

Campaign Contributions in an Unregulated Setting: An Analysis of the 1984 and 1986 California Assembly Elections

Janet M. Box-Steffensmeier; Jay K. Dow

The Western Political Quarterly, Vol. 45, No. 3. (Sep., 1992), pp. 609-628.

Stable URL:

http://links.jstor.org/sici?sici=0043-4078%28199209%2945%3A3%3C609%3ACCIAUS%3E2.0.CO%3B2-U

The Western Political Quarterly is currently published by University of Utah.

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at http://www.jstor.org/about/terms.html. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at http://www.jstor.org/journals/utah.html.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is an independent not-for-profit organization dedicated to creating and preserving a digital archive of scholarly journals. For more information regarding JSTOR, please contact support@jstor.org.

CAMPAIGN CONTRIBUTIONS IN AN UNREGULATED SETTING: AN ANALYSIS OF THE 1984 AND 1986 CALIFORNIA ASSEMBLY ELECTIONS

JANET M. BOX-STEFFENSMEIER, University of Texas at Austin, and

JAY K. Dow, University of Austin at Texas and University of Missouri-Columbia

he extent to which a received majority at the ballot box legitimizes the actions of elected officials depends on the shared belief that no single individual has disproportionate influence in the electoral process. Campaign contributions, however, are commonly perceived to provide the means by which some citizens become more politically equal than others. This is despite the fact that there is no clear relationship between money and electoral outcomes (Crain and Tollison 1976; Glantz et al. 1976; Jacobson 1978, 1980, 1985; 1990; Silberman and Yochum 1978; Welch 1981; Feldman and Jondrow 1984; Ragsdale and Cook 1987; Green and Krasno 1988, 1990; Grier 1989; Snyder 1990), or legislative voting behavior (Chappell 1982; Kau and Rubin 1982; Wright 1985, 1990; Wilhite and Theilmann 1987; Grenzke 1989a; Hall and Wayman 1990).

Our understanding of the connection between interest groups, representatives, and money is primarily informed by the investment model of the contributor-legislator relationship, the origins of which may be found in the early economic analysis of business demand for government regulation. The model specifies that contributors allocate resources among recipients such that the expected return of the investment, calculated in relation to the political outcome in the absence of contributions, is maximized. Empirical attempts to substantiate the economic theory of campaign contribution allocation seek to predict the distribution of resources across incumbents seeking reelection to the United States Congress based on a candidate's possession of specific

Received: April 4, 1991

Accepted for Publication: November 8, 1991

Note: A previous version of this paper was presented at the 1990 Meeting of the Public Choice Society in Tucson, Arizona. We thank James Endersby, James Granato, Kevin Grier, conference participant John Londregan, Michael Munger, Brian Roberts, Peverill Squire, and an anonymous reviewer for helpful comments. All errors are our responsibility.

legislative attributes. This paradigm remains the single most important component of the campaign finance literature.

We believe the acceptance afforded the economic model of campaign finance is unwarranted by existing empirical studies. This is because the theory is predicated on the assumption of a perfect market for public policy. In particular, the model assumes there exist no restrictions on campaign contributions. This is clearly antithetical to the federal electoral arena where imposed contribution limits are extraordinarily low relative to the resources of major contributors.

The existence of ceilings on campaign contributions suggests interest groups are unable to optimize the allocation of their resources and the distribution of contributions across candidates will be skewed relative to that predicted by theory. Therefore, recovered characteristics which predict the allocation of campaign contributions are likely artifacts of regulation. As a result, little is learned about the robustness of the investment model or of the true (non-regulated) value of legislative attributes. Further, we are given a distorted view of interest group activity and gain little insight relevant to more general issues of electoral reform.

Our study tests the investment model in an unregulated context—the campaign finance arena of the 1984 and 1986 California Assembly elections. This setting allows us to capture completely the tradeoff facing interest groups between resource use in the public and private sectors. Most important, the use of an unregulated environment allows us to recover the extent to which investors target contributions toward candidates with attributes most relevant to their interests. Consequently, we provide a more appropriate test of the model than that found in previous studies. Our analysis, viewed in conjunction with previous research, also provides a bench mark by which the merits of campaign finance and institutional reform may be assessed. Finally, the study of campaign finance in a context other than United States congressional elections has intrinsic benefits as well.

The paper is separated into six sections. Section 2 places our research in the context of previous studies on the political economy of campaign finance. Section 3 motivates the empirical specification with a brief overview of the salient aspects of the California institutional structure. Section 4 presents the estimated model. Sections 5 and 6 contain the results and subsequent discussion. The paper concludes with a review of the implications of our work.

PREVIOUS RESEARCH

The past decade has witnessed the development of a significant literature on the political economy of campaign finance. This research is largely predicated on the "Chicago" model of economic regulation (Stigler 1971; Peltzman 1976; Becker 1983), and treats campaign contributions as the medium through which the market for policy clears. Theoretical extensions of the model (Denzau and Munger 1986; Austen-Smith 1987) predict that interest groups seek to equate the marginal value of the last dollar contributed, defined in terms of a legislator's ability to provide desired policy, across recipients.

