

Political action committees at the state level: Contributions to education

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Abstract. This paper examines campaign contributions from educational political action committees (PACs). Using a new and unique data set of political activity of the educational PACs across the fifty states and throughout the decade of the nineties, the authors describe the contributions' patterns of these groups. The authors argue that teachers occupy a low cost position for organizing. Approximately 90 percent of educational PAC spending is on behalf of teachers' organizations. Generalized least squares analysis of the state-year variance in contributions indicate that competition between teachers' groups and other education interest groups is a significant factor that influences the educational PACs expenditures.

1. Introduction

Over the past two to three decades, a large literature on education policy has evolved in the social sciences. Most of this literature has centered on estimates of education production functions. In particular, scholars have made numerous attempts to estimate the effects of a particular set of policy variables such as school expenditures, class size, or teacher salary, on educational output, typically defined in terms of student achievement. Most noteworthy from these studies is the lack of systematic findings regarding the relationship between the policy inputs and educational output.¹ As a result of these studies, researchers currently are looking deeper into the education production process to examine specific issues such as teacher assignment to schools and other policy variables that may explain the inconsistent findings.

Especially in light of this literature, it is somewhat surprising that economists have given relatively little attention to the political process surrounding the development of education policy. State legislatures establish guidelines for curriculum in the schools, develop formulae for funding of schools, decide whether or not to allow charter schools or vouchers, set ceilings on class size, and influence salary structures directly or indirectly. Local school districts vary in independence across the states but virtually all are subject to the constraints of the political process of both their states and their local levels of government.

The lack of attention to policy processes in education can be attributed in large part to a lack of data. The role of interest groups and political

organizations for all policy areas has been empirically examined chiefly at the federal level simply because data are better. The federal emphasis is particularly problematic for education, however, because it is predominantly a state and local issue. While the federal role in education has grown in recent years, the preponderance of educational spending continues to be funded from state and local revenues (approximately 93 percent).² Education continues to be one of the two largest expenditure items in states' budgets. In a survey by Gray, Hanson, and Jacob (1998), education interest groups were chosen as second only to business organizations with respect to their effectiveness in influencing state policymakers.

This paper examines one aspect of state and local political processes in education at a nonfederal level. The paper focuses specifically on the competition between education political action committees and the effect of that competition on both total education contributions and contributions from specific groups. We describe a new and unique data set on political contributions made by education political action committees representing teachers and other groups across the states throughout the 1990s. This paper, as one in a series on the subject, examines the variance in contributions from education related political action committees at the state level over a ten-year period. Other papers examine both the policy consequences of the contributions and more micro aspects of the contributions such as the candidates to which the contributions are made.

2. Political Action Committees

Political economists have examined in some detail the strategies used by interest groups to lobby legislators. From a general perspective, individuals join groups to capitalize on economies of scale in lobbying and in producing political influence in an area of mutual interest to the individuals (Olson, 1965; Stigler, 1971; Becker, 1983). Following formation, the interest groups provide support to candidates and to elected officials in a variety of ways including the provision of information, direct contributions of money, and the generation of votes. In exchange for the political support, the groups gain access to the candidates and legislators. This access may influence legislation at a variety of stages including affecting committee agendas, influencing the nature of bills that reach the floor, as well as influencing final policy votes. Scholars have examined the precise ways groups can influence legislative agendas and votes and have examined whether the groups pursue rational strategies in choosing which candidates to support.³ From an economic perspective, the particular way in which these groups influence political outcomes depends upon a group's relative cost of choosing alternative strategies.

As Becker (1983) illustrated, the productivity of resources expended to produce influence depends, among other things, on the extent to which other

groups compete for the influence. An interest group facing no competition will spend less to produce a given amount of political influence than will a group facing competition from other groups, *ceteris paribus*. Spending from competitive groups will increase the political contributions by any given group. Previous works have regarded the competition as between functions such as education versus transportation. This paper examines the competition by looking at competing interests and positions within the single area of interest of education.

Over the past twenty years, interest groups have increasingly formed political action committees (PACs) as a formal way of representing their political interests. The PACs came into existence in the 1940s as federal campaign finance laws placed prohibitions on unions that restricted their dues money going to candidates. In 1971, campaign finance laws granted permission to unions to solicit voluntary contributions for political purposes and to use union money to pay for overhead operating expenses for PACs. Federal laws now limit contributions from corporations, individuals, political parties, and PACs. While the laws differ across states, a majority of states also now restrict campaign contributions from individuals, corporations, political parties, and PACs. As these laws governing campaign contributions have grown increasingly stringent, PACs began circumventing the rules at one margin by forming additional PACs. The number of PACs has increased both at the federal and state levels (Delaney, Fiorito, & Jarley, 1999). Whether or not limits on spending have curtailed the level of contributions, PACs have become major actors in campaign financing and political lobbying at both the federal and state levels of government.

