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Public Policy Brief

CAMPAIGN CONTRIBUTIONS, POLICY DECISIONS, AND ELECTION OUTCOMES

A Study of the Effects of Campaign Finance Reform

CHRISTOPHER MAGEE

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Preface

Congress has long struggled with the issue of money and politics. Proposals for campaign finance reform are essentially based on the belief that political influence can be bought with financial donations to a candidate's campaign. In an effort to eliminate this influence, Congress has considered proposals aimed at limiting the influence that money can buy. But do contributions really influence the decisions of legislators once they are in office? In this policy brief, Christopher Magee of the Economics Program at Bard College examines the link between campaign donations and legislators' actions.

Two reasons are generally given for campaign contributions to candidates from political action committees (PACs). One is that the contributions are intended to influence the actions taken by winning candidates once they are in office. The other is that they are intended to affect the outcome of an election. Magee examines these two explanations by estimating the effect of campaign contributions received by candidates on the outcomes of the 1996 elections to the U.S. House of Representatives. He uses a *Congressional Quarterly* survey of candidates' policy positions to determine the impact of contributions on the policy stances adopted by them.

Magee's results suggest that political action committees donate campaign funds to challengers in order to affect the outcome of the election by increasing the challengers' chances of winning. Campaign contributions received by challengers have a large impact on the election outcome but do not seem to affect the challengers' policy stances. In contrast, campaign contributions to incumbents do not increase their chances of being reelected and seem to be given with the hope of gaining influence. Magee's research indicates that PAC contributions to incumbents may be given

primarily to secure services that elected officials can provide, such as influencing the legislative agenda, rather than to affect the candidate's policy stance.

As Magee indicates, his findings have some important implications with regard to proposals for campaign finance reform. First, they indicate that limiting spending in election outcomes to a specified amount of public funding could benefit incumbents and hurt challengers. Second, reforms that eliminate PAC contributions without replacing them with public funding would have little impact on election outcomes, but such reforms might affect the policies that emerge from Congress.

Magee notes that his findings are not definitive and that more research needs to be done to evaluate the effects of campaign finance reform proposals. However, considering that Congress is likely to continue its efforts to remove the link between money and politics, Magee's findings are important. The work that is presented here contributes to an understanding of the real impact of these proposed reforms. As always, I invite your comments.

Dimitri B. Papadimitriou, *President*
June 2001

Campaign Contributions, Policy Decisions, and Election Outcomes

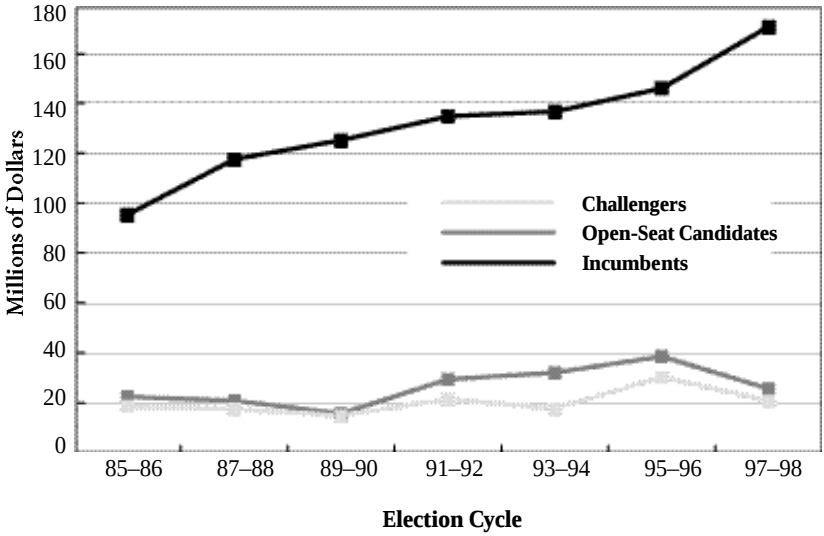
The most visible of the current proposals for campaign finance reform is the McCain-Feingold-Cochran bill. In its current draft, the bill would ban soft money contributions,increase the amount that individuals and political action committees (PACs) can contribute directly to parties, and limit advertising by labor unions and corporations on election issues near the time of the elections.[1] The bill has come a long way from its original version, which included voluntary spending limits and a ban on PAC contributions. The reduced ambition of the reform proposal reflects the difficulty of passing campaign finance reform through an evenly divided House and Senate, many of whose members believe that their political careers may be threatened by limitations on the way their campaigns are funded. These difficulties are so profound, in fact, that Congress has approved no major campaign finance reform since 1974.

Most proposed reforms of the campaign finance system seek to reduce legislators' dependence on interest groups. As Levitt (1995) points out, reform proposals focus on three issues: limits on candidate spending, limits on contributions, and public funding for campaigns. The effects of these proposals depend critically on the following questions: How effective is campaign money spent by challengers and incumbents in deciding elections? And do campaign contributions influence legislators' activities in office?

While the literature on each of these questions is extensive, clear answers have not yet emerged, and indeed, the results to date have left something of a puzzle. Many papers, such as Jacobsen (1978, 1985), Welch (1981), and Abramowitz (1988), have found that contributions to incumbents have little effect on the outcome of the election. The influence of contributions on legislators' voting behavior is often found to be minimal as well, particularly on issues that are ideological (Potters and Sloof,1996; Bronars and Lott,1997).

Despite these researchers' conclusions that contributions to incumbents have very small effects on their policy choices and on election outcomes, political action committees have steadily increased their contributions to House and Senate incumbents in the past 15 years, as Figure 1 shows. Over the same time period, however, there has been no clear trend in PAC contributions to open-seat candidates or to challengers. Political action committees gave $20 million to challengers and $24 million to open-seat candidates in 1985–86. In 1997–98, those contributions had increased to only $22 million and $27 million, respectively. While the real value of PAC contributions to incumbents rose by over 19 percent from 1985 to 1998, the real value of contributions to challengers and open-seat candidates fell by 26 percent and 24 percent, respectively. If contributions only affect elections when given to challengers or open-seat candidates and do not affect incumbents' policy actions or election outcomes, as much of the traditional literature has argued, this behavior is puzzling.

Figure 1 PAC Contributions



This policy brief presents empirical evidence of the effect of campaign contributions and expenditures on candidates' policy choices and election outcomes, and it discusses the implications of the results for campaign finance reform proposals.[2] In examining the link between contributions and policy choices, five major policy issues are studied: the North American Free Trade Agreement (NAFTA), the Family and

Medical Leave Act (FMLA), a ban on partial-birth abortions, cuts in the B-2 bomber program, and gun control. The results support previous researchers' conclusions that contributions affect policy decisions only for a limited set of issues—primarily those in which the costs or benefits are concentrated on an interest group and the issue is less publicly visible (Potters and Sloof, 1996). The empirical results also suggest that campaign expenditures by incumbents do not have large effects on election outcomes. Thus, the puzzle about PAC contributions to incumbents remains. One explanation consistent with the evidence is that PAC money to incumbents buys unobservable services, such as rewriting of legislation and rallying support or opposition to bills among other representatives. The data in this study show that contributions flow more readily to incumbents who, because they are congressional leaders or members of influential committees, are able to provide these agenda-development services to the interest group. This conclusion is consistent with results in Hall and Wayman (1990), which find that campaign money encouraged House committee members to expend more time and effort on policy issues important to the contributing PACs.

One advantage of this paper is that the data include information on both incumbent and challengers' policy positions. Most previous research examined the impact of contributions on policy choices made by legislators in office and ignored the selection issue of including in the data set only candidates who won their election. Because they contain both candidates' policy positions, the data here allow us to investigate whether interest groups target their contributions to races in which the candidates have opposing policy stances. Such a strategy would be rational if the PAC wanted to influence the election in favor of the candidate who supported its preferred position.

If political action committees behave rationally in giving campaign contributions (and Stratmann [1992] presents evidence that PACs are rational), they must be motivated by a desire to influence either the outcomes of the elections or the actions of legislators. Grossman and Helpman (1996) refer to the former reason as an electoral motive and the latter as an influence motive for campaign contributions.Stated another way, a PAC can manipulate government policies by buying either legislators' policy positions or the elections. In the latter case, interest groups attempt to sway elections in favor of candidates whose views are most in line with their own.

Bronars and Lott (1997) and Stratmann (1998) have studied the possible effect of campaign contributions on election outcomes or legislator policy positions. Bronars and Lott find that despite a large decline in contributions received during their last election cycle, retiring legislators do not change their voting patterns. The authors interpret this evidence to mean that PAC contributions do not change politicians' behavior. Further evidence that campaign contributions are given with an electoral motive comes from interviews of 20 major political action committees, which claimed that they almost never gave to both candidates in the same election. Poole and Romer (1985) also note this last result.