Attempts to substantiate the investment model of campaign finance seek to isolate the determinants of legislative productivity and predict the distribution of contributions across individuals. Empirical efforts to recover factors which influence the provision of campaign contributions have emerged primarily in the last decade. These studies characterize legislator productivity and, consequently, the distribution of resources, as a function of three classes of legislative attributes. First is ideology or constituent preference as captured in, for example, party membership or an interest group vote score. Second, a measure of candidate need, such as margin of victory in the previous election, is frequently included. Finally, institutional assets such as committee assignments and seniority are incorporated because, presumably, these provide the primary means by which the marginal cost of supplying legislation is differentiated across individuals.

Not surprisingly, interest groups are most likely to provide money to ideologically sympathetic representatives, or to those possessing institutional assets most relevant to their policy objectives. Refinements in this literature seek to determine if ideological or pragmatic concerns dominate the allocation decision, and to recover differences in the contribution patterns of distinct classes of interest groups.

There exists supporting evidence on both sides of the question of whether contributors tend to weigh ideological or pragmatic concerns most heavily in the allocation decision. Gopoian (1984), Poole and Romer (1985), Poole, Romer and Rosenthal (1987) find ideology to be the significant predictor of the distribution of contributions. Conversely, Grier and Munger (1986, 1991), Evans (1988), Hall and Wayman (1990) and Endersby and Munger (1991) argue that committee assignment is the major predictor of political action committee (PAC) con-

tributions. Candidate need is positively associated with contributions while seniority results have been mixed (Grenzke 1989b).

The extent to which a given class of attributes dominates recovered estimates is primarily a function of: (1) the level to which the contributor source has been aggregated (e.g., "corporate" or "labor" contributors versus individual PACs associated with specific industries or unions); (2) the institutional setting studied; and (3) the specific interest under consideration.

Ideological considerations, for example, are often predominant in analysis conducted at a high level of aggregation (Poole and Romer 1985). Studies conducted at the level of the individual PAC recover more tangible considerations as the significant predictors of resource allocation (Munger 1989). This suggests individual contributors base contributions, for example, on the specific policy property rights associated with committee membership. Differences across otherwise similar (e.g., corporate) PACs are lost in aggregation. The remaining common characteristic is ideological orientation. With respect to institutional differences, Grier, Munger and Torrent (1990), find that, unlike in the House of Representatives, committee membership in the Senate is insignificant in the allocation decision of special interests. Finally, there are differences among contributor classes. For example, petroleum contributors tend to be more ideological than other industries in the disbursement of contributions (Evans 1988; Gopoian 1984).

The defining characteristic of this literature, unfortunately, is the relatively low explanatory power of the estimated models. Regressions of interest group contributions on considerations such as chamber voting record, seniority, and committee assignments generally explain about 30 percent of the allocation decision, and rarely exceed 40 percent.¹

We argue weak results are obtained because the estimated models are designed to evaluate a theory predicated on the existence of a perfect market for policy, i.e., an unregulated setting. The Federal Elec-

¹ Most studies report about half or more of all independent variables as significant and yet R²s (or pseudo R²s) less than .40. Examples include Herndon (1982), Gopoian (1984), Evans (1988), and Grenzke (1989b). An exception is found in Grier and Munger's (1986) and Saltzman's (1987) regression analysis of union contributions to House incumbents. Their work still produces a large number of significant variables, however the correspondingly pseudo R² and R² are .52 and .65 respectively. The results obtained by Grier and Munger for corporate contributions are similar to those found in the previous studies. Saltzman provides information only about labor contributors.

tion Campaign Act (FECA) of 1971, and subsequent amendments, however, severely restricts amounts which may be contributed by a given PAC to an individual candidate.² This imposed limit, for many investors, is certainly significantly less than the marginal value of an additional dollar provided. This prevents the optimization of resource allocation across legislators. The market for policy, consequently, may not clear on the federal level.

Fortunately, regulation has predictable consequences. In particular, when the amount of money which can be contributed is restricted, one expects the allocation of resources to be based on a relatively broad range of criteria. Specifically, one expects interest groups to access a larger combination of factors such as ideology, committee assignments, and other considerations when disbursing money in the regulated environment. Conversely, in the unregulated setting the allocation decision is expected to be based on a more narrow set of criteria (McDevitt 1978).

This is because the allocation of campaign contributions across candidates in the investment model is analogous to the allocation of economic factors within a production activity (Ben-Zion and Eytan 1974; Bental and Ben-Zion 1975). If an interest group is prohibited from providing additional resources to candidates whom it would otherwise support, it will, in general, substitute part of the intended contribution from the most preferred recipients to others and reduce the size of the total budget allocated. The relative size of the substitution and budget effects is an empirical question. However, given the extraordinary resources of major contributors, their optimal allocation across candidates in a regulated setting will likely result in a larger number of candidates receiving contributions than would otherwise be the case.

The fact that the vast majority of individual PAC contributions are less than the imposed maximum does not mean that federal restrictions are effectively non-binding. On the contrary, there is no reason to believe that in the regulated environment the contributor's most favored candidates will receive the legal limit. Whether such occurs depends on several considerations. There exists several reasonable circumstances in which one expects PACs to give relatively small amounts to a large number of candidates. This should come as no surprise because, as Tufte (1974) suggests, Congress is unlikely to

² These limits may be found in Sorauf (1988) appendix B. For political action committees (PACs) the limit is \$5000 per candidate per election.

enact campaign finance regulation detrimental to a majority of incumbent legislators.