Individuals in the education industry occupy an especially low-cost position to form interest groups and PACs. In their professional positions as teachers and education administrators, most hold membership in professional organizations that represent their interests. Teachers across the fifty states typically join professional educators' organizations through affiliations of the National Education Association (NEA) or the American Federation of Teachers (AFT).⁴ Employees of the public schools join local and state associations, pay membership dues, and abide by any collective bargaining agreements applicable to their state organization. The NEA consists of approximately 2.5 million members nationally and the AFT numbers approximately 1 million members. The core function of the NEA and AFT is collective bargaining for the teachers. Most states' laws facilitate collective bargaining through public sector bargaining laws. Of the seventeen states that have not passed bargaining laws at the state level, ten allow local bargaining by teachers as long as local school boards agree to it.⁵

The governing rules for the teachers' organizations differ across the fifty states but federal laws prohibit the NEA and AFT affiliates from political lobbying or from directly providing information or monetary support

to candidates and legislators. It is legal, nevertheless, to form PACs to represent the interests of the teachers' organizations. The teachers' PACs do not differ from others in that they receive contributions from those individuals or groups whose interests they represent and then expend resources to gain access to particular candidates and legislators or to influence policy.

While across the states it is low cost for teachers to organize and form PACs relative to other interest groups, there also are differences between the states that are likely to influence the extent to which teachers will use PACs to represent their interests. For example, consider the teachers as an interest group competing with other groups interested in education to produce political influence (Becker, 1983). Teachers and other school officials must compete against interest groups that oppose the teachers' political position in education.⁶ In this context, the extent to which the teachers' organizations dominate the education political arena should influence the amount of total political contributions made by education PACs. In those states, for example, where the teachers' organizations constitute the only organized groups representing education, smaller contributions from education PACs will be required for a given degree of influence, *ceteris paribus*. On the other hand, in those states where groups representing citizens and business, for example, organize to lobby regarding education in ways that are counter to the preferences of teachers, total teacher PAC contributions required for producing political influence will be higher.⁷ If competing groups develop sufficient interest to form opposing PACs, the teachers' organizations will have to spend more effort and money to produce the same level of influence on legislators.⁸

It is not only competition from other groups that influence the pattern of contributions. Mentioned earlier, states also differ in collective bargaining rules for teachers. In those states in which the teachers collectively bargain for wages and other amenities, there will be a higher payoff to lobbying legislators than in those states where teachers have a professional organization but no collective bargaining rights. In the states without collective bargaining, the teachers will lobby for higher professional profile and other policy outcomes but fewer monetary rewards are at stake. As a result, there should be less political lobbying and less education PAC expenditures in the states without collective bargaining.

Finally, political institutional arrangements and demographic factors within any given state should influence the level of PAC activity within a state. For example, the campaign limitations placed on various types of contributions may influence education PAC contributions as they affect the cost of political activity.⁹ The political parties dominating the state, the composition of the legislature and other factors will be considered in more detail in the empirical analysis that follows.

3. The Data

The federal government requires all PACs that contribute to candidates or issues to register with the election boards of the respective state in which they contribute. These groups must report their political activities on a quarterly, semi-annual, or annual basis depending upon the extent of activity and the laws within the particular state. The data reported by the PACs are available to the public through open records laws. These data, however, are not compiled, sorted, filed, or reported in any systematic fashion. With rare exceptions, the states historically have made none of the data available electronically.¹⁰ Commonly, the reports are received from PACs and placed in storage with no further tabulating, coding, or public display of data and, in some states, with few accountability checks for election law compliance.

For the purposes of this research, each state's education PAC list was identified from all federally registered committees within the state. Each of the fifty state agencies charged with maintaining campaign finance reports was contacted and copies of all campaign finance reports filed for each identified education PAC were requested retroactively to the earliest year available. Because of state laws concerning length of storage and inadequacy in archival methods, the data received from states are not complete. There are, however, no known quantitative biases in the responses from the states.¹¹

Some states made available their contributions data as early as 1980. Others retained data for a maximum of ten years. We made a decision to begin our analysis with 1991, the earliest year for which we could get a substantial number of states' data.¹² We collected data at the PAC level for each state year available from 1991 to 2000. As illustrated by a sample of 3 years (1992, 1996, 2000) of data presented in Table 1, the number of educational PACs across the states ranges from a single PAC in 12 states to 56 reported PACs in West Virginia in the year 2000.¹³ Over the 1990s, Florida consistently has reported the highest number of PACs at 46 each year. The number of PACs has varied slightly over the 1990s with a slight upward trend in numbers. There are exceptions, however, as PACs form and dissolve continuously. California, for example, listed 16 educational PACs in 1992, 24 in 1996, and 19 in the year 2000. Texas educational PACs grew from 28 to 41 in the four-year period between 1992 and 1996 but decreased again to 36 by 2000.

