

IS THERE A REGIONAL EFFECT IN THE DIFFUSION OF CONSUMER ADVOCACY OFFICES
BEFORE STATE REGULATORY COMMISSIONS?

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ABSTRACT

Commentators on the introduction of pro-consumer measures have drawn attention to what appears to be a regional component to the diffusion of the measures. Should such an effect be pervasive and regular, the ability of consumer professionals to plan strategy for the development of pro-consumer measures would be considerably enhanced. In this paper, the diffusion of one particular pro-consumer measure, the consumer advocacy office before utility regulatory authorities, is examined, using a version of a model prescribed by previous researchers. No discernible regional pattern is observed in the consumer advocacy case.

Studies of the relationship between socio-demographic characteristics and public policy formation have suggested that a regional effect may be at work in the adoption of new measures in the consumer interest. It has been claimed that wealthy, highly industrialized states adopt pro-consumer legislation before less economically developed areas (Hofferbert 1966; Walker 1969; Gray 1973; Sigelman and Smith 1980). Geographically, the Northeast and Far West allegedly adopt progressive consumer legislation before the Southern and Central parts of the country (Walker 1969; Ford 1977).

The likely existence of a regional diffusion process raises many important questions for consumer professionals, not least of which is, exactly how pervasive and regular is the process? Specifically, do all states in the respective regions of the U.S. adopt measures at about the same time? And is the same regional effect present for all innovatory consumer measures? Pervasiveness and regularity in the process would enable consumer advocates to develop improved strategies for introducing measures, and to track their diffusion more efficiently.

It is the purpose of this paper to examine whether the regional effect was evident in the adoption of one particular pro-consumer measure, and to test how pervasive was the effect at the state level. The measure concerned is consumer proxy advocacy offices in the state utility regulation process. Previous work by Gormley

(1981, 1982, 1983, 1986) suggests that this is a potentially fruitful area of research.

Rapidly increasing utility rates in the latter half of the 1970's lead to a renewed public awareness of the utility regulation process (Barvick 1977; Phillips 1986). Already-existing citizens' groups increased their activities and new groups formed to help galvanize the consumer interest in rate hearings (Gormley 1983, 1986). In addition to these unofficial public representation groups, some state legislatures responded to public pressures by creating formal proxy advocacy offices. The offices were to represent the consumer interest before state utility regulatory commissions (NASUCA 1979).

As of 1989, consumer proxy advocacy offices were present in 38 of 51 states (including the District of Columbia)³. The objectives of this paper will be to look at which states have adopted offices, to see how active the various offices are, and to test whether the diffusion of advocacy offices is consistent with the factors purportedly observed in the adoption of similar kinds of consumer legislation.

The importance of public representation within the structure of a participatory democracy has been recognized by political scientists and consumer researchers (Mazamian and Sabatier 1980; Berry 1981). Proxy advocacy offices are a potentially effective means of enhancing public representation (Schraub 1976; Barvick 1977; NASUCA 1979; Gormley 1981a,b,c, 1983, 1986). Any research which sheds light on the process of adoption of proxy advocacy efforts is therefore of interest.

METHODS

Following the past studies mentioned above, the general form of the relationship hypothesized to exist between the adoption of consumer proxy advocacy by state and its determining factors is:

$$(1) \quad ADI = f(EC_i, SPOL_i, EN_i)$$

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³The 13 states without advocacy offices were: Alaska, California, Idaho, Kansas, Montana, Nebraska, North Dakota, Oklahoma, Oregon, Rhode Island, South Dakota, Tennessee, Wyoming.

where AD represents alternatively the existence of and degree of proxy advocacy, EC represents economic variables, SPOL represents socio-political variables, EN represents confounding energy-specific variables, and i stands for a specific state of the U.S.

As mentioned above, in addition to whether or not a state has established an advocacy office, this study is interested in the degree of adoption in terms of the per capita budget of the office and the number of cases in which it is involved. Table 1 specifies the form of the three dependent variables (OFFICE, PCBUDGET, ACTIVITY) used in the study.

Economic variables which are said to be related in some way to the adoption of pro-consumer measures are income and the extent of industrial activity in the state (Hofferbert 1966; Walker 1969; Ford 1977; Mazmanian and Sabatier 1980). The higher the state income and the more active its industry, the more likely it is that the state will adopt pro-consumer legislation. Table 1 shows the independent variables (PCINC, PCVA) used to operationalize the hypothesized relationships in this study.