This exposition can be formally developed.³ It is not necessary to do so here. Rather, it is sufficient to observe that this understanding results in an empirically testable set of propositions by which the investment model of campaign finance can be evaluated. Specifically, by estimating models similar to those discussed previously in an unregulated setting, ceteris paribus, we should recover either greater summary measures of statistical power with a corresponding number of significant variables, or comparable statistical power with fewer significant explanatory variables.

Consequently, to evaluate market theories of campaign finance, we need to replicate the existing empirical tests in an unregulated setting. Our analysis provides this by estimating a model to explain the allocation of campaign contributions made to incumbents seeking reelection to the California Assembly during the 1984 and 1986 election cycles. California places no restrictions on the amounts which may be contributed by interest groups to candidates for state office. The next section establishes the importance of campaign finance in California and motivates our empirical specification by providing a basic overview of salient aspects of the California institutional structure.

California

The California legislature is a bicameral body. We focus our analysis on the lower chamber, the eighty-member Assembly. The ideological composition of the Assembly is dominated by Democrats, yet is reasonably balanced.

Twenty-three standing committees are the primary source of legislative power in the Assembly. Each has exclusive rights over policy within its jurisdiction, and can impede legislation by refusing to refer bills to the parent chamber. The single most important standing

³ For a discussion on the allocation of factors across production activities the reader is referred to Henderson and Quandt (1980: chapter 5). There exist two ceteris paribus conditions relevant to our conclusion. First, an individual contributor's investment does not affect the probability of a candidate's election. Second, the interest group's budget constraint must be greater than the imposed contribution limit. Given that our analysis involves only incumbents seeking reelection and that the federal ceiling on campaign contributions is likely significantly less than the resources of major contributors, it does not seem likely that either condition is particularly troublesome.

committee is Rules. The Assembly Rules Committee refers all bills to policy committees and determines the procedures under which legislation may be considered by the chamber as a whole (Driscoll 1986).

The speaker is the most powerful member of the Assembly and derives his standing from presiding over the chamber, referring bills to committee, raising and dispensing campaign funds. Relative to his counterpart in the United States House of Representatives, the California Assembly Speaker (Willie Brown, Democrat-AD17, has occupied the position since 1980) has significantly greater control over the policy process. This influence is mainly derived from the Speaker's control over privileges, such as assigning committee chairmanships, which are generally associated with seniority on the federal level (Squire 1988).4

The primary characteristics of the Assembly relevant to this study are those directly related to electoral politics. During the 1984 and 1986 election cycles, only one of all the incumbents who sought reelection was defeated.⁵ Most significant, Assembly incumbents seeking reelection are able to raise extraordinary levels of special interest campaign contributions. In 1984 incumbents seeking reelection accumulated, on average, over \$166,551. The corresponding figure for 1986 is \$155,629. Table 1 provides important information about the California Assembly.

THE DATA AND MODEL

The campaign finance data used in this study was obtained from the *General Election Report* issued by the California Fair Political Practices Commission (CFPPC) for the 1984 and 1986 elections. There is no limit on the amount which may be contributed to a candidate seeking election to the California Assembly for either the primary or general election and all contributions over \$100 in 1984 and \$250 in 1986 were recorded. This requirement included registering the name of the donor (individual, group or business), the contributor's economic

⁴ The primary source of the Assembly Speaker's power is his ability to appoint all committee positions except those on Rules (Bell 1984).

⁵ In 1984, 77 incumbents ran for reelection and won. Of the three who did not, two incumbents retired or ran for another office and the last was defeated in the primary election. In 1986, there were eleven open seats due to retirement or candidates seeking other offices. No incumbents who sought reelection were defeated (California Journal 1984, 1986).

	1984	1986
Percent who sought reelection and won	98.7	100.0
Mean contributions	\$166,551	\$155,629
Receipts per constituent	\$0.70	\$0.63
Receipts per vote	\$1.48	\$1.73
Tenure*		
Mean	2.8	3.4
Median	2.5	3.0

TABLE 1
CHARACTERISTICS OF THE CALIFORNIA ASSEMBLY

Source: Bureau of the Census, Tables 422, 444; California Fair Political Practices Commission, 1984 and 1986 Reports; *California Journal* 1984, 1986; Ornstein, et al., Tables 1-6, 2-7, 3-9.

interest, and the amount of the contribution. Assuring compliance with these regulations is the responsibility of the CFPPC.

The CFPPC General Election Report disaggregates contributors into approximately twenty categories. We estimate separate linear regression models using the total amount provided from each of four contributor classes (Labor, Public Employees, Finance and Insurance, and Petroleum) as the dependent variable. These contributors were selected because of the important role they play in California politics, to facilitate comparison of the allocation strategies of liberal and conservative interest groups and, in the case of the petroleum interests, because of the special attention the industry has received in the campaign finance literature.

Dependent Variable

CONTRIBUTION_{ij}: The sum of contributions raised by the ith incumbent from the jth contribution category during the 1984 and 1986 election cycles. Separate regressions are calculated for each of the two election cycles on contributions received from each of the four categories listed above. If liberal and conservative interests are distinct with respect to ideology and policy objectives, this should be reflected in differences in their respective valuations of legislative assets.