In the 12 states with only one registered education PAC, that PAC is the one representing the state affiliate of either the NEA or AFT. As indicated in Table 1, approximately 80% of the educational PACs represent teacher's unions (organizations) and are classified as public PACs. To further illustrate, consider a randomly chosen state, Indiana. Of 36 registered PACs, 30 of them (or 86%) are affiliates of the National Education Association. An additional 2 PACs are affiliates of the American Federation of Teachers. The remaining 4 PACs are school employee PACs that are not affiliated with a professional

Table 1. Number of educational PACS

State	Total number of PACS			Public PACS		
	1992	1996	2000	1992	1996	2000
ALABAMA	8	9	8	7	7	5
ALASKA	5	7	5	5	7	4
ARIZONA	3	19	18	2	14	11
ARKANSAS		9	9		9	4
CALIFORNIA	16	24	19	14	20	12
COLORADO	2	4	7	2	4	6
CONNECTICUT	30	32	33	25	26	26
DELAWARE	1	1	1	1	1	1
FLORIDA	46	46	46	45	45	45
GEORGIA			13			10
HAWAII	1	1	1	1	1	1
IDAHO	1	1	1	1	1	1
ILLINOIS	28	35	35	18	24	23
INDIANA	36	36	35	35	35	35
IOWA	1	1	1	1	1	1
KENTUCKY	1	1	1	1	1	1
LOUISIANA	2	7	11	2	5	11
MAINE	1	1	1	1	1	1
MARYLAND		4	2		1	2
MASSACHUSETTS	5	5	5	5	5	5
MINNESOTA	7	9	6	7	9	6
MISSISSIPPI	1	1	1	1	1	1
MISSOURI	16	16	16	8	8	8
MONTANA	11	14	13	11	13	13
NEBRASKA	1	1	1	1	1	1
NEVADA			14			13
NEW HAMPSHIRE		1	1		1	1
NEW JERSEY	3	4	10	3	4	8
NEW MEXICO		3	3		3	3
NEW YORK	9	9	10	8	8	8
NORTH CAROLINA	4	2	2	2	2	2
OHIO	7	8	11	6	6	8
OKLAHOMA	1	4	3	1	4	3
OREGON	12	11	15	8	9	7
PENNSYLVANIA	6	6	6	5	5	5

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Table 1. (Continued)

State	Total number of PACS			Public PACS		
	1992	1996	2000	1992	1996	2000
RHODE ISLAND	12	12	12	12	12	12
SOUTH CAROLINA			3			1
SOUTH DAKOTA	1	1	1	1	1	1
TENNESSEE		3	3		2	2
TEXAS	28	41	36	22	21	25
UTAH	9	9	9	9	9	9
VERMONT		1	1		1	1
WASHINGTON	5	5	5	5	5	5
WEST VIRGINIA		1	56		1	54
WISCONSIN	32	37	44	32	37	44
WYOMING	1	1	1	1	1	1

teachers' organization. There are no registered PACs dealing with education that represent other interest groups. Other educational PACs are generally business groups or citizen groups such as the "Citizens of Locality Z for Good Education." These PACs often represent opposite views and support different candidates than the public PACs. Empirically, we consider these education PACs separately from teachers' PACs when appropriate.

For the purpose of this paper, PAC data are aggregated to the state-year level so that we can examine spending variations across states. Individual PAC behavior within given states are being analyzed in other papers. We were able to collect annual data from 33 states for 1991. For each year beyond 1991, the number of states for which we collected data increases. The one state for which we were unable to collect any data is North Dakota.¹⁴ Some states such as Idaho report the receipt of funds and contributions to educational PACs only during election (even) years. More generally, PACs collect revenues and report contributions annually but contributions are generally larger during election years. In Michigan, for example, real educational PACs contributions totaled approximately \$717,000 in 1997, \$3,100,000 in 1998, \$576,000 in 1999, and \$2,700,000 in 2000. Many state contribution patterns resemble that of Michigan.

Table 2 lists three data years of aggregate educational PAC activity by state, measured in real dollars of contributions. As illustrated, these data vary greatly. California unambiguously represents the high end of activity with contributions of almost \$200 million in the year 2000 compared to the average state's contributions from educational PACs of \$4,506,486. At the other end, Maine had almost no expenditures reported. Vermont and New Hampshire

also had very small levels of expenditures. On average, the states' increased contributions throughout the 1990s. The average state's expenditure in the year 2000 represents almost a ten-fold increase in contributions to the average state from 1992 when average contributions per state were slightly over \$500,000 (in real terms). The issue addressed in the remainder of this paper is that of

