead to a narrowing of the margin of victory. However, if contributions are also service-induced – there is a quid pro quo – limits on contributions can increase the margin of victory. In the latter case, limits reduce the amount of favors promised and thus voters find the advertising messages of high quality candidates to more credible, leading to larger margins of victory.

Using variation over time and controlling for state-specific effects, Stratmann and Aparicio-Castillo (2005) examine electoral competitiveness in legislative elections across 45 states from 1980 to 2000. Panel data techniques reduce the possibility that omitted variables are correlated with observed party competitiveness and with a state's decision to adopt a campaign finance law or to modify an existing one. Stratmann and Aparicio-Castillo find that stricter limits on individuals, corporations, labor unions, and PACs are associated with narrower margins of victory and a greater number of candidates in elections. These findings are consistent with those of Besley and Case (2002), who report that the existence of corporate campaign contribution limits lead to more vigorous party competition in state legislatures.

The Coate (2004a) model also predicts that, relative to privately financed campaigns, public financing increases the high-quality candidate's chances of winning an election. Publicly financed advertising is the case of purely informative advertising: no promises need be made to contributors when campaign messages are paid for by the taxpayers. Guided by this prediction, Houser and Stratmann (2005) find that the high-quality candidate is elected more frequently and his margin of victory is larger in publicly financed campaigns. Specifically, Houser and Stratmann report that the high-quality candidate wins one-third less often when campaigns are financed by special interests. They also study contribution caps and matching funds, finding that the right candidate (in terms of voter welfare) is elected more frequently in the matching treatment than under private financing and no matching.[13]

While the incremental change in the margin of victory due to an additional publicly financed advertisement is positive and roughly constant, the margin is positive but decreasing in special-interest campaigns. In view of the Coate (2004a) model, the reason for this asymmetry is that voters become skeptical that high-quality, but power-hungry candidates in privately financed campaigns are engaged in substantial favor-trading. One way to circumvent this belief is to cap the amount of private funds that can be raised.

Arizona and Maine are among some of the states that recently have enacted campaign finance reform laws that provide for public financing. Public funds accounted for over half of the total amount spent in legislative races in those two states in 2002. Examining trends in political outcomes in Arizona and Maine, it appears that the reelection rates of incumbents drop when public financing is significant (Mayer, Werner & Williams, 2004). Public funding also appears to increase the number of candidates seeking election and the likelihood that an incumbent faces a competitive race. On the other hand, analyzing cross-sectional data, Malbin and Gais (1998) find no evidence that public funding with spending limits makes elections more competitive.

Another interesting avenue along which to study campaign finance reform is to examine its effects on voter participation (Milyo, Primo & Groseclose, 2002) and on political efficacy and trust (Primo & Milyo, 2004). Using data

from National Election Studies, Primo and Milyo find little evidence that state laws mandating public disclosure of political contributions and limiting contributions from organizations are associated with increased efficacy, while public financing decreases efficacy.

7. Conclusion

Among other changes, the recent federal campaign finance reform (McCain-Feingold) eliminated "soft money" and doubled the allowable individual contribution for the 2004 election from $1,000 to $2,000 per candidate per election cycle. (Primary and general elections count as separate elections.) Since challengers rely more on party contributions than incumbents, and since incumbents have an advantage in fund-raising, this law has probably benefitted the current office holders relative to their potential challengers. Getting rid of soft money has accelerated the rise of so-called 527 groups, groups that spend money on campaign advertising independent of candidates. Little academic work has been done to date analyzing the effects and the allocation of these funds. In particular, it would be interesting to see if these groups spend monies in similar markets as the candidate they support or oppose, or whether they instead tend to advertize in different markets. Further, detailed data on the timing of candidate advertising and advertising of independent groups allows for the study of strategic interactions, and how polls respond to advertising.

Not all campaign finance reform necessarily benefits incumbents. In many states voters have used ballot initiatives to limit contributions to candidates in state elections. These contribution limits seem to have the effect of making elections more competitive (Stratmann & Aparico-Castillo, 2005). One possible explanation for this finding is that limits are primarily binding for incumbents, but not for challengers, resulting in an improvement in challengers' relative positions.

Little academic work has been done on in-kind contributions, such as "volunteers" distributing campaign literature, telephoning voters and contacting them in person. Clearly these volunteers can serve as substitutes or complements to funds expended in campaigns. Volunteers may enhance the credibility of a campaign and thus cause campaign spending to become more productive. Endorsements represent another area of research where little empirical work has been done. Like in-kind contributions, endorsements of candidates by the local media, celebrities or other political figures can have a direct or indirect effect on election outcomes.

Notes

1. Data for the 1996 campaign were obtained from http://www.fec.gov/ pres96/presmstr.htm# disbursements; data for the 2000 and 2004 campaign were obtained from http://www. fec.gov/finance/disclosure/srssea.shtml.

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2. See http://www.opensecrets.org/pressreleases/2004/04spending.asp.
3. http://www.fec.gov/press/press2004/20050103canstat/overviewpost2004.pdf.
4. Milyo (2001) suggests that these findings are consistent with the view that incumbents are intertemporal utility-maximizers.
5. One alternative approach is to employ covariance restrictions, as in Erikson and Palfrey (1998).
6. For studies examining the effect of incumbents' war chests on deterring entry by challengers see, for example, Epstein and Zemsky (1995), Box-Steffesmeier (1996), and Goodliffe (2001).
7. Contributions to committees supporting or opposing initiatives or referenda are not subject to spending limits, while contributions to candidates in elections are limited. The legal motivation for the difference in treatment is that the Supreme Court sees the potential for quids pro quo between candidates and contributors, but that this option is not available when groups contribute to committees whose goals are to pass or defeat ballot initiatives.
8. Only a few studies examine how contributions influence the allocation of time by legislators. One example is the work by Hall and Wayman (1990). This is surely an interesting avenue for future research. Time is a scarce good and there are many political actors competing for a legislator's time.
9. A benign interpretation of this result is that interest groups either immediately reward a legislator after having cast a vote or, if a legislator announces a favorable position prior to a vote, that the interest group expresses its gratitude immediately by contributing to the legislator's campaign. However, even under this benign view, some observers will interpret the observed patterns of giving as suggesting at least the appearance of corruption. Stratmann (1995) finds that contributions that are given in the election cycle when a roll call vote is taken, in addition to contributions from the previous election cycle, have independent and a statistically significant influence legislators' voting behavior.
10. This is one of the reasons why meta-analysis may be useful. For example, ten predicted signs, each of them statistically insignificant, may nevertheless be statistically significant in aggregate. Thus, pooling the information in a systematic manner may give additional information regarding the effectiveness of campaign contributions.
11. These conclusions are unaffected when the results from the labor and corporate PAC coefficient estimates reported in Ansolababere, de Figuieredo and Snyder (2003) are included.
12. These studies typically do not address whether contributors give more in close races because they hope to influence the outcome, or because participation in the political process is more rewarding when a race is tight, just as sports events seem to draw larger audiences when the teams are more evenly matched. Future work may also want to examine whether more contributions make races closer or if closer races draw more contributions.
13. Experimental work in the area of campaign finance limits is rare. One exception is Cadigan (2004), who does not examine the effects of limits directly, but draws inferences based on experimental data. He suggests that BCRA 2002 is likely to make elections less competitive.

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