Stratmann finds that farm PACs increased the number and amount of weekly contributions around the time of farm subsidy votes in Congress as well as near the primary and general elections. He concludes that farm PACs give campaign money to affect both elections and legislator behavior. Welch (1980) also finds evidence that interest groups donated more money to likely winners than they did to candidates in close races. He points out that this pattern of contributions is inconsistent with interest groups having only an electoral motive for giving. Snyder (1992) suggests that the tendency of PACs to donate heavily to senior incumbents who face little electoral opposition is "not so consistent with a charitable motive for giving."

Studying the effect of contributions on legislator voting behavior is complicated by the fact that campaign contributions are endogenous, meaning that interest groups may give donations to candidates who would support the group's position even in the absence of the contribution. Chappell (1982) finds that when he controls for their endogeneity, campaign contributions do not significantly affect legislative voting in any of the seven issues he examines. Stratmann (1991), however, uses the same empirical method to show that contributions significantly affect legislators' votes on eight out of ten agricultural policy bills analyzed. Baldwin and Magee (2000b) find that contributions from business and labor groups affected representatives' voting on NAFTA and the GATT Uruguay Round Agreement.

Despite these instances in which money affects voting behavior, Bender and Lott (1996), in a review of the literature, conclude that politicians vote in their constituents' interests in "the vast majority of cases." They argue that when campaign contributions do affect legislators' voting behavior, the deviation between the representatives' actions and their constituency

interests is not large. Morton and Cameron (1992) suggest that campaign money is more likely to affect legislators' behavior when the economic effects of the bills under consideration are concentrated on particular interest groups and when the issues are less publicly visible.

The effect of campaign contributions on election outcomes is also somewhat in dispute. The "early empirical evidence," according to Morton and Cameron (1992), and the "conventional wisdom," according to Levitt (1995), are that election spending by challengers has a large impact on election outcomes, but that spending by incumbents is relatively unproductive. This view was initially argued by Jacobson (1978, 1985) and supported by Abramowitz (1988).

Green and Krasno (1988), Levitt (1994), and Erikson and Palfrey (1998, 2000) disagree with the view that challenger spending affects election outcomes more than incumbent spending. Green and Krasno find that incumbent spending has a greater effect on election outcomes when a new measure of challenger political quality is included in the regressions. Incumbent spending also appears to have a significant effect on vote outcomes for freshmen incumbents (Erikson and Palfrey, 1998) and in races that are expected to be close (Erikson and Palfrey, 2000). Levitt finds that spending by challengers and incumbents has a similar, very small impact on the election results in repeated races between the same two candidates.

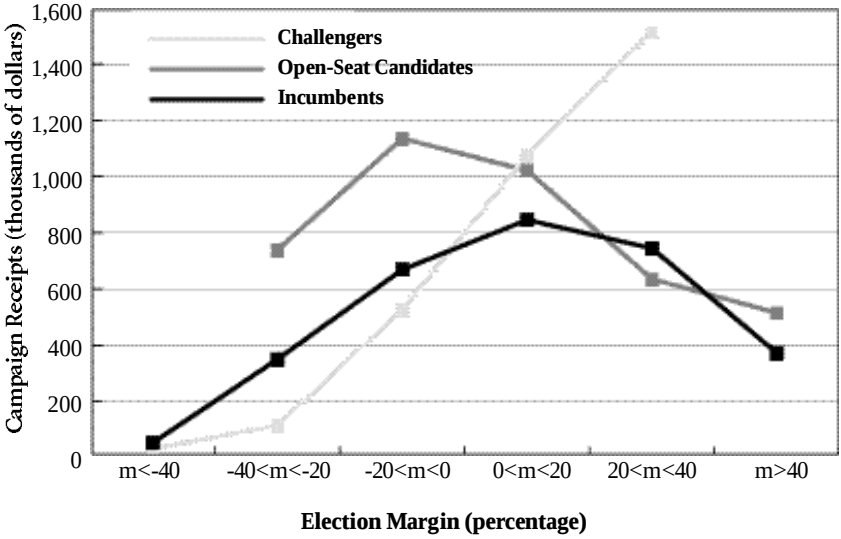
Empirical Model

To examine this issue, a multiple-equation empirical model was developed. It estimates the probability that a candidate will win an election, the contributions candidates receive, and the policy choices they make. An election outcome is assumed to be a function of the personal characteristics of two candidates and the total campaign contributions that each has available. Since donors give campaign funds to candidates who are more likely to win, and candidates seek more money if they are involved in a close race, contributions must be treated as endogenous.

Figure 2 reveals the endogenous nature of contributions by plotting average campaign receipts against the margin of victory for candidates in open-seat

races, for challengers facing incumbents, and for incumbents. The figure shows a decline in the total contributions received by incumbents and by open-seat candidates as their margin of victory rises. Only one incumbent lost (and one challenger defeated him) by more than 20 percentage points. The fact that campaign receipts rise for successful challengers cannot reveal if money influences an election or if successful candidates attract more money.

Figure 2 Campaign Contributions and Margin of Victory



A system of equations was used to separate the actual effect of contributions on election outcomes from the effect that these contributions were expected to have on outcomes. (For a detailed description of the model and the methods used, see Appendix A). Factors in the first stage of the model included campaign contributions received by candidates (separated between Republican and Democratic candidates), the expected percentage of the popular vote received by each candidate (again, separated by party affiliation), whether the candidate was an incumbent, and other exogenous explanatory variables. From the model, estimates were derived for the effects of receipts by an incumbent, challenger, or open-seat candidate on election outcomes for each party affiliation. Also gleaned from the estimates are how campaign receipts respond to expected voting outcomes and the extent to which the candidates alter their fund-raising in response to the contributions raised by their opponent.

The second stage of the model estimated the effects of campaign contributions on the policy decisions made by candidates. Candidates are assumed to adopt policy stances based on personal traits, characteristics of their congressional districts, and campaign contributions given by groups who support or oppose each bill. (The policy choices are described in more detail below.) PAC contributions are assumed to be endogenous because interest groups want to help elect candidates who are predisposed to support the committee's preferred position. Included in this stage of the model are contributions that a candidate receives from groups who support or oppose a given policy, and the policy decision of the opposing candidate. From these estimates we can see the effects of campaign contributions on the policy stances adopted by incumbents and challengers.

Five policy choices are examined in this paper. The first is the North American Free Trade Agreement (NAFTA), which eliminated trade barriers among the United States, Canada, and Mexico. Organized labor strongly opposed NAFTA while business groups generally supported it. Baldwin and Magee (2000b) present evidence that campaign contributions from labor groups were associated with votes against the 1993 NAFTA bill while business group contributions were correlated with votes in favor of it. The Family and Medical Leave Act (FMLA), requiring businesses to provide leave for workers who have a medical emergency, give birth, or adopt a child, is the second policy issue examined. Labor groups are assumed to oppose NAFTA and support the FMLA while business groups support NAFTA and oppose the FMLA.

A third policy issue examined is a bill proposing a ban on partial-birth abortions. Interest groups identified as pro-life are assumed to support the bill while pro-choice groups oppose it. The final policy positions analyzed are proposals to cut spending for B-2 bombers and the Brady bill restricting sales of handguns. Defense aerodynamics political action committees (identified by the Center for Responsive Politics) are assumed to oppose the former proposal while interest groups advocating a reduction in military spending support it. Handgun control groups are assumed to support the Brady bill while the National Rifle Association (NRA) and other gun rights groups oppose it. The data used in this study are described in the tables.

Empirical Results

Campaign contributions and election outcomes

The first question to address is what effect campaign contributions received by candidates have on election outcomes. This issue is particularly important in evaluating the impact of campaign finance reform proposals on election probabilities for challengers and incumbents. Table 1 presents the results of estimates from the first round of the model. The second column in the upper portion of the table presents the marginal effect of a unit change in the listed variable on the percentage of votes received by the Democrat. The marginal effects are calculated relative to the vote fraction that an otherwise average Democrat would receive. These baseline vote fractions are listed at the bottom of the table.