Table 2. Total contributions of PACS

State	1992	1996	2000
ALABAMA	\$233,985	\$253,713	\$878,000
ALASKA	\$172,334	\$197,162	\$225,620
ARIZONA	\$16,746	\$202,641	\$2,024,808
ARKANSAS		\$49,918	\$45,407
CALIFORNIA	\$4,423,704	\$11,073,701	\$187,097,102
COLORADO	\$638,539	\$679,182	\$743,185
CONNECTICUT	\$166,362	\$161,910	\$150,849
DELAWARE	\$ 79,067	\$11,640	\$36,610
FLORIDA	\$797,879	\$1,097,622	\$1,478,041
GEORGIA			\$210,794
HAWAII	\$148,344	\$87,704	\$87,941
IDAHO	\$676,519	\$522,539	\$105,622
ILLINOIS	\$2,098,077	\$2,885,290	\$4,335,717
INDIANA	\$776,168	\$884,411	\$1,723,878
IOWA	\$189,903	\$320,508	\$374,223
KANSAS	\$119,239	\$61,809	\$242,555
KENTUCKY	\$277,176	\$350,733	\$313,181
LOUISIANA	\$120,085	\$99,809	\$121,267
MAINE	\$35,231	\$19,718	\$14,500
MARYLAND		\$119,142	\$175,247
MASSACHUSETTS	\$98,193	\$86,431	\$174,234
MICHIGAN		\$1,794,203	\$2,663,384
MINNESOTA	\$951,442	\$1,292,194	\$794,588
MISSISSIPPI	\$22,709		\$72,102
MISSOURI	\$106,738	\$165,334	\$458,901
MONTANA	\$113,572	\$100,514	\$56,155
NEBRASKA	\$179,037	\$578,929	\$190,022
NEVADA			\$1,748,824
NEW HAMPSHIRE		\$16,769	\$17,703
NEW JERSEY	\$642,218	\$366,542	\$395,775
NEW MEXICO		\$91,902	\$78,615

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Table 2. (Continued)

State	1992	1996	2000
NEW YORK	\$2,586,444	\$3,443,029	\$4,007,743
NORTH CAROLINA	\$155,980	\$274,672	\$207,058
OHIO	\$905,086	\$1,298,019	\$1,302,419
OKLAHOMA		\$44,846	\$47,879
OREGON	\$826,090	\$1,287,006	\$2,949,063
PENNSYLVANIA	\$235,132	\$154,861	\$170,591
RHODE ISLAND	\$69,042	\$110,804	\$100,946
SOUTH CAROLINA			\$100,855
SOUTH DAKOTA	\$14,883	\$113,724	\$85,216
TENNESSEE		\$275,109	\$258,167
TEXAS	\$204,369	\$1,140,912	\$721,069
UTAH	\$95,901	\$175,267	\$229,094
VERMONT		\$5,337	\$1,164
VIRGINIA	\$126,742	\$137,052	\$135,812
WASHINGTON	\$1,396,817	\$652,804	\$1,010,701
WEST VIRGINIA			\$560,860
WISCONSIN	\$1,030,642	\$1,166,823	\$1,836,702
WYOMING	\$86,895	\$57,493	\$57,644

explaining the variance in contributions from all education PACs and from those representing teachers' unions across states over this time period.

4. An Empirical Model and Estimates

The data for this analysis cover the years, 1991–2000.¹⁵ Observations are at the state-level and include 49 states. The PAC contribution data form the core of the data set. As described above, these data were gathered from the elections commission of individual states and this paper represents the first use of these data. The PAC contributions represent all contributions on the behalf of education PACs to state or local candidates, representatives, or issue campaigns. As illustrated in Table 2, the states vary a great deal in the contributions by the PACs. Table 3 lists the descriptive statistics for the available data.¹⁶

From a political economy perspective and as discussed earlier, the extent to which education PACs represent a single position or whether they compete among themselves is one factor that should influence the level of contributions from PACs. If the teachers' professional organizations face organized opposition from other education interests or interests in other functional areas, they

Table 3. Descriptive statistics

Variable name	Description	Mean	Standard deviation
EDUCATION PAC	Contributions from all education-related PACs	1,104,540	9,363,183
TEACHER PACs	Contributions from teacher PACs	685,163	2,760,990
PUBLIC PACs	Percent of education PACs representing NEA or AFT	79.10	23.37
STATE COLLECTIVE BARGAINING	Dummy variable = 1 if a state has state level collective bargaining for teachers; 0 otherwise	0.66	0.47
LOCAL COLLECTIVE BARGAINING	Dummy variable = 1 if a state allows local collective bargaining for teachers; 0 otherwise	0.21	0.41
UNION MEMBERSHIP	Percent of state's workers who are unionized	14.15	5.94
L-POLITICAL PARTIES	Dummy variable = 1 if the state limits contributions from political parties; 0 otherwise	0.47	0.50
L-PACs	Dummy variable = 1 if the state limits contributions from PACs; 0 otherwise	0.63	0.48
L-LABOR UNIONS	Dummy variable = 1 if the state limits contributions from labor unions; 0 otherwise	0.52	0.50
L-INDIVIDUALS	Dummy variable = 1 if the state limits contributions from individuals; 0 if not	0.68	0.47
EGISLATURE SIZE	Number of persons in the state legislative body	147	59
HOUSE MAJORITY	Dummy variable = 1 if the house majority party is democrat; 0 otherwise	0.58	0.49
SENATE MAJORITY	Dummy variable = 1 if the senate majority party is democrat; 0 otherwise	0.53	0.50
GOVERNOR PARTY	Dummy variable = 1 if the Governor is democrat; 0 otherwise	0.42	0.49