Independent variables

CALIFORNIA CHAMBER OF COMMERCE VOTE SCORE (CCCVS): The proportion of votes consistent with the California Chamber of Commerce (CCC) position on select bills. CCCVS is

^{*} Tenure is in number of terms

defined in terms of votes cast, so absences are not incorporated.⁶ A CCCVS score of 1.00 indicates a perfect pro-business voting record. The use of CCCVS is identical to the use of other interest group vote scores at the federal level, and as argued by Chappell (1982) and Endersby and Munger (1991), may be used as a proxy for constituent preferences. The expected coefficients are negative for labor and public employees, positive for petroleum and finance and insurance contributors.⁷

VOTE(t-1): The proportion of the total vote received in the previous election. The smaller VOTE(t-1) is, the weaker the incumbent is likely to be and, ceteris paribus, the lower the supply price for policy. The expected coefficient sign is negative for all interest groups.

SENIORITY: The number of years served in the chamber. It is reasonable to suppose that, all things equal, the supply price that can be charged for the provision of policy is inversely related to chamber seniority. Consequently, the expected coefficient sign is positive for all interests.

REPUBLICAN: A dummy variable which indicates membership in the Republican party. There are no third party Assemblymen in our sample. The expected sign is negative for labor and public employee contributors, positive for petroleum and finance and insurance contributors.

SPEAKER: A dummy variable for the Assembly Speaker, Willie Brown. We include this term to capture the unique institutional position occupied by the Speaker in the California Assembly. Because the Speaker holds no committee assignments, inclusion of this term allows us to capture more completely the effect of committee jurisdic-

⁶ Absences defeat the purpose of taking a stand. However, there are relatively few of these. Of the 14 votes selected by the California Chamber of Commerce in 1984 as the basis of their legislator ratings, the mean proportion of absences was 0.069, the minimum number of absences was 0 and the maximum was 4. For 1986, 18 votes were selected and the mean proportion of absences was 0.060, the minimum was 0 and the maximum was 4 (*California Chamber of Commerce Alert* 1984, 1986).

⁷ There is no reason, in general, to believe that contributions are linear in vote score. In fact one should expect that an quadratic term is appropriate because legislators ideologically predisposed to vote consistent with the interests of a particular contributor presumably do not need to be paid to do so, and those strongly opposed to a particular interest cannot be paid enough to vote otherwise. However, in a previous version of this paper regressions conducted using only 1984 election cycle information established that the quadratic term was consistently insignificant in accounting for the allocation decisions of these special interests.

tion on the allocation of resources. The expected sign for all groups is positive.

COMMITTEE; (i = 1, 2): Dummy variables which indicate membership on two of the twenty-three standing committees in the California Assembly. The first committee is the Rules Committee. As discussed previously, Rules is the most important standing committee in the chamber, has jurisdiction over all legislation, and is the only committee whose members are not appointed by the Speaker. By using CCCVS we see that the chamber voting record of the aggregate membership of the Rules Committee is about the same as the chamber (Mean 1984 Assembly CCCVS is 0.47, mean Rules Committee CCCVS is 0.49: The figures for 1986 are 0.54 and 0.52 respectively). We expect positive coefficients for all groups. This is because voting records of those on the committee do not distinguish members from nonmembers while the legislative property rights associated with membership do.

The second committee is the most important policy committee for the relevant contributing group. The interests of each category of investors is represented by a small, well defined subset of legislative committees. Committee relevance was determined by looking at the traditional jurisdictional subject area claimed by different committees (Gopoian 1984). Consequently, determining the appropriate policy committee in each case is straight forward. Those selected are: Labor and Employment Committee for labor contributors; the Public Employees and Retirement Committee for public employees; Natural Resource Committee for petroleum contributors; and the Finance and Insurance Committee for finance and insurance contributors. The expected coefficient is positive in all cases.

Our model may be written:

$$\begin{split} \text{Contribution}_{ij} &= \beta_{0i} + \beta_{1i} CCCVS + \beta_{2i} Vote(t-1) + \beta_{3i} Seniority \\ &+ \beta_{4i} Republican + \beta_{5i} Speaker + \Sigma_{k=1,2} (\beta_{ki} * Committee_{ki}) + e_{ij} \end{split}$$

To estimate the coefficients of this equation we use the maximum-likelihood TOBIT procedure. A limited-dependent variable regression method is required because campaign contributions are censored at zero and ordinary least squares estimation will produce biased estimates. The TOBIT estimator is consistent and, unlike PROBIT or LOGIT estimation, allows us to use the actual dollar amount contrib-

⁸ None of these differences are statistically significant.

uted as the dependent variable. Thus, considerably more information is provided than in analysis based on the other methodologies.⁹

Results for the 1984 and 1986 election cycles are reported in tables two and three respectively. In each case we present the unstandardized coefficients, which correspond approximately to dollar amounts, the coefficient standard errors, the likelihood ratio statistic which indicates the significance of each regression, and $\hat{\mathbf{R}}^2$ which is a summary measure of explained variance. Specifically, $\hat{\mathbf{R}}^2$ is the square of the Pearson correlation coefficient between the observed and expected values. It is interpreted analogously to an OLS \mathbf{R}^2 .