Table 1 Estimates of Effects from the First Model

A. Election Outcome Equation

	Democrat Vote Fraction		Single Equation Estimates
Variables	**Coefficients**	**Marginal Effects**	
Contributions			
Incumbent (D)	-0.00004 -	0.00143	-0.00003
Challenger (D)	0.00026 ***	0.00996	0.00027 ***
Open Seat (D)	0.00015 *	0.00589	0.00012 *
Incumbent (R)	-0.00002	-0.00060	-0.00002
Challenger (R)	-0.00029 ***	-0.01104	-0.00036 ***
Open Seat (R)	-0.00020 ***	-0.00806	-0.00022 ***
Instrumental variables			
Presidential vote	0.00772 ***	0.30806	0.00766 ***
Other variables			
No high school degree	0.00309 **	0.12317	0.00292 **
Per capita income	-0.00174	-0.06949 O,E	-0.00125
Office (D) – Office (R)	0.05536 ***	2.20612	0.06320 ***
Nominee (D) – Nominee (R)	0.02709	1.08036	0.03702
Terms (D) – Terms (R)	0.00520 **	0.20750	0.00416 *
Incumbent (D) – Incumbent (R)	0.26560 ***	10.44897	0.27084 ***
Constant	-0.06541		-0.05494
R-squared	0.9008		0.8890
Baseline vote fraction (incumbent)	0.6335		
Baseline vote fraction (challenger)	0.4000		
Baseline vote fraction (open seat)	0.5065		

B. Contribution Equations

Variables	Democratic Receipts Coefficients		Republican Receipts Coefficients	
Democrat fraction of vote	1150.79	***	116.75	O,E
Vote fraction * Close race	-25.39	O	599.07	***
Opponent contributions	0.34	***	0.10	
Instrumental variables				
Northeast	72.91		6.91	
South	66.78		159.20	***
West	40.58		-12.98	
Age	-4.16		-5.16	**
Primary	123.13	***	84.32	*
1994 receipts	0.95	***	0.89	***
Committee chair	-14.61		182.36	**
Ways and Means Committee	-59.51	O	48.71	E
Other variables				
No high school degree	-6.18	*	-10.10	***
Per capita income	-5.16		-2.46	
Office	116.22	**	145.16	**
Nominee	-35.37		39.61	O
Terms	7.31	O	0.64	O
Incumbent	-377.72	***	-186.57	*
Constant	-14.29	O	514.04	**
R-squared	0.5979		0.6047	
Observations	412		412	
Log likelihood	-5303		-5303	

O, E indicate that the sign of the coefficient is sensitive to excluding outliers or to the estimation method. *, **, *** indicate that the coefficient is significant at the 10 percent, 5 percent, and 1 percent levels, respectively.

These results indicate that contributions received by incumbents do not affect election outcomes because the coefficients on Democratic and Republican incumbent contributions (column 2) are both statistically and economically insignificant. The estimates indicate, for example, that $100,000 of extra spending by a Republican incumbent would lower the Democratic challenger's share of the vote by only 0.06 percentage points. The sign on the Democrat incumbent contribution variable is actually negative, suggesting that the Democrat's vote share falls as his or her contributions increase. Whether this coefficient is positive or negative, however, is sensitive to the estimation technique used.[3] The small, and even sometimes negative, effects of incumbent spending are consistent with the estimates in Jacobson (1978, 1985) and Abramowitz (1988). The coefficient estimates on the incumbent contribution variables are significantly different from the coefficient estimates on the challenger contribution variables at the 1 percent level and different from the coefficients on the open-seat contribution variables at the 5 percent level. Contributions

received by Democrats appear to have the same impact on the election as contributions received by Republicans. The coefficients on the contribution variables do not differ significantly in magnitude between Democrats and Republicans.[4]

Unlike contributions to incumbents, campaign contributions received by challengers and open-seat candidates do have a statistically significant effect on the 1996 House election outcomes. An extra $100,000 in contributions received by Republican challengers and open-seat candidates lowers the Democrat's vote share by 1.1 and 0.8 percentage points, respectively. The same increase in contributions to Democratic challengers and open-seat candidates raises that vote share by 1 and 0.6 percentage points. These estimates are smaller than the impact of challenger contributions on election outcomes found in Magee (2001). That paper examined only races between incumbents and challengers, and it found that $100,000 in challenger contributions raised their vote share by 2.2 percentage points, while the effect of incumbent contributions remained negligible. The estimated impacts of challenger contributions on the election outcomes are not significantly different from the effect of open-seat contributions.

Jacobson (1978) hypothesizes that the difference between the effects of challenger and incumbent spending on election outcomes arose because the purpose of advertising is to gain name recognition. Incumbents already enjoyed name recognition among their constituencies, but challengers did not. Thus, challengers had more to gain from campaign spending than incumbents, and money available to the former should have a larger impact on the election. The result found in this study, that contributions received by challengers and open-seat candidates have similar, large effects on elections, is consistent with Jacobson's hypothesis since both challengers and open-seat candidates lack name recognition relative to incumbents.

Because the type of models used for these estimates is very sensitive to the assumptions of the model, a number of robustness tests were performed; these are included in Table 1. The estimation was performed excluding outliers, which are defined as races in which the winning candidate gained more than 90 percent of the vote or in which one of the candidates received more than $2.4 million. These restrictions excluded 12 races. The regressions were also run using alternative estimation procedures (generalized method of moments and two-stage least squares). Coefficients whose

signs reverse when outliers are excluded are marked with O and those that are sensitive to the estimation technique are marked E. The last column in Table 1A presents the results of estimating the election outcome as a single equation, which treats contributions as exogenous. The coefficient estimates remain very similar in the single-equation regression.

If political action committees give money solely for the purpose of influencing elections, they should target their campaign contributions to candidates whose opponents have adopted a contrary policy position. When both candidates hold the same policy stance on an issue, a concerned interest group has no electoral motive to contribute. Table 2 investigates whether interest groups give less money in races in which both major candidates have adopted the same policy stance. The table shows average contributions from interest groups that are concerned about the particular issue in question.

Table 2 Mean Contributions from Related Interest Groups by Type of District

Contributions to all candidates	NAFTA	FMLA	Abortion	B-2 Bomber	Brady Bill
Districts in which candidates have same policy stance	$ 98,803	$ 94,019	$ 1,075	$ 3,540	$ 1,453
Districts in which candidates have different policy stances	101,735	98,008	1,987	2,547	2,333
T-statistic for difference of means	0.269	0.382	2.249*	-1.616	1.374
Contributions to challengers only					
Districts in which candidates have same policy stance	39,712	40,580	890	384	550
Districts in which candidates have different policy stances	31,442	25,290	2,229	414	2,387
T-statistic for difference of means	-1.079	-2.013*	2.517*	0.155	2.053*

* The coefficient is statistically significant at the 10 percent level.

There is no evidence that interest groups concerned with NAFTA, the Family and Medical Leave Act, and defense spending targeted their money toward races in which candidates adopted opposing policy stances. The only statistically significant difference indicated that labor and business groups actually gave less money to challengers in races in which the candidates were split on the FMLA than to challengers in races in which the two candidates agreed on the policy issue. On the two other issues,abortion and gun control, however, Table 2 provides some evidence that interest groups gave more money when candidates held opposing policy stances.

Snyder (1992) defines "investor PACs" as those "set up by organizations with relatively narrow economic interests," such as corporations, labor unions, and the defense industry. Ideological PACs have "broad ideological goals and a relatively strong desire to affect election outcomes." Table 2 presents evidence to support this categorization. The electoral motive, which pushes interest groups into giving money primarily to races in which the candidates disagree, is of primary importance for ideological PACs such as pro-life, pro-choice, gun control, and gun rights groups. The electoral motive is swamped by other considerations among the investor PACs interested in NAFTA, the FMLA, and defense spending.

Campaign contributions and policy positions

Table 3 presents the results of estimating NAFTA and FMLA policy decisions and the contributions received from labor and business groups. The two issues are estimated simultaneously since both were important to labor and business.

Table 3 NAFTA and FMLA Policy Decisions and Labor and Business Contributions

A. NAFTA Policy Decision

Variables	Coefficients	Marginal Effect
Incumbent contributions ($C_{jm} - C_{(-j)m}$)	-0.0006	-0.0247
Challenger contributions ($C_{jm} - C_{(-j)m}$)	0.0159	0.6132
District characteristics		
Export ratio	0.2613 *	9.6705
Percentage Hispanic	0.0220 ***	0.8468
Union	-0.0247 *	-0.9592
Per capita income	0.0180	0.6953
No high school degree	-0.0362 ***	-1.4057
Votes for Clinton	-0.0207 **	-0.8039
Personal characteristics		
Democrat	-0.4257	-16.8429
Constant	1.5699 **	
Baseline probability	0.60	
R2	0.11	

B. Family and Medical Leave Act Policy Decision

Variables	Coefficients	Marginal Effect
Incumbent contributions ($C_{jm} - C_{(-j)m}$)	-0.0031 **	-0.0988
Challenger contributions ($C_{jm} - C_{(-j)m}$)	0.0014 E	0.0451
District characteristics		
Union	0.0632 ***	2.0639
Votes for Clinton	0.0763 ***	2.4995
Personal characteristics		
Parent	0.2698	9.3317
Married	-0.2225	-6.5608
Male	-0.3422	-9.6097
Democrat	4.3293 ***	74.6908
Constant	-5.4252 ***	
Baseline probability	0.25	
R2	0.56	

E indicates that the sign of the coefficient is sensitive to the GMM estimation technique.