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Table 3. (Continued)

Variable name	Description	Mean	Standard deviation
POPULATION	Total population of the state in logs	15.07	1.01
HH INCOME	Median household income	40,410	6,360
METRO	Percent of the state's population in a metropolitan area	68.55	20.78
AGE 65	Percent of the state's population over 65 years of age	12.72	2.08
POVERTY	Percent of the state's population below poverty	12.52	3.86
EDUCATION	Percent of the population with 4 or more years of college	23.12	4.45
TOTAL PAC CONTRIBUTIONS	Total campaign contributions in a state	1,770,000,000	3,280,000,000

will have to spend more, *ceteris paribus*, to produce a given level of political influence in the legislative process. We would expect, therefore, the aggregate level of contributions from all education groups to be higher if there are educational PACs that compete with the teachers' PACs.

The political and institutional environment within the state also should influence the extent to which education PACs organize and contribute to the political process. The laws governing collective bargaining for teachers, in particular, should influence the level of contributions across the states. Those states with collective bargaining laws should have higher levels of education PAC contributions, *ceteris paribus*. Based on other studies of PAC and interest group activity and influence, the size of the legislative body, the influence of political parties in a state, and the limits placed on contributions from various individuals and groups will likely influence political contributions by educational PACs. Delaney et al. (1999) argue that factors such as union density are generally important determinants of contributions to political action groups. They also argue that public sector unions are more politically active than private ones. Finally, PAC contributions are expected to have increased over time and to be higher in election years than non-election years.

To determine the factors that influence the total level of contributions to education PACs across the states and over time, the first dependent variable to be estimated will be the state-year total campaign contributions by all education PACs. The contributions are estimated as a function of the political

environment of the state and other socioeconomic variables expected to influence education contributions. There are alternative ways to estimate the political contributions given the panel construction of data. We estimate the following basic model with a random effects model. Conceptually, random effects are used because political variables are subject to shock and the state effects, therefore, are likely to be random. The following random effects generalized least squares model will be estimated:¹⁷

$$Y_{it} = \alpha_{it} + \beta_1 X_{it} + \beta_2 Z_{it} + e_{it}.$$

where Y is the log of aggregate education PAC contributions in state i in year t ; X represents a vector of independent variables signifying the institutional and political environment in a given state in a given year; and Z is a vector of variables representing demographic variables that would be expected to influence the total political contributions to education in a state. Finally, e_{it} represents the complex error term for the estimates.

A major independent variable of interest is the extent to which the education PACs in a state represent a unified position or whether they compete for political influence regarding education. The data allow us to determine which education PACs represent teachers' organizations only or which represent potentially competitive groups such as citizens' or business groups. The variable, PUBLIC PACs, is the percent of education PACs within a state representing the teachers' organizations. The higher the percentage, the less competition faced by the PACs from other education PACs. We expect this to be negatively correlated with total education contributions. The state's institutional and political structure includes the status of teachers' collective bargaining laws in a state. States fall into three categories and will be represented by a set of two dummy variables. These include states with state level bargaining power (STATE = 1), states with legal rights to bargain at individual local districts (LOCAL = 1) and those with no rights to bargain at either the state or local level (STATE = 0, LOCAL = 0).¹⁸ State or local bargaining rights should be positively related to contributions from education PACs because teachers in these states have more at stake in political campaigns than do those teachers in which there is no collective bargaining. To capture the general union propensity in a state, a variable, UNION, also is included and is the percentage of union membership in state i and year t . State institutional variables also include a vector of dummy variables indicating whether the state limits (YES = 1) political contributions from Corporations, CORPORATIONS, from political parties, POLITICAL, from labor unions, LABOR, and on the contributions from PACs, PACS. The majority party (Democrat = 1) controlling the Governor's office, GOVERNOR, the majority party in the Senate, SENATE, and the majority party in the House of Representatives, HOUSE, of each state also are included as others have sometimes found these

influence the level of political lobbying. Finally, the size of the legislature, LEGISLATURE, is included.

Demographic variables include the total population in a state, POP, the median household income level in a state, INCOME, and the percent of the population in metropolitan areas, METRO. POP and INCOME are expected to relate positively to total contributions from educational PACs. METRO is more complicated. A larger metropolitan population would face lower costs of organizing, *ceteris paribus*, than one in rural areas. On the other hand, the location of the population in metropolitan areas may imply more decision making at the local level, *ceteris paribus*, and thus, less reason to lobby. Other demographic control variables include the percent of the population aged 65 and older, AGE 65, the percent of the population below poverty, POVERTY, and the percentage of the population with four years or more of higher education, EDUCATION. All reflect taste for schooling and may influence the propensity to lobby for education. AGE 65 and POVERTY are expected to negatively influence PAC contributions in education and EDUCATION should positively influence PAC contributions.