Corresponding regressions could not be pooled across electoral cycles. This suggests that the contribution strategies of contributors change across time. More will be said on this point in the subsequent discussion.

1984 RESULTS

Before reviewing each regression individually one should note some general features of the results as a group. First, all chi-square tests of regression significance reject the null hypotheses that the independent variables have no joint explanatory power at the 0.01 level. Second, summary measures of explained variance, with the exception of those for labor contributions, are quite high and generally exceed those reported in similar research. The log-likelihood statistic and pseudo R²s taken together lend considerable support to the exchange based investment model of campaign finance. Third, our prediction that, given a fixed level of regression power, fewer explanatory variables would be significant relative to studies conducted with federal level data has been substantiated. Out of eight independent variables no more than four are significant in any regression. This suggests interest groups base their allocation decision on a narrower range of criteria in the unregulated setting relative to the regulated setting. Finally, there exist considerable similarities between the contribution patterns of analogous interests, and corresponding differences across the dissimilar groups. However, unlike in previous studies, it is the liberal contributors

⁹ The TOBIT procedure estimates both the coefficients and the corresponding variance simultaneously. For a detailed discussion on TOBIT see Tobin (1958), McDonald and Moffitt (1980), and Amemiya (1985). Previous studies using the TOBIT estimator in a similar context are Welch (1979), Grier and Munger (1986, 1991) and Grier, Munger, and Torrent (1990).

620

TABLE 2 1984 CONTRIBUTIONS: TOBIT REGRESSION ON ATTRIBUTES BY INTEREST CLASS.

		Public Emp.	Finance/Ins.	Petroleum
Intercept	21553**	15822**	8288	-464
	(6094)	(3696)	(8300)	(2832)
CCC Vote Score	1332	2314	15889	4471
	(6311)	(4536)	(10205)	(3326)
Vote(t-1)	-202*	-109*	-109	-19
	(88)	(53)	(119)	(39)
Seniority	-79 [°]	-122	785	29
•	(314)	(222)	(517)	(165)
Republican	-17276**	-8923*	-9804	1202
•	(5434)	(3793)	(8513)	(2752)
Speaker	21309*	67175**	108529**	13206**
	(9266)	(6810)	(15479)	(4945)
Rules Committee	-1294	-1936	10728*	6866**
	(3564)	(2341)	(5271)	(1699)
Labor Committee	1857	, ,	` ,	` ,
	(2691)			
Public Emp. Comm.	` /	3287		
		(2117)		
Finance/Ins. Comm.		` ,	10739*	
			(4134)	
Natural Res. Comm.			` ,	3406**
				(1299)
N = 77				
-2*Log-likelihood	57.10	88.96	69.80	42.26
\hat{R}^2	0.35	0.69	0.56	0.42

that appear to weigh ideological considerations most heavily, while the conservative groups base their contributions on pragmatic concerns.

The results for labor contributors are contained in column one. The intercept is significant, and indicates that regardless of any of the independent variables, California legislators can still expect about \$21,553 in labor contributions. Margin of victory in the previous election is also significant, the correct sign, and suggests that for each additional percentage of the electoral vote candidates receive about \$202 less in labor contributions. The Party term is extraordinarily strong, the correct sign, and indicates that, on average, Republicans

^{** =} p < 0.01

receive \$17,276 less in labor contributions than Democrats. The largest coefficient belongs to the Speaker variable, or, more accurately, the "Willie Brown Coefficient," and indicates that on average the speakership is worth about \$21,309 additional labor dollars. Both the Chamber of Commerce vote score and seniority coefficients are statistically insignificant and the wrong sign. ¹⁰ The two committee variables also do not achieve statistical significance. Similar results are obtained for public employee contributors.

Regression results for finance and insurance industry contributions are dissimilar to those obtained for labor and public employee contributions. Coefficients for the intercept, vote score, and seniority variables are insignificant, albeit of the expected signs. The party membership variable is also insignificant. The Speakership variable is significant and extraordinarily large at \$108,529. The coefficients for the two committee variable coefficients have their expected signs, are significant, and approximately the same size. Membership on the Rules Committee is worth an additional \$10,728 to finance and insurance contributors. Membership on the Finance and Insurance committee brings \$10,739 in additional industry contributions. Similar results are obtained for petroleum industry contributors.

THE 1986 RESULTS

Results for the 1986 election cycle also provide support for the exchange-based investment model of campaign finance and the consequences of campaign finance regulation discussed previously. All of the regressions calculated with 1986 campaign contributions produced high summary measures of statistical power with relatively few significant explanatory variables. For this reason, the subsequent discussion will be brief and will review all results simultaneously.

Two features of the 1986 results require examination. First is the changing allocation patterns of contributors across electoral cycles. In 1984 similar interests based allocation on like criteria, and these principles differed between liberal and conservative contributors. In 1986 much of the pattern found in the previous election cycle has disappeared. Unlike in 1984, membership on relevant policy committees accounts for a significant portion of the allocation strategy of liberal interests in 1986. The sole significance of the speakership variable, in

¹⁰ The result that seniority is insignificant is not surprising given Squire's (1988) argument that seniority matters little in gaining positions of power in the Assembly.