The economic variables are generally agreed to be the important ones in any regional effect which might be present. It has been suggested, however, that other socio-political variables may intervene in the relationship. Prominent among these are education and the past record of political activism in the state. The average level of education in the state is expected to be positively related to adoption of consumer measures (Walker 1969; Ford 1977). Pro-consumer measures are expected to be adopted more readily by states which have a past history of being relatively active politically (Sharkansky 1969; Gray 1973; Johnson 1976). Table 1 shows the independent variables (ED, PA, AGEOFF) which were included as socio-political variables.

A combination political-economic variable which is of interest is the presence of people in the state of low socio-economic status. Socio-political activity requires resource expenditure, and a state with a large economically disadvantaged population may have relatively more difficulty in raising those resources. Two independent variables were developed to cover income distribution (SD1 and SD2 in Table 1).

Gormley (1981b; 1983) reported that there is a correlation between level of involvement of consumer groups in utility hearings and the volatility of the energy market. Accordingly, variables to represent the change in energy costs and consumption (PCEND, PCENJ, PCBTU; see Table 1) were included as independent variables for this study.

Ordinary least squares analysis was used to estimate the relationship between the three dependent variables and various combinations of the independent variables. The power of the

model to predict whether or not a state would establish a consumer proxy advocacy office was also tested by discriminant analysis. Finally, two analyses of variance were performed, one with states grouped by geographical region and the other with division made by income quartile.

Values of the dependent variables were taken from the National Association of Utility Consumer Advocates' Directory. Values for the independent variables were largely gathered from The Statistical Abstract of the United States and from The Survey of Current Business. Where current year data were specified, the year for the study was 1986, the most recent year for which a complete data set could be obtained. All economic data were prepared on a per capita basis.

RESULTS

Results of the regression analysis are shown in Table 2. Three versions of the regression equations represented the general form of the relationship described above. The three equations were selected with the help of a matrix of Pearson correlation coefficients for the variables outlined in Table 1. In order to minimize potential collinearity problems, education (ED) and per capita income (PCINC) were used in different versions of the equation, and the income distributional variables (SD1 and SD2) were dropped respectively from one equation containing income and the equation containing education. The energy variables (PCEND, PCENT, PCBTU) were all mutually highly correlated, so were used consecutively in the three equations.

Overall, the fit of the equations ranged from poor for the three versions with the per capita budget of the office (PCBUDGET) as the dependent variable, to reasonable for those with the number of cases in which the office makes an appearance (ACTIVITY) as the dependent variable. The evidence of the individual regression equations, however, is that there is little by way of a systematic relationship among the variables across the states. Few coefficients are significantly different to zero at even the .10 level, and there are numerous cases of alternating signs on variables.

What evidence there is of systematic relationships between variables points to the degree of industrial activity (PCVA) being positively related to adoption of advocacy office. There was an observed significant inverse relationship between energy use per capita (PCBTU) and two of the three dependent variables. Finally, there was an indication from one equation only that the racial composition of the state (SD2) may be related to adoption of an advocacy role: the larger the non-white proportion of the state's population, the more likely it was to adopt an advocacy office.

In subsequent runs of the equations, not shown here, two states (Indiana and Vermont) were eliminated because of outlier values on two of the dependent variables, and non-linear (log and log-log) versions of the equations were tested. In all cases, improvements over the equations shown in Table 2 were marginal at best.

As a further test of the presence of a systematic relationship between the variables across states, a discriminant function was developed for the equations with the dichotomous OFFICE variable as the dependent variable. The list of independent variables was as in the first equation of Table 2, but with all three energy variables. Prior probabilities (0=.24, 1=.76) were based on the actual frequency of advocacy offices in the year of the study. The overall rate of correct prediction was fairly high, at 87 percent, and much better for states with offices (94% correct) than for those without (64%).

Finally, analysis of variance was performed in order to test for two broader regional patterns in the adoption of consumer proxy advocacy offices. First, a one-way ANOVA was carried out for means of each of the dependent variables and using Ford's (1977) four-region grouping of states. Second, because of the firm conviction in the literature that state income per capita would be a factor in the adoption of pro-consumer legislation, states were grouped by income quartiles, and a one-way analysis of variance performed between income and the means of the three dependent variables. Results, shown in Table 3, do not show any indication of a systematic regional effect in either of the two analyses.

CONCLUDING COMMENTS

The aim of this paper was to examine whether a regional effect was at work in the diffusion of consumer proxy advocacy offices before state utility regulatory commissions. Regression analysis of state-level data did show some evidence of a systematic relationship, but it was not strong statistically. An associated discriminant model showed some power of prediction of adoption of offices by state. Scrutinization of the regression coefficients showed that the regional effect that was noted was imparted largely by the degree of industrial activity in the states and by state energy consumption levels.