Finally, because the data are panel data, two variables capturing the influence of time are included. YEAR, or the year of the observation, is included to capture any trends over time in education contributions to PACs. YEAR2 is included to capture possible nonlinear effects of time.¹⁹ In this case, because we expect contributions to spike in election years, we also include a variable, EVEN YEAR, to capture the differences in spending in election years as opposed to off-election years.

The results from estimating the equation using aggregate education PAC contributions are presented in columns 2 and 3 of Table 4. All dollar measures are estimated in real (year 2000) dollars and in logs. Begin first with a variable of major interest, PUBLIC PACs.²⁰ As illustrated, the estimated coefficient is negative and significant. A higher concentration of public education PACs, or those representing teachers' organizations, leads to less total political contributions by education groups. Alternatively, less competition from other education PACs leads to less spending overall by education PACs. This finding supports the Becker thesis that the extent of organized competition for political influence is a determinant of the size of spending by an interest group.²¹

The institutional rules governing teachers' organizations also proved highly significant in explaining campaign contributions. Again examining the results in columns 2 and 3, collective bargaining by teachers, whether it be at the state level or the local level, results in greater PAC expenditures for education. Because the PAC contributions include expenditures for candidates and causes at both state and local levels, this result is as expected.

Consistent with much of the literature, formal limits on campaign contributions are insignificant in explaining aggregate PAC contributions. Limits on political parties, PACs, labor unions, and individuals are insignificant. The

Table 4. Education PAC contributions

Explanatory variables (1)	Coefficient (and z-statistics) (2)	p value (3)	Coefficient (and z-statistics) (4)	p value (5)
PUBLIC PACS	-0.858 (-2.21)	0.027	-1.643 (-2.99)	0.003
STATE COLLECTIVE BARGAINING	1.864 (3.99)	0.000	0.892 (1.59)	0.113
LOCAL COLLECTIVE BARGAINING	1.619 (3.54)	0.000	0.413 (0.75)	0.662
UNION MEMBERSHIP	-0.009 (-0.52)	0.601	-0.008 (-0.40)	0.687
L-POLITICAL PARTIES	0.038 (0.29)	0.768	0.059 (0.31)	0.755
L-PACS	0.293 (1.48)	0.139	-0.136 (-0.56)	0.575
L-LABOR UNIONS	-0.173 (-0.84)	0.402	-0.257 (-1.00)	0.315
L-INDIVIDUALS	-0.153 (-0.62)	0.537	0.031 (0.10)	0.917
LEGISLATURE SIZE	-0.009 (4.45)	0.000	-0.021 (-4.90)	0.000
HOUSE MAJORITY	0.098 (0.63)	0.529	0.165 (0.80)	0.422
SENATE MAJORITY	-0.243 (-1.68)	0.094	-0.139 (-0.86)	0.391
GOVERNOR PARTY	0.255 (2.05)	0.040	0.091 (0.52)	0.603
POPULATION	1.619 (7.92)	0.000	1.788 (6.42)	0.000
HH INCOME	1.607 (1.71)	0.086	1.893 (1.63)	0.103
METRO	-0.013 (-1.32)	0.186	-0.031 (-2.39)	0.017
AGE 65	-0.149 (-2.19)	0.029	-0.055 (-0.67)	0.506
POVERTY	-0.030 (-1.07)	0.283	-0.046 (-1.23)	0.217
EDUCATION	-0.059 (-2.24)	0.025	-0.011 (-0.31)	0.760
YEAR	0.097 (1.46)	0.143	-0.014 (-0.11)	0.909
YEAR ²	-0.005 (-0.72)	0.472	-0.005 (-0.52)	0.605
EVEN YEAR	1.063 (12.42)	0.000	0.158 (0.65)	0.514
TOTAL PAC CONTRIBUTIONS			0.133 (2.09)	0.037
CONSTANT	-25.396 (-2.41)	0.016	-28.89 (-2.16)	0.031
N	382		125	
R ² OVERALL	0.67		0.76	
WALD CHI ²	376.90	0.000	155.57	0.000

results suggest these limits are not contributing in a significant way to explaining variance across the states during the time period represented in this study.²² Also consistent with the literature, the size of the legislature is a significant factor in explaining education PAC contributions. Specifically, larger sized legislatures result in lower total contributions from education PACs. Others have posited that this result reflects the higher cost of influence with larger legislative bodies. Population size for the state, on the other hand, is positively related to contributions as would be predicted.