C. Contribution Equations

Variables	Business Contributions Coefficients	Labor Contributions Coefficients
Policy choices		
NAFTA	11.8455	-53.3721 ***
NAFTA (opponent)	1.6804 E	-2.4772
FMLA	-67.8002 ***	71.6803 ***
FMLA (opponent)	-9.2766	2.7675
Personal characteristics		
Committee chair	38.0351 ***	-3.8717 E
Ways and Means Committee	43.0381 ***	-------
Commerce	93.1447 ***	-------
Small Business	8.0633 E	-------
Education and Labor	-------	32.8593 ***
Labor (subcommittee)	-------	21.1688
Terms	1.1636	0.1983 O,E
Incumbent	31.8428 ***	-5.2434 O
Office	-18.8547 ***	21.3640 ***
Nomination	-2.8765	7.3720 *
Democrat	18.7421	11.9712
Total receipts	0.1175 ***	0.0699 ***
Constant	24.9943 *	-31.4396 **
R2	0.63	0.43
Observations	384	384

O indicates that the sign of the coefficient is sensitive to the exclusion of outliers.
E indicates that the sign of the coefficient is sensitive to the GMM estimation technique.
*, **, *** indicate that the coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively.

Campaign contributions from business and labor groups have no statistically significant effect on candidates' positions on NAFTA. The sign of the coefficient is even negative for incumbents, and the magnitudes indicate that a $1,000 increase in business contributions (relative to labor contributions) lowered an incumbent's likelihood of voting for NAFTA by only 0.02 percentage points and raised a challenger's probability of supporting NAFTA by 0.6 percentage points. Republicans from districts with export-oriented employment, a high proportion of residents without a high school degree, who were largely Hispanic, and a weak union presence were more likely to support NAFTA.

Contributions also do not affect candidates' policy stances on the Family and Medical Leave Act in the expected manner. A $1,000 increase in labor contributions lowers the probability of an incumbent's supporting the FMLA by 0.1 percentage point and raises the probability that a challenger supports the act by 0.05 percentage point. Thus, the estimated impacts of labor and business contributions on both NAFTA and the FMLA are very small. Democrats (98 percent of whom supported it) from strongly unionized districts,particularly those districts that voted Democratic in the 1996 presidential election, were more likely to support the FMLA than were Republicans (29 percent support).[5]

The first columns in Table 3C show the factors affecting how much financial support a candidate receives from business groups and labor groups. The estimates show that business PACs gave slightly more money ($11,846) and labor PACs gave much less money ($53,372) to candidates who supported NAFTA. Meanwhile, labor groups gave $71,680 more to FMLA supporters while business groups donated $67,800 to FMLA opponents. An opponent's policy stance on the bills did not affect a candidate's receipts from labor or business groups.

The results in Table 3C also suggest that PACs gave campaign donations with an eye toward the agenda-development services that incumbent legislators could provide. Business groups gave about $38,000 more to members of the House Ways and Means Committee in 1995–96,$93,000 more to members of the Commerce Committee, and $43,000 more to the chairs or ranking members of committees. Labor groups raised donations by $33,000 to members of the Education and Labor Committee and by $21,000 to members of the Labor Subcommittee of Appropriations.

Table 4 presents the results of estimating the abortion policy decisions and the contributions from groups interested in this issue. As with NAFTA and the FMLA, campaign contributions do not significantly affect the policy stance adopted by candidates (the coefficient again has the wrong sign for incumbents), but donations do flow to candidates who support the interest

Table 4 Abortion Policy Decisions and Interest Group Contributions

A. Policy Decision

Variables	Coefficients	Marginal Effect
Incumbent contributions ($C_{jm} - C_{(-j)m}$)	-0.2328	-7.7470
Challenger contributions ($C_{jm} - C_{(-j)m}$)	0.1477	4.3106
District characteristics		
Over 65	4.9102	23.6979
Per capita income	-0.0356	-1.1123
Abortions	-0.0318 **	-0.9918
Teen births	0.0143	0.4388
Votes for Clinton	-0.0391 **	-1.2223
Personal characteristics		
Male	1.1025 ***	20.2492
Age	-0.0036 O	-0.1106
Married	0.2137	6.0740
Catholic	1.0226 ***	19.5933
Democrat	-2.9158 ***	-74.9110
Constant	3.6641 **	
Baseline probability	0.76	
R2	0.43	

B. Contribution Equations

Variables	Pro-Life Contributions Coefficients	Pro-Choice Contributions Coefficients
Policy decisions		
Abortion bill	1.2272 **	-2.2138 ***
Abortion bill (opponent)	-0.1257	0.0841
Personal characteristics		
Committee chair	0.4562	-0.3103
Judiciary	0.0974	-0.1583
Terms	-0.1109 **	-0.0009 O,E
Incumbent	-1.0192	-0.8018 *
Office	0.5427	0.2135
Nomination	0.7808	0.0194 O
Democrat	-0.4654	-0.5028
Total receipts	0.0009 **	0.0018 ***
Constant	-0.2288 E	1.5539 ***
R2	0.12	0.19
Observations	538	538

O indicates that the sign of the coefficient is sensitive to the exclusion of outliers.
E indicates that the sign of the coefficient is sensitive to the GMM estimation technique.
*, **, *** indicate that the coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively.

groups' preferred position. Candidates supporting the ban on partial-birth abortions received about $1,227 more from pro-life groups and $2,214 less from pro-choice PACs. These differences in donations represent very large swings, considering that the average candidate received only $1,260 from pro-life groups and $710 from pro-choice groups. The abortion policy stance was split largely along party lines, as the very large coefficient estimate on the Democrat variable shows.

Table 5 National Defense Policy Decisions and Interest Group Contributions

A. Policy Decision

Variables	Coefficients	Marginal Effect
Incumbent contributions ($C_{jm} - C_{(-j)m}$)	0.0637 ***	2.5356
Challenger contributions ($C_{jm} - C_{(-j)m}$)	3.2287	53.6284
District characteristics		
Veterans	0.1439 **	5.7337
Air Force	-0.0654	-2.5873
Military employment	-0.0442 ***	-1.7514
Votes for Clinton	-0.0018	-0.0716
Personal characteristics		
Military service	-0.3601 **	-13.7703
Male	-0.0760	-3.0069
Democrat	0.9646 ***	34.5354
Constant	-1.0781	
Baseline probability	0.46	
R2	0.21	

B. Contribution Equations

Variables	"Dove Group" Contributions Coefficients	Defense Industry Contributions Coefficients
Policy decisions		
B-2 bomber bill	0.0349	-1.1626
B-2 bomber bill (opponent)	0.0297	-1.2272 *
Personal characteristics		
Committee chair	-0.0249	1.6333
National Security	0.0195	11.8175 ***
Budget	-0.0008	-0.8351
Terms	0.0035	0.3307 **
Incumbent	-0.1916 ***	0.6007
Office	0.0294 O	-0.4796
Nomination	0.0388 E	0.1547 E
Democrat	0.0932 **	-0.5695
Total receipts	0.0002 ***	0.0039 ***
Constant	-0.0797 ***	0.8246
R2	0.10	0.45
Observations	469	469

O indicates that the sign of the coefficient is sensitive to the exclusion of outliers.
E indicates that the sign of the coefficient is sensitive to the GMM estimation technique.
*, **, *** indicate that the coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively.

The determinants of national defense policy positions and related PAC contributions are presented in Table 5. Defense spending is the only policy choice of the five examined here in which contributions are estimated to sway candidates' votes. A $1,000 rise in contributions received from peace groups relative to the defense lobby raised an incumbent's probability of voting for the reduction in defense spending by about 2.5 percentage points. The estimated effect on challengers is much larger, but the coefficient is not estimated very precisely and is not significantly different from zero. The two coefficients are jointly significant at the 5 percent level. Further evidence that defense industry PACs have an influence motive is given by the estimate that members of the National Security Committee receive $11,818 more in campaign contributions from defense PACs. These targeted donations represent an increase of more than four times the average defense lobby contributions to candidates ($2,650). Candidates (particularly Republicans) who had served in the military themselves and those from districts with large military employment were also likely to vote against reductions in B-2 bomber spending.

Unlike the other policy issues examined here, contributions from the defense lobby and from "dove" groups do not significantly respond to the defense spending policy choice adopted by the candidates. The point estimates indicate that a candidate who supported the reduction of spending on B-2 bombers received, on average, about $35 more from peace groups and $1,163 less from defense groups than did an otherwise identical defense hawk. The estimates also suggest that a candidate whose opponent supports the bill will receive over $1,200 less from defense PACs. If it were contributing with an electoral motive, the defense industry should have given more money to candidates whose opponents favored reducing military spending.