Analysis of variance over aggregations of states failed to reveal any broader pattern of regional effects at work, whether states were grouped on a geographical basis or by income levels. The lack of impact of income on adoption patterns was also apparent in the regression analyses.

The absence of a strong regional effect in the establishment of advocacy offices implies that regional effects in the diffusion of pro-consumer measures are not as pervasive as

previous work in the area might have lead us to believe. The expectation that certain "progressive" regions will lead and others will follow in a set order is perhaps too simplistic a picture of the real world.

Throughout the paper, the concern was with the pervasiveness of the regional phenomenon rather than its existence. Nevertheless the failure of the analysis to show clear evidence of the existence of the effect observed in previous studies is worthy of comment. There are at least two interpretations that can be drawn from the findings. It is possible that the consumer advocacy office is in some sense a different kind of situation than the measures studied by previous writers, and subject to its own dynamic. Or, it is possible that times are changing, and what is being observed here is an end to the older patterns of adoption of pro-consumer legislation. Whatever the explanation, further study of diffusion of pro-consumer legislation would seem to be desirable.

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TABLE 1
Variables used in the study of the diffusion of consumer advocacy offices.

Title	Description & Measurement

a. Dependent Variables	
OFFICE	Presence of an advocacy office in the state: 0 = no office in state; 1 = office in state.
PCBUDGET	Budget of the office in \$ per capita.
ACTIVITY	Case load per office; the number of regulator cases in which the office participated.
b. Independent Variables	
PCINC	State disposable income in \$ per capita.
PCVA	Value added in manufacturing of the state in \$ per capita.
ED	Education level of state: median years of education completed.
PA	Political activity: percent voter turnout in the gubernatorial election closest to the year the office was established (1976 for no office states).
SD1	Income distribution: Percentage of state population with less than \$20,000 of income.
SD2	Income distribution: percentage of population that is white.
AGEOFF	How long an office has been in existence (PCBUDGET and ACTIVITY equations only): 1987 minus the year the office was set up.
PCEND	Change in energy expenditure during the "energy crisis" years 1973-81: \$ per capita.
PCENT	Change in percentage of state personal income spent on energy 1973-81.
PCBTU	Residential energy used in 1985: trillions of Btu's per capita.

TABLE 2
Regression analysis of diffusion of consumer
advocacy offices by states.

	OFFICE			PCBUDGET			ACTIVITY		
	I	II	III	I	II	III	I	II	III
ED			-.472 (.503)			.457 (.563)			47.1 (129)
PCINC	-.015 (.047)	-.020 (.045)		.043 (.052)	-.041 (.035)		5.16 (11.8)	-7.30 (8.0)	
PCVA	.078 (.005)	.083* (.045)	.077* (.044)	-.042 (.052)	-.036 (.050)	.007 (.050)	9.13 (11.8)	9.71 (11.4)	12.4 (11.4)
SD1	-.005 (.017)		-.007 (.013)	.017 (.019)		.016 (.014)	4.68 (4.22)		3.96 (3.23)
SD2	-.010 (.006)	-.012* (.006)		-.006 (.007)	-.006 (.007)		-7.31 (1.62)	-.539 (1.62)	
PA	.004 (.659)	.110 (.614)	.379 (.624)	1.18 (.732)	.993 (.682)	.989 (.698)	241 (166)	184 (156)	218 (160)
AGEOFF				-.003 (.008)	-.004 (.007)	.0003 (.008)	4.67* (1.72)	4.50* (1.71)	4.95* (1.78)
PCEND	-.0002 (.0002)			-.0001 (.0002)			.004 (.040)		
PCENT		-.034 (.023)			-.039 (.025)			-4.66 (5.74)	
PCBTU			-14.2* (5.38)			-11.3* (6.02)			-1306 (1382)
CONST	2.23	1.98	4.78	-1.04	1.01	.443	-420	88.8	758
F	1.56	1.81	2.39	.63	.71	1.08	2.17	2.40	2.76
R-Squ	.22	.21	.26	.10	.10	.14	.28	.26	.29

* = significant at at least the .10 level.

TABLE 3
Analysis of variance of adoption of consumer
advocacy offices by region and by income.

	Means		
	OFFICE	PCBUDGET	ACTIVITY
a. Region			
NE	.889	.514	115.22
WEST	.538	.202	26.38
CENTRAL	.667	.143	78.75
SOUTH	.882	.251	56.41
F	2.08	1.13	1.22
p>F	.116	.348	.311
R-Square	.12	.07	.07
b. Income			
1st Quartile	.750	.129	42
2nd Quartile	.538	.363	104
3rd Quartile	.847	.222	47
4th Quartile	.847	.304	63
F	1.39	.58	.85
p>F	.258	.633	.474
R-Square	.08	.04	.05