The other institutional variables of interest are the parties of the legislature and the Governor. When a Democrat occupies the Governor's office, there are higher PAC contributions from education PACs but the party in power in the legislative bodies proves insignificant. Finally, the results on two demographic variables are of interest. Both the percentage of the population over 65 years of age and the college-educated population of a state are negatively related to lobbying contributions by education PACs. The first is consistent with studies of the demand for public schooling. While a positive sign was expected on educational attainment, there are plausible explanations for the negative sign. One possible explanation is that the college-educated work force disproportionately chooses private schooling for their children.

The model tested above measures competition strictly in terms of teacher organizations versus other education PACs. More generally, education PACs also must compete against PACs representing entirely different issues. Increased contributions from PACs representing agriculture, health, or public safety mean less influence from a given dollar of expenditure by the education PACs. To generate a given level of influence requires higher PAC contributions from the education groups. We would expect, therefore, that contributions from all other PACs would be positively correlated with contributions from education PACs, *ceteris paribus*.

Total contributions from all interest groups across functional areas are not available across the states for the time period examined here. Limited data are available from *Follow the Money*, and those data are included in the results presented in columns 4 and 5. The variable, TOTAL PAC CONTRIBUTIONS, is positive and significant suggesting that higher contributions from PACs representing issues other than education raise the contributions from education PACs. For the most part, the statistical significance of the other independent variables remains unaffected by the inclusion of this variable and the smaller sample size of the data. A couple of variables, including education of the population and the party of the Governor, do lose significance when including the total contributions. The inclusion of the total contribution variable also obviates the even year variable. The PUBLIC PAC variable remains significant in this smaller sample estimate.

The measure of competition among education groups in Table 4 was the concentration of teacher PACs. In some states, the teachers' PACs were the only education PACs and contributions are 100% from teachers' groups. But the teacher contributions vary across states and have varied in the aggregate over time. In the early 1990s, contributions from teachers' groups constituted, on average, 95 percent of the education contributions across the states. This changed significantly in the late 1990s with education reform initiatives with teacher groups accounting for as little as 65 percent of the education contributions in 1999.

Table 5. Teacher PAC contributions

Explanatory variables (1)	Coefficient (and z-statistics) (2)	p value (3)
OTHER EDUCATION PACS	0.035 (1.98)	0.047
PUBLIC PACS	0.195 (0.44)	0.657
STATE COLLECTIVE BARGAINING	1.942 (4.15)	0.000
LOCAL COLLECTIVE BARGAINING	1.767 (3.83)	0.000
UNION MEMBERSHIP	-0.140 (-0.79)	0.427
L-POLITICAL PARTIES	0.048 (0.39)	0.698
L-PACS	0.162 (0.84)	0.403
L-LABOR UNIONS	-0.114 (-0.57)	0.570
L-INDIVIDUALS	-0.150 (-0.62)	0.536
LEGISLATURE SIZE	-0.008 (-4.07)	0.000
HOUSE MAJORITY	0.119 (0.79)	0.428
SENATE MAJORITY	-0.235 (-1.68)	0.093
GOVERNOR PARTY	0.247 (2.07)	0.039
POPULATION	1.559 (7.57)	0.000
HH INCOME	1.341 (1.49)	0.137
METRO	-0.008 (-0.87)	0.387
AGE 65	-0.147 (-2.15)	0.031
POVERTY	-0.35 (-1.30)	0.193
EDUCATION	-0.055 (-2.14)	0.032
YEAR	0.089 (1.40)	0.161
YEAR ²	-0.006 (-0.95)	0.341
EVEN YEAR	1.040 (12.68)	0.000
CONSTANT	-23.072 (-2.26)	0.024
N	382	
R ² OVERALL	0.67	
WALD CHI ²	386.40	0.000

Table 5 presents results when re-estimating Equation (1) with an alternative dependent variable and an alternative measure of competition among education PACs. Here, the dependent variable measures the contributions from teachers' PACs only rather than all education PACs. As an independent variable, we measure the direct competition for political influence from other interest groups representing education with the variable, OTHER EDUCATION PACS. This variable measures direct dollar contributions from education PACs that represent business or citizens' groups. If these groups are competing with teachers' PACs, the estimated coefficient should be positive. If the other education PACs complement the teachers' PACs in their lobbying efforts with state legislatures, the coefficient should be negative.

The results indicate that contributions from other education PACS are competitive with that of the teachers' organizations as the estimated coefficient is positive and significant. Spending from other education groups leads to greater aggregate spending by teacher PACs suggesting that business or citizen PAC contributions do not complement that of the teachers but rather, that the various education groups are competing for political influence. These results reinforce those of Table 4.