The factors affecting candidates' decisions about gun control are presented in Table 6. As with the NAFTA, FMLA, and abortion stances, contributions do not affect candidates' policy decisions on the Brady bill. A $1,000 increase in contributions from gun control groups (relative to gun rights groups) means a 3 percentage point increase in the likelihood of supporting the Brady bill for incumbents. As with the defense bill, the impact of contributions on challenger policy choices is very imprecisely estimated. Women, Democrats, and candidates from wealthy districts with large police forces are more likely to support gun control.

Table 6 Gun Control Policy Decisions and Interest Group Contributions

A. Policy Decision

Variables	Coefficients	Marginal Effect
Incumbent contributions ($C_{jm} - C_{(-j)m}$)	0.0765	3.0489
Challenger contributions ($C_{jm} - C_{(-j)m}$)	100.6938	52.7121
District characteristics		
Per capita income	0.0878 ***	3.5023
Police	0.0400 *	1.5933
Violent crimes	-0.0002	-0.0094
Metropolitan	0.0079	0.3130
Votes for Clinton	0.0101	0.4012
Personal characteristics		
Male	-0.5142 ***	-19.2686
Military service	0.0609	2.4290
Democrat	1.5610 ***	45.9397
Constant	-4.1761 ***	
Baseline probability	0.47	
R2	0.48	

B. Contribution Equations

Variables	Gun Control Group Contributions Coefficients	Gun Rights Group Contributions Coefficients
Policy decisions		
Brady bill	0.3449 ***	-5.7828 ***
Brady bill (opponent)	-0.0206	1.1640 ***
Personal characteristics		
Committee chair	-0.1219 *	-0.8182
Terms	-0.0024	-0.2172 **
Incumbent	-0.0373	1.3442 E
Office	-0.0442	-0.3455 O
Nomination	0.0574	0.5700
Democrat	-0.0702 E	1.9832 ***
Total receipts	0.0003 ***	0.0029 ***
Constant	-0.1540 ***	1.8723 ***
R2	0.13	0.10
Observations	440	440

O indicates that the sign of the coefficient is sensitive to the exclusion of outliers.
E indicates that the sign of the coefficient is sensitive to the GMM estimation technique.
*, **, *** indicate that the coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively.

The coefficient estimates in Table 6B provide strong evidence that political action committees interested in gun control issues are giving money primarily from an electoral motive. Contributions from gun control groups rise by about $345 and donations from gun rights groups fall by $5,783 when a candidate supports the Brady bill. Furthermore, contributions

from gun rights groups rise by $1,164 if the candidate's opponent supports the Brady bill. These results are consistent with those in Langbein (1993), which find that campaign contributions from the NRA and from handgun control advocates were targeted primarily at extremist supporters of the two groups' positions. Unlike the estimates here, however, she finds that NRA contributions influenced representatives' voting on gun issues in 1985.

The results in Tables 3–6 suggest that interest groups donate funds in response to candidates' policy stances on most issues rather than in an effort to exert influence. Contributions had a statistically significant impact on the position adopted by incumbents in the expected manner for only one out of five policies and never significantly influenced the positions of challengers. For four of the issues, however, the candidates' policy positions significantly affected the pattern of contributions that they received. Two of the policies, gun control and abortion, might reasonably be considered ideological issues, and the result that contributions from interested PACs do not affect voting patterns is consistent with the conclusions of earlier studies that ideological PACs reward legislators who support their positions rather than influencing their behavior. For only one proposal—to cut B-2 bomber spending, for which contributions were clearly an investment for the defense industry—did campaign donations influence policy positions rather than respond to them. The B-2 bomber issue may also be reasonably described using the conditions that Morton and Cameron (1992) suggest are favorable for contributions to influence legislators' votes: benefits that are concentrated on a narrow group and reduced public visibility.

Except for the defense industry, these results are generally consistent with the attempt by PACs to influence elections and aid those candidates whose positions are similar to their own. This strategy makes sense for challengers, for whom contributions have a large impact on the election outcome. It also makes sense if the PACs are trying to mobilize effort on the part of like-minded incumbents, as Hall and Wayman (1990) suggest. One result inconsistent with an electoral motive for giving is that the opponent's policy stance rarely affects the candidates' receipts from an interest group. Only gun rights groups appear to consider both candidates' positions in making the contribution, as a purely electoral strategy for giving would dictate.

If contributions only rarely affect legislator policy positions, is it because the candidates always adopt the vote-maximizing policy stances, or do candidates choose positions based on personal preference? The estimates on the five bills examined here leave open the latter possibility. The coefficients on the district variables are jointly significant at the 1 percent level in each of the NAFTA, FMLA, defense spending, and gun control policy equations, and at the 5 percent level in the abortion equation, indicating that candidates respond strongly to voter preferences. Even excluding the party variable, however, personal characteristics also affected candidates' policy stances on three of the bills. The coefficients on the personal characteristics are significant at the 5 percent level for the abortion bill (W=12.39), the defense spending bill (W=6.13), and the Brady bill (W=7.68). Personal characteristics did not significantly affect the FMLA, and no personal characteristics other than party were included in the NAFTA equation.

Treating campaign contributions as endogenous is very important in calculating the effect of contributions on policy positions. Table 7 compares the estimated effect of contributions on policy positions from Tables 3–6 with estimates of policy equations that treat contributions as exogenous. In every case, using a multiple equation system to identify the impact of contributions on incumbents' policy choices reduces the coefficient estimate dramatically. In four out of five of the policies, contributions appear to have a highly significant effect on incumbents' policy stances in a single-equation estimation. Three of these coefficient estimates become negligible or negative in the multiple equation system, however. The effect of using a multiple equation system on the challenger contribution coefficients is less clear. Because PAC contributions to challengers are less common, these estimates are imprecise in the multiple equation system. The single-equation estimates find a significant correlation between contributions and policy choices for two of the issues (abortion and gun control). The estimated impacts of contributions on challengers' policy decisions on these two issues are not significantly different from zero when contributions are treated as endogenous.

Comparing the effect of contributions on policy choices made by incumbents and by challengers in Column 1 of Table 7 reveals that contributions have a larger positive effect on the policy decisions of challengers for all five issues examined. The estimate of the effect of contributions on challenger policy stances is also positive for all five bills. Contributions may

thus affect challenger policy choices, but the impact cannot be estimated precisely enough to differentiate it from zero because of the relatively small amount of PAC money flowing to challengers

Table 7 Effect of Treating Contributions as Endogenous

Effect of Contributions on:	Multiple Equation Estimates	Single Equation Estimates
Incumbents	f_3	
NAFTA	-0.0006	0.0028 ***
FMLA	-0.0031 **	0.0013
Abortion bill	-0.2328	1.2129 ***
Defense spending	0.0637 ***	0.0894 ***
Gun control	0.0765	0.6395 ***
Challengers	f_4	
NAFTA	0.0159	0.0015
FMLA	0.0014	0.0035
Abortion bill	0.1477	0.1798 ***
Defense spending	3.2287	0.0849
Gun control	100.6938	0.1659 ***

Policy Implications

The results presented above suggest the following conclusions. First, contributions have large effects on election outcomes only for challengers. Second, campaign money tends to flow to candidates who support the interest group's favored position rather than influencing the policy decisions made by the candidates. An attempt is now made to quantify how large a role campaign money played in shaping the House of Representatives in 1997–98.

Table 8 presents the 1996 House of Representatives election outcomes and uses the estimation results to simulate the predicted outcomes if campaign fund-raising were replaced with complete public funding of elections. In the 1996 House of Representatives elections, 207 Democrats, 226 Republicans, and 2 Independents won seats. In races between an incumbent and a challenger, 360 out of 381 incumbents (95 percent) won election. Data are sufficient to predict the election outcome for 364 elections involving an incumbent, with 175 races won by Democrats, 189 by Republicans, and 343 by incumbents (94 percent).

Table 8 Predicted Outcomes with Publically Financed Elections

A. Incumbent against Challenger Elections

	Democratic Victories	Republican Victories	Incumbent Victories	Challenger Victories
Outcomes	207	226	360	21
Outcomes the model can predict	175	189	343	21
Predicted outcomes				
With all variables	175	189	334	30
With no incumbent contributions	179	185	334	30
With no challenger contributions	163	201	358	6
With no contributions	165	199	357	7

B. Open-Seat Elections

	Democratic Victories	Republican Victories
Outcomes	32	37
Outcomes model can predict	23	27
Predicted outcomes		
With all variables	25	25
With no open-seat contributions	29	21

C. Effects of Public Funding of Elections at Various Levels

	Democratic Victories	Republican Victories	Incumbent Victories	Challenger Victories
Predicted outcomes at actual 1996 funding levels	175	189	334	30
Public funding of $250,000	168	196	350	14
Public funding of $550,000	174	190	333	31
Public funding of $1,000,000	183	181	285	79

The predicted number of seats won by Democrats, Republicans, incumbents, and challengers under three counterfactuals—no campaign contributions received by incumbents, challengers, or both—is provided in the bottom half of Table 8A. The method used to derive these estimates is provided in Appendix B.