TABLE 3
1986 Contributions: TOBIT Regression on Attributes by Interest Class.

15537			
	7154	6298	103
(11805)	(4135)	(10164)	(1326)
4773	-224	9011	3567
(18004)	(5926)	(14695)	(1902)
-163	-70	-75	-11
(130)	(48)	(119)	(15)
79	-6	637	57
(515)	(195)	(486)	(60)
-35010**	-1812	5040	272
(12994)	(3804)	(9499)	(1216)
89214**	45853**	182879**	20209**
(14687)	(5927)	(15082)	(1849)
2561	-752	-1362	267
(7121)	(2413)	(5632)	(699)
12419*			
(5173)			
	6244**		
	(1986)		
		6897	
		(3860)	
			-766
			(536)
77.78	56.26	100.62	90.19
0.45	0.65	0.77	0.79
	(11805) 4773 (18004) -163 (130) 79 (515) -35010** (12994) 89214** (14687) 2561 (7121) 12419* (5173)	(11805) (4135) 4773 -224 (18004) (5926) -163 -70 (130) (48) 79 -6 (515) (195) -35010** -1812 (12994) (3804) 89214** 45853** (14687) (5927) 2561 -752 (7121) (2413) 12419* (5173) 6244** (1986)	(11805) (4135) (10164) 4773 -224 9011 (18004) (5926) (14695) -163 -70 -75 (130) (48) (119) 79 -6 637 (515) (195) (486) -35010** -1812 5040 (12994) (3804) (9499) 89214** 45853** 182879** (14687) (5927) (15082) 2561 -752 -1362 (7121) (2413) (5632) 12419* (5173) 6244** (1986) 6897 (3860)

The dominance of the speaker variable in all regressions is the second aspect of the 1986 results which requires explanation. This term, especially for financial and petroleum interests, is largely responsible for the high summary measures of explained variance, and drives

conjunction with the insignificance of the policy committee variables, for finance and insurance contributors as well as for petroleum interests, suggests these industries became more conservative in their allocation strategies.

the pronounced levels of statistical significance for each regression.¹¹ There is absolutely nothing trivial or uninteresting about this. That an institutional resource as strong as the Assembly Speakership can command so much attention from contributors with both ideological and pragmatic differences is entirely consistent with the understanding of an unregulated campaign finance market developed in this paper. The fact that the appointment accounts for such a large proportion of the allocation decision of these interest groups demonstrates that investors recognize the extraordinary influence of the speakership in California politics.

It is difficult to conjecture on changes which may have taken place across electoral cycles which led to differences in contributor strategies and the emergence of the dominant speaker variable. Our initial suspicions centered on the differences in reporting requirements between 1984 and 1986. If interest groups which provide larger individual contributions allocate resources in a manner different than those who provide smaller amounts this will be reflected in statistical differences across election cycles. However, reestimation for 1984 contributions greater than or equal to two hundred and fifty dollars (the 1986 minimum reporting requirement amount) produced results similar to those reported in Table 2. More promising reference can also be made to the fact that 1984 was a presidential election, while 1986 was an off year election. It is well known that the circumstances of a particular election year can affect the amount of money available to candidates (Jacobson 1980). If the latter electoral environment was characterized by relatively greater uncertainty due to the reduced significance of the election then it is reasonable for interest groups to base allocation on more limited and well defined criteria. If this is an accurate characterization of the 1986 election remains speculative on our part.

DISCUSSION AND CONCLUSION

Our empirical results lend considerable support to the basic proposition of the investment model of campaign finance—namely, that

Despite this, the speaker variable should not be dropped because the effect of omitting a relevant explanatory variable, at a minimum, biases the estimates of the other coefficients. In general, coefficient estimates obtained from regressions calculated without the speaker variable or observations cannot be interpreted. There exist circumstances where this may not happen (see Kmenta 1986: section 10-4), but for our data and model it would seem that to omit the speaker term would do more harm than good.

the distinctions across contributors and legislators lead to corresponding differences in the pattern of resource allocation. This assertion is substantiated by more focused allocation in the unregulated setting. If contributors appeared to allocate resources in a less than focused manner in the unregulated setting, considerable doubt would have been placed on the robustness of the model (McDevitt 1978). Such is not the case.

A second important aspect of our study relates to the changes in the allocation pattern of the four interest classes. In the second section of the paper it was noted that considerable scholarly work has been devoted toward understanding whether interest groups are primarily ideological or pragmatic in their contribution decisions. As our work and common sense suggests, few things in politics are cast in stone. The interest group which one year supports ideologically sympathetic legislators may the next year strike a deal with the devils on the appropriate policy committee. Nothing in the economic theory of resource allocation suggests specific considerations are preeminent in calculus of investors. Rather, the theory simply predicts that contributors equate the marginal value of the last dollar contributed across recipients. The factors which determine this value can certainly change. They are, in fact, expected to change across, for example, institutions. Our research indicates these factors may differ across time as well.