Other variables are not qualitatively different in these estimates. Collective bargaining rules again prove to be highly significant in explaining the contributions from education groups. The size of the legislative body is again negatively related to contributions suggesting some economies of scale in influence production and state population is positively related to the level of contributions in a state. The final variable of great significance is even year, suggesting that election year contributions are greater than off-year contributions.²³

Taken together, these results are highly revealing. State contributions from PACs are very much influenced by the state's own degree of competition. The competition between educational PACs within a given state, regardless of the way in which it is measured, influences the overall level of education contributions. The institutional settings in the states' that govern collective bargaining for teachers also proves significant in explaining contributions from PACs. The only political variable consistently significant is the size of the state legislature. Socioeconomic differences across the states throughout the 1990s are not robust in their influence on PAC contributions.

5. Concluding Comments

This paper has examined interest group activity as expressed through campaign contributions of political action committees for education. In particular, the paper examines factors that influence the level of campaign contributions in education across the states during the decade of the 1990s. This paper represents a significant contribution to the literature on several fronts. First, this paper directly tests the Becker thesis that interest groups compete with one another for political influence and compete in the form of campaign contributions. This paper examines the competition between groups representing a single functional area, education. Second, scholars have only recently begun to examine political activity from an empirical perspective in any function at the state level. The unique data described in this paper allow such an examination. Finally, political processes in education particularly have been examined very little. The analysis of this paper serves as a foundation for building the literature in this area. More detailed analyses of the behavior of individual PACs and consideration of the effects of campaign contributions on educational outcomes are now required.

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Notes

1. See Hanushek (1986) for one of the initial surveys of this literature. The one policy variable that tends to significantly explain educational outcomes is teacher quality although its measurement is complex.
2. The Bush Administration's "No Child Left Behind" Act represents a significant departure from education policymaking historically. The federal government has mandated that states establish performance standards for schools and has tied policy and dollars to the standards.
3. For an extensive survey of the literature on interest groups and lobbying, see Baumgartner and Leech (1998).
4. This is a classic Stigler-type special interest organization (Stigler, 1971).
5. For more details regarding the influence of unions on education in the states, see Terry Moe, "Teachers Unions and the Public Schools," Chapter 7.
6. It is possible that some of these groups will complement the teachers' interests as well. The directional effect of other education groups on teachers' contributions is an empirical question and will be addressed in a later section.
7. In recent years, voucher and charter school laws have raised interest from groups other than teachers. State funding formulae sometimes incites action from non-teacher groups.
8. The contributions from groups other than education interest groups also will be important. We consider both in the empirical section.
9. David Lowery argues that are several variables that might influence the cost of political activity. The empirical section considers additional measures.
10. This is beginning to change. See, for example, *Follow the Money*, an Institute on Money in State Politics, that provides an electronic data base for contributions over three election cycles.
11. The missing data resulting from the lack of response is restricted to the dependent variable. Empirically, these are treated as missing observations. As a way of addressing possible state-level biases, the empirical estimates include a fixed effects model (discussed later) as an alternative to the model presented in the tables.
12. Thirty-four states provided data for 1991 PAC activity.
13. Data from earlier years PACs in West Virginia were not available. Some states (such as Washington) reported bond referendum PACs for locally held elections. Because most states did not include these, they are not included in the data reported here.
14. In the regressions to follow, missing years of contributions' data will be treated as missing observations.
15. The years are dictated by availability. The number of states reporting PAC contribution data prior to 1990 is too small to include in the analysis. The observations for the analysis total 409 because of missing data for some years.
16. Data on school expenditures, teacher salaries, and other school inputs and outputs are from data provided by the National Center for Education Statistics through the School District

Data Book and Common Core Data. Demographic data from the Census of Population are included in the School District Data Book. Union data are from the Current Population Survey and political variables are from the collection of Richard Fording in the Political Science Department at the University of Kentucky. Total PAC activity in a state (limited years) comes from Follow the Money.

17. A fixed effects model is estimated as an alternative because of the missing contributions data described earlier. Although there are no known biases by state that would influence the years or states that are missing, these estimates will serve to test the robustness of the preferred random effects model. The results from the fixed effects model will be briefly discussed in a later footnote.
18. These variables are time invariant in this data set and will not be used in the fixed effects model.
19. YEAR is entered as a variable that equals 0 in 1991, 1 in 1992, etc.
20. There are alternative measures of the competitiveness of education groups but data were available only for limited years. Using data for 1997 (supplied by David Lowery), we also included a variable for education groups as a fraction of all registered groups in the state. The variable was insignificant.
21. The fixed effects model yielded qualitatively similar results. Both the estimated coefficient and the t-statistic were larger in absolute value in the fixed effects model. The collective bargaining variables used in the random effects model were dropped in the fixed effects estimates because they are time invariant state dummy variables.
22. We tested the joint significance of the limit variables and found the limits to be jointly insignificant. Again using data supplied by David Lowery, we also estimated the equation for the year 1994 only with an independent variable measuring the average cost of a legislative campaign in the state. The variable was insignificant.
23. For this model, the fixed effects estimates were not robust. The other PAC variable proved insignificant. The random effects model which allows the inclusion of the state and local collective bargaining variables is again conceptually preferable.

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