The table shows that the model predicts the total number of seats won by Democrats and Republicans quite well, but it overestimates slightly the number of seats won by challengers. The simulations reveal the negligible impact that contributions received by incumbents have on election outcomes. The model predicts that if incumbents had received no campaign money, they would still have won exactly the same number of seats

as they did in reality, where incumbents had over $725,000 on average. The contributions received by challengers, on the other hand, had a very large effect on the outcomes. The model predicts that the number of challengers winning election would have fallen from 30 (out of 364) to 6 if they had received no campaign money. If neither incumbents nor challengers had received any campaign funds, the number of challengers that gained seats in the House of Representatives is estimated to have fallen from 30 to 7. Thus, despite the large fund-raising advantage that incumbents enjoy, campaign contributions appear to help challengers more than incumbents because money received by the former has a large effect on the election outcome while money received by the latter does not. The model also predicts that Democrats would have lost 14 seats in the House of Representatives had no campaign contributions been given to candidates. This result emerges because there were more Democratic than Republican challengers.

Table 8B shows similar predicted effects of campaign contributions on election outcomes for the open-seat races. There were 50 open-seat races in 1996 that resulted in data sufficient for the model to predict the outcome. The model slightly overpredicts the number of Democratic winners at 25, while only 23 Democrats actually won election. In open-seat races, Republicans appeared to gain from campaign contributions. If neither candidate had received any campaign money, four more Democrats are predicted to have won election. This result emerges partly because Democratic open-seat candidates received slightly more money ($656,000 on average) than did their Republican counterparts ($640,000).

Table 8C shows the impact of forcing all candidates in all House campaigns to use only public funding at three different levels. Such a reform would be difficult to implement in a constitutional manner since the Supreme Court ruled in 1976 in *Buckley v. Valeo* that mandatory spending limits for candidates were unconstitutional as a violation of free speech. The first level of public funding is $250,000 for every candidate, which is very close to the average campaign receipts of challengers in the general election to the House of Representatives in 1998 ($255,788). The second level of public funding examined is $550,000, close to the average receipts of all general election House candidates in 1998 ($544,335). The impact of providing a much higher level of public funding, $1 million to each candidate, is also examined in the table.

Perhaps not surprisingly—given the results above—the larger the level of public funding provided to each candidate, the greater the number of challengers who may be expected to win election. A more surprising result is that moving all candidates to the average campaign financing received by challengers in 1996 resulted in a predicted decline of 16 successful challenges. The result seems counterintuitive since two-thirds of the challengers would see an increase in their contributions if public funding of $250,000 were provided for every general election candidate, and 93 percent of incumbents would receive less campaign money. Challengers receiving less than $250,000 were not viable candidates in 1996, however, and raising their campaign funds up to that level does not make them viable candidates. The lowest total of campaign funds received by a challenger who won the 1996 election was $621,220. The model predicts that raising all candidates to $250,000 in available funds (but not reducing the money received above that level) would have resulted in a gain of only two extra seats for challengers. Forcing all candidates to use only $250,000 of public money would thus have a largely negative impact on the election chances of the viable challengers who received considerable campaign donations without helping the election chances of the majority of challengers. Even providing public funding of $550,000—almost the average of all general election candidate receipts and more than twice the challengers' average receipts—would increase the number of elections challengers won by only one seat. Providing a very high level of public funding for House races ($1 million) is estimated to increase the number of challengers winning election by 49.

These simulations suggest that because of the importance of campaign contributions to challengers' election outcomes, public funding of elections would need to be at a relatively high level (about $500,000) in order to maintain even the current electoral challenge to incumbents. If the goal were to increase the likelihood of challengers unseating incumbents, public funding would need to be provided at a very high level.

These results can be stated in a different way by answering the question of how much extra money challengers would need in order to elect one more challenger to office. If the goal is to raise challenger representation in Congress, what would be the price of buying one more seat for challengers? Using the results presented here, this paper estimates that if each

of the 364 challengers in 1996 had been given an extra $18,621, one more challenger would have won election. These extra funds would have cost a total of $6,778,044. That value is the price of buying one more seat for challengers in the House of Representatives, and it applies equally to government reformers or to interest groups intent on shaping representation in the government.

The price of electing an extra Republican challenger in 1996 would have been slightly higher than that of electing an extra Democratic challenger. If $5,704,860 had been spread evenly among the 204 Democratic challengers, the predicted number winning election would have risen from 22 to 23. It would have taken an extra $8,535,920, spread among the 160 Republican challengers, to increase the expected number winning election from 8 to 9. The reason for this difference comes from the nonlinear effect of campaign money on the probability of winning election. For candidates whose expected vote fraction is very low, a small increase in contributions does not have a large impact on election probabilities. The effect of money on election chances rises rapidly, however, as the expected vote fraction approaches 50 percent. Democratic challengers had a much larger expected fraction of the vote in 1996 than Republican challengers did, and this difference is reflected in the fact that 18 Democrats defeated Republican incumbents whereas only 3 Republican challengers won their elections. Any extra money received by Democratic challengers would thus have had a larger impact on their election chances than equivalent contributions received by Republican challengers.

Since the estimated effect of receipts by Democratic incumbents on their vote shares is negative, calculating the extra money that would result in one more incumbent Democrat being elected (in expectation) is not possible. The price of an extra seat for an incumbent Republican in 1996, however, is estimated to be $98,532,000, or $483,000 in extra campaign contributions distributed evenly among each of the 204 Republican incumbents. The greater impact of challenger than incumbent contributions on election outcomes is reflected in the fact that the price of buying an extra seat for a Republican incumbent is about 11.5 times greater than the price of securing an extra seat for a Republican challenger.

Impact of PAC contributions on expected support for the five policy issues

Many arguments for campaign finance reform focus on the excessive influence of political action committees on the decisions made by Congress. In fact, the original McCain-Feingold campaign finance reform bill in June 1996 included a ban on PAC contributions. This section uses the empirical results presented earlier to estimate the predicted effect of PAC contributions on the expected support for each of the five policy issues in the 105th Congress. These calculations estimate the effect that a ban on PAC contributions would have on expected support for the policy issues.

Table 9A shows the actual contributions made by interest groups that had a stake in either supporting or opposing one of the five issues studied in this paper. Business groups, who in general supported NAFTA and opposed the Family and Medical Leave Act, gave about $48 million to candidates for the 1997–98 House of Representatives, compared to labor groups' $38 million. Pro-life groups (supporting the ban on partial-birth abortions) contributed slightly over $1 million while pro-choice groups donated nearly $600,000. Contributions relating to the last two issues, cuts in defense spending and gun control, are heavily tilted in favor of the bills' opponents. The defense industry and gun rights groups each contributed well over $2 million, compared to less than $50,000 each for peace groups and gun control advocates.

In order to measure the effect of the PAC contributions on the makeup of the House of Representatives, this paper uses the probability that each candidate will win the election and the likelihood that he will support the bill under consideration to calculate the expected support and opposition to each bill. The previous material discusses the probability, based on the election estimates in Table 1, that a candidate will win election to office. The probability that a candidate supports a specific policy issue is directly estimated for each of the five policy issues in Tables 3–6. The expected numbers of supporters and opponents in the House of Representatives for that specific policy issue are provided in Table 9A. (The methods used to produce the estimates in Table 9 are provided in Appendix C.)