Finally, our work provides the opportunity to enter the debate on campaign finance reform. Namely, what, if anything, does regulation do for us? There are well known theoretic (Tullock 1972; Hinich 1977; Aranson and Hinich 1979) and empirical (McDevitt 1978; Jacobson 1980) reasons for believing that restrictions on campaign contributions benefit incumbents at the expense of challengers and third party candidates. Our evidence supports this. The removal of constraints on contributions allows investors to target the allocation of their resources. Consequently, the wealth is not distributed in as an egalitarian manner among incumbents as would otherwise be the case.

The obvious caveat is that while some incumbents will be financially hurt by deregulation others will benefit. In 1986, California Assembly Speaker Willie Brown, for example, amassed over three million dollars in campaign contributions. This is a huge sum for any single state legislative race, even by California standards. He was able to do so because of the extraordinary political power associated with the privileges of the speakership. This illustrates that campaign finance reform must be viewed in conjunction with institutional reform. A cap

on campaign contributions reduces the standing of the most powerful members by bringing the balance of legislators to a more financially equal position. It does so, however, at the cost of a less competitive electoral system. The extraordinarily high rate of reelection among California Assembly members tells us, however, that discrepancies in the distribution of resources is not the primary consideration which matters in electoral politics. Rather, as postulated by Jacobson (1980) it is the absolute level of contributions raised which appears to be significant in determining the competitiveness of electoral contests.

We conclude that contributors to political campaigns distinguish across recipients in the allocation of their funds to maximize their expected return as postulated by the investment model of campaign finance. In addition, to reduce the importance of large contributors in political affairs one must simultaneously deregulate the campaign finance market and reduce those institutional powers which make certain individuals so valuable to special interests. This and other research suggests that there exists a choice between having politically powerful individuals able to provide the things special interests are willing to pay for, accompanying regulation to balance this, and a less than competitive electoral system; or a political process unable to distribute specialized benefits, campaign finance deregulation, and competitive elections.

REFERENCES

- Amemiya, Takeshi. 1985. Advanced Econometrics. Cambridge, MA: Harvard University Press.
- Aranson, Peter H., and Melvin Hinich. 1979. "Some aspects of the Political Economy of Election Campaign Contribution Laws." *Public Choice* 34: 435–61.
- Austen-Smith, David. 1987. "Interest Groups, Campaign Contributions, and Probabilistic Voting." *Public Choice* 54: 123-39.
- Becker, Gary. 1983. "A Theory of Competition Among Pressure Groups for Political Influence." *Quarterly Journal of Economics* 98: 371-400.
- Bell, Charles G., and Charles M. Price. 1984. California Government Today: Politics of Reform, 2nd ed. Homewood, IL: Dorsey Press.
- Bental, Benjamin, and Uri Ben-Zion. 1975. "Political Contribution and Policy: Some Extensions." *Public Choice* 24: 1-12.
- Ben-Zion, Uri, and Zeev Eytan. 1974. "On Money, Votes, and Policy in a Democratic Society." *Public Choice* 21: 1-10.
- Bureau of the Census. 1990. Statistical Abstract of the U.S. Washington, DC: U.S. Government Printing Office.
- California Chamber of Commerce Alert. 1984 and 1986. Various Issues.

- California Fair Political Practices Commission. 1985. 1984 General Election Campaign Receipts and Expenditures. Sacramento: California Fair Political Practices Commission.
- . 1988. 1986 General Election Campaign Receipts and Expenditures. Sacramento: California Fair Political Practices Commission.
- California Journal 1984 and 1986. Various Issues.
- Chappell, Henry. 1982. "Campaign Contributions and Congressional Voting: A Simultaneous Probit Tobit Model." *Review of Economics and Statistics* 61: 77-83.
- Crain, William M., and Robert Tollison. 1976. "Campaign Expenditures and Political Competition." *Journal of Law and Economics* 19: 177-88. Denzau, Arthur, and Michael C. Munger. 1986. "Legislators and Interest
- Denzau, Arthur, and Michael C. Munger. 1986. "Legislators and Interest Groups: How Unorganized Interests Get Represented." *American Political Science Review* 80: 89-106.
- Driscoll, James D. 1986. *California's Legislature*. Sacramento: Center for California Studies at California State University.
- Endersby, James W., and Michael C. Munger. 1991. "The Impact of Legislator Attributes on Union PAC Campaign Contributions." *Journal of Labor Research* (forthcoming).
- Evans, Diana. 1988. "Oil PACs and Aggressive Contribution Strategies." Journal of Politics 50: 1047-56.
- Feldman, Paul, and James Jondrow. 1984. "Congressional Elections and Local Federal Spending." American Journal of Political Science 28: 147-63.
- Glantz, Stanton A., Alan I. Abramowitz, and Michael P. Burkhart. 1976. "Election Outcomes: Whose Money Matters?" *Journal of Politics* 38: 1033-38.
- Gopoian, David J. 1984. "What Makes PACs Tick? An analysis of the Allocation Pasterns of Economic Interest Groups." American Journal of Political Science 28: 259-81.
- Green, Donald P., and Jonathan S. Krasno. 1988. "Salvation for the Spendthrift Incumbent: Reestimating the Effect of Campaign Spending In House Elections." *American Journal of Political Science* 32: 884–907.
- Grenzke, Janet. 1989a. "PACs and the Congressional Supermarket: The Currency is Complex." *American Journal of Political Science* 33: 1-24.
- —. 1989b. "Candidate Attributes and PAC Contributions." Western Political Quarterly 42: 245-64.
- Grier, Kevin. 1989. "Campaign Spending and Senate Elections, 1978-84." Public Choice 63: 201-19.
- Grier, Kevin, and Michael Munger. 1986. "The Impact of Legislator Attributes on Interest Group Campaign Contributions." *Journal of Labor Research* 7: 349-61.
- Grier, Kevin, Michael Munger, and Gary Torrent. 1990. "Allocation Patterns of PAC Monies: The U.S. Senate." Public Choice 67: 111-28.

- Hall, Richard L., and Frank W. Wayman. 1990. "Buying Time: Moneyed Interests and the Mobilization of Bias in Congressional Committees." American Political Science Review 84: 797-820.
- Henderson, James M., and Richard E. Quandt. 1980. Microeconomic Theory: A Mathematical Approach, 3rd ed. New York. McGraw-Hill.
- Herndon, James F. 1982. "Access, Record, and Competition as Influences on Interest Group Contributions to Congressional Candidates." *Journal of Politics* 44: 996-1019.
- Hinich, Melvin. 1977. "A Model for Campaign Contributions." In P. Auster and B. Sears, eds., *American Revolution*. Tucson: Department of Economics, University of Arizona.
- Jacobson, Gary C. 1978. "The Effects of Campaign Spending in Congressional Elections." American Political Science Review 72: 469-91.
- -----. 1980. Money in Congressional Elections. New Haven: Yale University
- ——. 1985. "Money and Votes Reconsidered: Congressional Elections, 1972–1982." *Public Choice* 47: 7–62.
- ——. 1990. "The Effects of Campaign Spending in House Elections: New Evidence for Old Arguments." *American Journal of Political Science* 34: 334–62.
- Kau, James B., and Paul H. Rubin. 1982. Congressmen, Constituents and Contributors: Determinants of Roll Call Voting in the United States House of Representatives. Boston: Martinus Nijhoff.
- Kmenta, Jan. 1986. Elements of Econometrics. New York: Macmillan.
- McDevitt, Roland D. 1978. "Congressional Campaign Finance and the Consequences of Its Regulation." Ph.D. dissertation, University of California at Santa Barbara.
- McDonald, John F., and Robert A. Mossitt. 1980. "The Uses of Tobit Analysis." The Review of Economics and Statistics 62: 317-21.
- Munger, Michael. 1989. "A Simple Test of the Thesis That Committee Jurisdictions Shape Corporate PAC Contributions." *Public Choice* 62: 181–86.
- Ornstein, Norman J. 1987. Vital Statistics on Congress. Washington, DC: Congressional Quarterly Press.
- Peltzman, Sam. 1976. "Toward a More General Theory of Regulation." Journal of Law and Economics 19: 211-40.
- Poole, Keith T., and Thomas Romer. 1985. "Patterns of Political Action Committee Contributions to the 1980 Campaigns for the U.S. House of Representatives." *Public Choice* 47: 63-112.
- Poole, Keith T., Thomas Romer, and Howard Rosenthal. 1987. "The Revealed Preferences of Political Action Committees." *American Economic Review* 77: 289-302.
- Ragsdale, Lyn, and Timothy E. Cook. 1987. "Representatives' Actions and Challengers' Reactions: Limits to Candidate connections in the House." *American Journal of Political Science* 31: 45-81.
- Saltzman, Gregory. 1987. "Congressional Voting on Labor Issues: The Role of PACS." Industrial and Labor Relations Review 40: 163-79.
- Silberman, Jonathan, and Gilbert Yochum. 1978. "The Role of Money in Determining Election Outcomes." Social Science Quarterly 58: 671-82.

- Snyder, James M. 1990. "Campaign Contributions as Investments: The U.S. House of Representatives, 1980–1986." *Journal of Political Economy* 98(6): 1195–1227.
- Squire, Peverill. 1988. "Member Career Opportunities and the Internal Organizations of Legislatures." *Journal of Politics* 50: 726-44.
- Sorauf, Philip M. 1988. Money in American Elections. Boston: Scott, Foresman.
- Stigler, George J. 1971. "The Theory of Economic Regulation." Bell Journal of Economics 2: 3-21.
- Tobin, James. 1958. "Estimation of Relationships for Limited Dependent Variables." *Econometrica* 26: 24-36.
- Tullock, Gordon. 1972. "The Purchase of Politicians." Western Economic Journal 10: 354-55.
- Tufte, Edward R. 1974. "Electoral Reform: An Introduction." *Policy Studies Journal* 2(4): 240-42.
- Welch, W. P. 1979. "Patterns of Contributions: Economic Interest and Ideological Groups." In Herbert E. Alexander, ed., *Political Finance*. Beverly Hills: Sage.
- Wilhite, Allen, and John Theilmann. 1987. "Labor PAC Contributions and Labor Legislation: A Simultaneous Logit Approach." *Public Choice* 53: 267-76.
- Wright, John R. 1985. "PACs, Contributions and Roll Calls: An Organizational Perspective." *American Political Science Review* 79: 400-414.
- ——. 1990. "Contributions, Lobbying and Committee Voting in the U.S. House of Representatives." *American Political Science Review* 84: 417-38.