Table 9 Effect of PAC Contributions on Expected Support for Policies

A. Contributions and Expected Support for Each Bill in the 105th House of Representatives

	NAFTA	Family Leave Act	Abortion	B-2 Bombers	Brady
Total contributions in support[1]	$48,125,528	$37,610,881	$1,034,617	$48,876	$37,177
Total contributions in opposition[1]	$38,130,687	$47,944,878	$582,060	$2,190,068	$2,458,769
Predicted supporters	203	235	250	186	198
Predicted opponents	211	176	161	215	203

B. Effects of PAC Contributions on the Expected Support for Each Issue[2]

	With No Contributions in Support of Bill	With No Contributions Opposed to Bill	With No Contributions in Favor of or Opposed to Bill
NAFTA support			
Influence effect only	201 / 213	219 / 196	214 / 200
Electoral effect only	202 / 212	206 / 208	205 / 209
Total effect	200 / 214	220 / 194	215 / 199
FMLA support			
Influence effect only	237 / 175	220 / 192	221 / 190
Electoral effect only	232 / 180	237 / 175	233 / 179
Total effect	233 / 178	221 / 190	218 / 193
Abortion bill support			
Influence effect only	261 / 151	244 / 168	254 / 157
Electoral effect only	250 / 162	250 / 161	250 / 162
Total effect	261 / 151	244 / 168	254 / 157
B-2 bomber cuts support			
Influence effect only	181 / 220	230 / 171	227 / 174
Electoral effect only	186 / 215	186 / 215	186 / 215
Total effect	181 / 220	230 / 171	227 / 174
Brady bill support			
Influence effect only	196 / 205	222 / 179	220 / 181
Electoral effect only	198 / 203	198 / 203	198 / 203
Total effect	196 / 205	222 / 179	220 / 181

[1] These rows include only contributions to those candidates for whom probabilities of election and of supporting the bill in question can be predicted.
[2] The table shows the expected number of supporters for the bill/expected number of opponents for the bill.

NAFTA was expected to have slightly more opponents (211) than supporters (203) in the 105th House, while the FMLA was expected to have considerably more supporters (235) than opponents (176). The ban on partial-birth abortion enjoyed the strongest expected support (250 supporters and only 161 opponents), while cuts in spending on B-2 bombers were predicted to fail in a vote by 186–215. The Brady gun control bill had a nearly even split,

with a few more opponents (203) than supporters (198). The opponents and supporters for each bill do not add up to the total number of seats because missing data precludes the calculation of probabilities for some of the candidates. Nonetheless, data are sufficient to predict the positions of more than 400 of the 435 seats for all five bills.

Table 9B presents the influence, electoral, and total effects of PAC contributions on the overall House stance for each of the five issues examined in this paper. Three different counterfactuals are considered. In the first, interest group contributions against the bill remain at their actual levels while contributions in favor of the bill are set to zero. The second counterfactual sets only contributions against the bill to zero, while the third assumes that neither interest groups supporting nor those opposing the bill gave any money to candidates.

The effects of business contributions on the expected support for NAFTA are very small. Without any money from business groups, the expected support for NAFTA falls by only three seats overall, two-thirds of which come through the influence effect. Labor group contributions, on the other hand, have a large effect on the predicted support for NAFTA. Without any money from organized labor, 220 representatives were predicted to have favored NAFTA, compared to only 203 representatives who were expected to support NAFTA after receiving labor contributions. Almost all of the impact of the labor contributions is due to the money influencing the probability that candidates would support NAFTA rather than affecting which candidates won election. The overall effect of the interest group money is to reduce support for NAFTA from 215 supporters (and 199 opponents) to only 203 supporters (and 211 opponents).

Surprisingly, labor groups have a greater effect on the makeup of Congress on this issue despite the larger sums given by business groups. The reason for this seeming paradox is that labor groups gave much more money to challengers than did business groups. Labor groups gave more than $17 million to challengers and open-seat candidates compared to only slightly more than $6 million from business groups. Because contributions to incumbents had a negligible impact on these candidates' NAFTA policy positions and election chances while contributions to challengers or open-seat candidates had a larger effect on their positions and chances, the labor strategy paid off in terms of reducing support for NAFTA in the House of Representatives.

The result is similar to that found in Baldwin and Magee (2000b), that labor contributions had a larger impact on the probability of a representative voting for the NAFTA bill in 1993 than did business contributions. Some of the advantage of labor groups in lobbying over this issue is that they clearly place a greater emphasis on defeating NAFTA than business groups do in supporting it.

The importance of PAC contributions in reducing support for NAFTA may have had a long-term effect on U.S. trade policy in North and South America. In 1997 and 1998 President Bill Clinton attempted to get fast-track negotiating authority to extend NAFTA to include Chile (and potentially other Western Hemisphere countries) in an expanded free trade area. The bill never gained enough support to be brought to a vote in 1997, however, and was defeated 180–243 in the House of Representatives in 1998. Baldwin and Magee (2000a) discuss the determinants of the 1998 House vote and the role that labor contributions played in its defeat.

As with NAFTA, there are small (2–3 vote) changes in expected support for the FMLA due to the electoral effect of business and labor group contributions. The influence effect of contributions is actually perverse in this case because of the negative coefficient estimate on incumbent contributions in table 3B. Thus, money from business groups appears to influence incumbents to support the FMLA, and money from labor groups influences them to oppose it. The overall effect of money from both business and labor PACs raises support for the FMLA from an expected 218 votes without any contributions to an expected 235 supporters with contributions.

The expected support for the abortion, defense spending, and gun control bills is not altered by the electoral effect of PAC donations. In each case, the total contributions from PACs interested in the outcome of the measures was less than $3 million, so the donations had only a negligible impact on the election outcomes. The influence effects of PAC contributions on the latter two bills turn out to be quite large, however. Consider a bill cutting spending for B-2 bombers. In the absence of contributions from peace groups, it is estimated that five fewer representatives would have supported the cuts (181 supporters without the peace group contributions and 186 supporters with those contributions). In the absence of defense industry lobbying against the cuts, it is estimated that 44 more representatives would have supported the bill (230 supporters without the defense contributions and 186 with them).

The total effect of the two groups' lobbying efforts was to reduce the expected support for the bill from 227 representatives (easily enough to pass the cuts) to 186 (which would be roundly defeated by opponents).

The lobbying over gun control represents a similar story, of a bill that would have been expected to pass without any contributions, which was defeated in the presence of those contributions. With contributions from both supporters and opponents of the Brady bill, the expected makeup of the House of Representatives included 198 supporters and 203 opponents of gun control. The small amount of money given by gun control groups had raised support for the measure from 196 to 198 (entirely through the influence effect). The much larger donations of gun rights groups reduced the expected support from 222 members (in the absence of gun rights contributions) to 198 representatives (after those contributions were made).

Thus, for three of the policy issues examined (NAFTA, B-2 bomber spending cuts, and gun control), the PAC contributions were decisive in turning a bill's expected passage in the House into its predicted defeat. These results should be interpreted with caution, however, since they depend on large but imprecisely estimated coefficients for the effect of contributions on challengers' policies regarding defense spending and gun control. Nonetheless, the results suggest that PACs can have large impacts on the types of policies that emerge from Congress.

Conclusions

The empirical estimates presented in this paper suggest the following conclusions. First, the empirical results here do not solve the puzzle of why PACs give the predominant share of their money to incumbents rather than to challengers. Contributions to challengers not only have a greater impact on elections, but also a larger positive impact on policy decisions for all five of the policy issues examined here. Contributions to incumbents, on the other hand, have a negligible impact on election outcomes and on policy decisions for all of the issues except defense spending.

Why do PACs give to incumbents if their money does not influence either policy choices or election outcomes? Most likely in an effort to buy

unobservable services that benefit the interest group. Evidence consistent with that hypothesis is that business groups gave more money to members of the Ways and Means and Commerce Committees, labor groups targeted contributions to members of the Education and Labor Committee, and defense PACs heavily supported members of the National Security Committee.

A second conclusion is that contributions received by challengers and open-seat candidates appear to have a much larger effect on election outcomes than do contributions received by incumbents. The policy implication of this result, as shown in Table 8, is that any attempt to limit spending in election outcomes to some specified amount of public funding would likely favor incumbents and hurt challengers unless the spending limit were set at a very high level—more than $500,000 per candidate in order to maintain the current expected number of challengers winning election.

A campaign policy reform that eliminated PAC contributions without replacing them with public funding would have little impact on election outcomes since most PAC money goes to incumbents. Such a reform might have important effects on the policies emerging from Congress, however. The simulations in Table 9 indicate that eliminating PAC contributions would have resulted in expected majority House support for NAFTA, cuts in defense spending, and gun control. Instead a majority of representatives were expected to oppose all three of these bills after receiving PAC contributions. Thus, PAC money appeared to be decisive on these issues. That is the great fear of campaign finance reformers—that interest groups wield excessive power in the legislative process. The results in this paper give that fear some support, although it is tentative support because of the difficulty of measuring precisely the impact of contributions on policy choices. In the time-honored tradition of economists wishing to create future demand for their services, I end with the comment that more research needs to be done on this issue.

Notes

1. A summary of the McCain-Feingold-Cochran bill is available at www.StraightTalkAmerica.com

2. For further investigation of these issues,see Magee (2001).

3. When the system is estimated using two-stage least squares, the coefficient becomes insignificantly positive.

4. Poor instruments used to identify the election outcome equation are not to blame for the insignificant coefficient on incumbent contributions. The vectors of coefficients of the eight instrumental variables in the contribution equations have Wald statistics between 268 and 273, and they are both statistically significant at the 1 percent level.

5. Although they are not reported in the tables, extensive sensitivity analyses have been performed on the effects of omitting variables from the regressions. Magee (2001) reports the estimates under alternative specifications of the model; these results are available from the author upon request. The sensitivity tests show that the small impact of contributions on the NAFTA decision and the surprisingly negative effect of contributions on the FMLA policy choice are robust to changes in the variables that are included in the model. The estimates are also checked for their robustness to the exclusion of outliers (defined as the five candidates receiving the most money from labor or business groups) and to the estimation technique.

Appendix A

In order to separate out the effect of contributions on election outcomes from the effect of expected outcomes on contributions, the following system of equations is estimated.

1. $votes_D = F(a_0 + a_1X + I_D(a_2C_D+a_3C_R) + I_R(a_4C_D+a_5C_R) + (1-I_D)\,(1-I_R)(a_6C_D+a_7C_R)) + e_1$
2. $C_D = b_0 + b_1Y + b_2E(votes_D) + b_3C_R + e_2$
3. $C_R = d_0 + d_1Z + d_2E(votes_D) + d_3C_D + e_3$

where C_D and C_R are the campaign contributions received by Democrats and Republicans, $E(votes_D)$ is the expected percentage of the popular vote received by the Democrat, F is the cumulative standard normal distribution, I_D (I_R) is a dummy variable that equals one if the Democrat (Republican) is an incumbent, and X, Y, and Z are vectors of exogenous explanatory variables. Since the votes variable is bounded between zero and one, equation 1 is specified nonlinearly (using the standard normal cumulative distribution function) in such a way that the output is restricted to between zero and one. In the estimation, the expected voting outcome is equal to the predicted outcome given by the right-hand side of equation 1. The estimates of a_2 and a_5 reveal the effect of incumbent receipts by Democrats and Republicans on the election outcome. The estimates of a_3 and a_4 are defined similarly for challengers, and a_6 and a_7 show the impacts of contributions on open-seat elections. These equations are estimated using contributions received by candidates rather than their campaign expenditures. Receipts and expenditures are highly correlated (correlation = 0.96), however, and using expenditures does not change the results. The coefficients b_2 and d_2 estimate how campaign receipts respond to the expected voting outcome, and b_3 and d_3 reveal the extent to which the candidates alter their fund-raising in response to the contributions raised by their opponent. The system of equations is estimated by full-information maximum likelihood.

The estimates in equation 1 yield a predicted vote share for the incumbent while equations 2 and 3 determine the predicted contributions received by each candidate. In a simultaneous equation model, certain exclusion

restrictions are required to identify the model. The variable excluded from the contribution equations but included in equation 1 is the margin of victory in the congressional district by the presidential candidate from the incumbent's party. This variable reflects the party strength of the incumbent representative in the district, but it should not directly affect the contributions he or she receives. Excluded from equation 1 are dummy variables indicating if the incumbent was the chair or ranking member of a committee or on the Ways and Means Committee in 1994–95, age, regional dummy variables, the incumbent's campaign receipts in the 1994 election cycle, and whether or not the candidate was involved in a primary. Each of these variables affects the candidate's ability or inclination to amass contributions without directly affecting his or her chances of success in the election.

The system of equations estimated is:

4. $P_{jm} = F(f_0 + f_1X_d + f_2X_{pm} + f_3I_m(C_{jm}-C_{(-j)m}) + f_4(1-I_m)(C_{jm}-C_{(-j)m})) + e_4$
5. $C_{jm} = g_0 + g_1Y_{pm} + g_2P_{jm} + g_3P_{j(-m)} + e_5$
6. $C_{(-j)m} = h_0 + h_1Z_{pm} + h_2P_{jm} + h_3P_{j(-m)} + e_6$

where P_{jm}=1 if candidate m supports policy j, F is the cumulative standard normal distribution, X_d is a vector of district characteristics, X_{pm}, Y_{pm}, and Z_{pm} are personal characteristics of candidate m, C_{jm} ($C_{(-j)m}$) are the contributions that candidate m receives from groups who support (oppose) policy j, and $P_{j(-m)}$ is the policy decision of the opposing candidate. The coefficients f_3 and f_4 reveal the effects of campaign contributions on the policy stances adopted by incumbents and challengers, respectively. Magee (2001) estimates a similar set of equations but finds the effect of campaign contributions on policy choices to be identical between incumbents and challengers.

Equations 5 and 6 estimate the campaign contributions a candidate receives from political action committees for and against each policy stance. PAC independent expenditures against a candidate are counted as negative contributions, so that the dependent variables in equations 5 and 6 are not bounded by zero. The contributions are determined by the personal characteristics of the candidate as well as the policy stance

adopted. The theoretical model predicts that if PACs have an electoral motive in making campaign donations, then there will be positive coefficient estimates of g_2 and h_3 and negative estimates of g_3 and h_2. Support for a PAC's preferred policy stance (and opposition to that stance by the candidate's electoral opponent) should lead to greater campaign contributions from the PAC. Because of the difficulty in attaining convergence of the parameters using full-information maximum likelihood, the system is estimated by generalized method of moments. Sensitivity analyses are performed on the estimation technique, the inclusion of outliers, and the variables included in the model.

Appendix B

The regression estimates in Table 1 generate a predicted vote share for the Democratic candidate. The full-information maximum likelihood estimation performed assumes that the residuals are distributed normally. That assumption can be used to transform the predicted Democratic vote share into a predicted probability the Democrat will win the election. The calculations are complicated slightly by the fact that third-party candidates gain votes in many districts. The Democrat will win the election if he or she receives more than half of the votes going to the two major party candidates, or if

$votes_D > x = (1 - votes_3)/2$, where $votes_D$ = Democrat's vote share

$votes_3$ = third-party candidates' vote share, and

x = the vote share necessary for victory.

The probability of the Democrat winning is

$$p_D = Pr(E(votes_D) + e_1 > x) = Pr\,(e_1 > x - E(votes_D))\; F((e(votes_D) - x)/\sigma)$$

where F is the cumulative standard normal distributions and σ is the standard deviation of the residual e_1. E(votesD) is the predicted Democratic vote share from equation 1. Substituting in a value of zero for incumbent contribution receipts (or challenger receipts, or both) allows the probability of victory to be calculated under a counterfactual of no campaign contributions received by incumbents,

challengers, or both. Summing up the probabilities of victory over all Democrats (Republicans, incumbents, challengers) results in the predicted number of victories for Democrats (Republicans, incumbents, challengers). The expected number of victories can also be calculated for the three counterfactuals. The predicted number of seats won by each group under the various counterfactuals is included in the bottom half of Table 8A.

Appendix C

The expected number of supporters and opponents in the House of Representatives for policy issue j are:

7. $E(supp_j) = \sum p_m P_{jm}$ and $E(opp_j) = \sum p_m(1 - P_{jm})$

where pm=the probability, based on estimates in Table 1, that candidate m will win election to office, and P_{jm} is the probability that candidate m supports policy issue j.

As discussed earlier, PAC contributions can affect the expected support for the bills in two ways. First, the money can affect the probability that a candidate wins the election. With no money from the particular interest group, the candidate's probability of winning the election would be p'_m. Considering only the electoral effect of the PAC money, the expected support and opposition for bill j in the House of Representatives in the absence of the interest group's contributions would be:

8. $E(supp_j^{no\ C,E}) = \sum p'_m P_{jm}$ and $E(opp_j^{no\ C,E}) = \sum p'_m(1 - P_{jm})$

The total electoral effect of the interest group's money on the expected House of Representatives support for bill j is $E(supp_j) - E(supp_j^{noC,E})$.

Second, the interest group's money can influence the likelihood of a candidate's support for a bill. If the PAC had given no money to candidate m, her likelihood of supporting bill j would be P'_{jm}. If PAC contributions had only an influence effect on candidates, the expected support and opposition for the bill in the House in the absence of the group's donations would be:

9. $E(supp_j^{no\ C,I}) = \sum p_m P'_{jm}$ and $E(opp_j^{no\ C,I}) = \sum p_m(1-P'_{jm})$

The influence effect of the interest group's money on the expected House of Representatives support for bill j is then $E(supp_j) - E(supp_j^{noC,I})$. The total impact of PAC contributions on expected support for each bill includes both the influence and electoral effects, of course. Taking both of these effects into consideration, the predicted support for bill j in the 105th House of Representatives in the absence of the interest group's campaign contributions is:

10. $E(supp_j^{no\ C}) = \sum p'_m P'_{jm}$ and $E(opp_j^{no\ C}) = \sum p'_m(1 - P'_{jm})$

The difference between the predicted support with the PAC's contributions and support without its contributions, $E(supp_j) - (E(supp_j^{noC})$, provides a measure of its total impact on the House position regarding the bill.

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