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The Increasing Advantage Of Incumbency In the U.S. States

This paper uses district-level electoral returns to estimate the size of the incumbency advantage in 24 U.S. states over the period from 1970 to 1986. Our major findings are two: first, the incumbency advantage in the median state roughly doubled over the time period investigated; second, this increase can be explained in terms of the growth of legislative operating budgets and, by inference, in casework and other particularistic services provided by state legislators to their constituents.

Incumbent members of the United States House of Representatives enjoy substantial electoral advantages over those who might challenge them for their seats—advantages ranging from the franking privilege (Mayhew 1974) to the opportunity to perform casework for constituents (Fiorina 1977) to the use by voters of incumbency as a cue (Ferejohn 1977). An extensive academic literature attempts both to quantify the aggregate size of these advantages, in terms of vote percentages, and to explain variations in the size of the incumbency advantage over time.

In contrast to the flood of scholarly attention paid to the incumbency advantage at the federal level—especially since the discovery that this advantage increased considerably after the mid-1960s (Erikson 1971; Mayhew 1974)—studies of the incumbency advantage at the state level have been few. This dearth of attention has presumably reflected not just the general tendency of the discipline to ignore the states (Jewell 1982) but also the lack of machine-readable data with which to study incumbents' electoral advantages in the states. Recently, however, the Inter-university Consortium for Political and Social Research (ICPSR) has made available an enormous dataset on state electoral returns from 1968 to 1986. The availability of this data resource means that a comparative perspective on the incumbency advantage can be attained at greatly reduced cost.

The advantages of such a perspective are of the kind that usually accrue to comparative research. For example, it might turn out that the incumbency advantage in some of the states has been increasing at more or less the same pace as it has at the federal level, raising the question of whether the various explanations for the increasing incumbency advantage at the federal level can be generalized to the states. On the other hand, it might turn out that there are substantial variations in the size of the incumbency advantage cross-sectionally, raising the question of why some states' incumbents are more equal than others. Answering such questions might shed light not just on state experience but on federal experience as well.

In the last few years, Jewell and Breaux (1988), Breaux (1990), and King (1991) have begun the kind of multistate comparative research into the incumbency advantage that the ICPSR dataset facilitates. In this paper, we construct a larger dataset than these authors have employed, one that encompasses half of all the continental states. Our inquiry focuses on two questions: has the incumbency advantage in the states generally increased? and—anticipating our affirmative answer—can explanations offered at the federal level help explain state trends?

The structure of the paper is as follows. Section 1 briefly reviews the previous literature. Section 2 describes the data and methods we use. Section 3 presents state-by-state results on the size of the advantage that incumbents enjoy, demonstrating an upward trend in most states. Section 4 turns to the task of explaining the cross-temporal and cross-sectional variation identified in section 3. Section 5 digresses to consider a part of the incumbency advantage not fully captured by the measures used in sections 2, 3, and 4: the ability to scare off serious challengers. Section 6 concludes.

Previous Research

There are several studies of legislative elections in one or a few states that take some account of incumbency (e.g., Caldeira and Patterson 1982). There are only three studies of which we are aware, however, that present comparable data on the incumbency advantage for a wide range of states—viz., the studies of Jewell and Breaux (1988), Breaux (1990), and King (1991).[1]

The first of these studies looks at electoral returns at the district level for 14 states that have used single-member districts exclusively since 1968, providing information on the percentage of legislators who have sought reelection, the percentage of incumbent

candidates who have succeeded in securing reelection, and the average margin of victory for incumbents. Jewell and Breaux are primarily interested in whether there has been any increase over time in these three statistics; they find little change in the percentages seeking or winning reelection, but a noticeable increase in the average margin of victory. Moreover, as Jewell and Breaux note, "this trend toward larger margins is not found in open-seat races, a finding which suggests that the trend is largely explained by the growing political advantages enjoyed by incumbents rather than by an increase in electorally safe districts" (Jewell and Breaux 1988, 512). One purpose of this paper is to follow up on this suggestion by providing a direct measure of the value of incumbency, one comparable to those used in the study of federal elections, and see whether it has indeed increased over time.

The second study mentioned above, Breaux's, assesses the size of the incumbency advantage and is more cross-sectional in focus. Breaux's methodology, familiar from the literature on the federal incumbency advantage, is to calculate average sophomore surge, retirement slump, and slurge measures for each state over the period from 1968 to 1986.[2] In doing so, however, he includes all races, including uncontested races, in the analysis; as a result, some of the largest swings are to be found when a contested race is followed by an uncontested race (or vice versa). It is not surprising that Breaux finds the size of the sophomore surge and retirement slump tends to be larger in those states "having a relatively large proportion of uncontested incumbent victories" (Breaux 1990, 281).

The standard practice in the literature on the incumbency advantage in Congress is to exclude uncontested races, thereby removing the frequency of uncontested races as a factor in determining the size of the incumbency advantage. This practice, standard though it may be, is questionable, since the ability to scare off would-be challengers is one of the advantages of incumbency. Nonetheless, the best way to include such races in the analysis is not entirely clear (cf. Gelman and King 1990, 1158–62) and, in any event, we are interested here in establishing results directly comparable to those in the congressional literature. Hence, in the bulk of this paper we exclude uncontested races. In the penultimate section, however, we focus specifically on whether and how much the presence of an incumbent candidate tends to scare off competition and, hence, to produce uncontested races. This section provides a complement to the main results of the paper, which are conditional on there being a contest.

In the third paper, King (1991) measures the incumbency advantage in a substantially different fashion than do Jewell and

Breaux—as we explain in the next section. King then uses his estimates of the incumbency advantage (in 13 states) as the dependent variable in a cross-sectional time-series regression. The chief independent variable included in the analysis, motivated by Fiorina's (1977) theory of the federal incumbency advantage, seeks to assess the ability of state legislators to perform casework. We shall return to his specification and findings in the section explaining our own findings.

Data and Methods

The data we use in this study are district-level returns from all lower house elections in those states that used a significant number (see the appendix) of single-member or post-position districts in the period from 1968 to 1986.[3] The previous literature has studied mostly the 16 states which used single-member districts exclusively throughout the 1968–86 period. To these we have added eight states that, although employing some single-member districts, also employed either multimember districts, post-position districts, or both.[4] (We estimated the incumbency advantage in these eight states from the electoral returns in the single-member and post-position districts only, ignoring the multimember districts—on which, see Cox and Morgenstern 1992.) Our intention was to assemble the largest possible set of states in which lower house elections yielded sufficiently many data points for analysis and were comparable to U.S. House elections.

The method that we employ in order to measure the size of the incumbency advantage in these states is not based on the conventional sophomore surge and retirement slump measures, for reasons indicated below. Instead, we use the regression-based measure proposed by Gelman and King (1990), which can be viewed as a generalization and modification of Erikson (1971). For every pair of elections in a given state and reapportionment regime (e.g., 1976 and 1978 in New York), we calculated the following variables:

IPV_{it} = the percentage of the two-party vote won by the incumbent party in the *i*th district at the *t*th election (the mnemonic motivation behind IPV is "Incumbent Party's Vote");

$\text{IPV}_{i,t-1}$ = the percentage of the two-party vote won by the incumbent party in the *i*th district at the (t–1)*th* election (note that, by definition, this percentage must be greater than 50%);

DEM_{it} = whether or not the Democrats were the incumbent

party in the *ith* district, *tth* election—coded as 1 if they were, 0 otherwise; and

INC_{it} = whether or not the incumbent candidate in the *ith* district, *tth* election ran for reelection—coded as 1 if he or she did, 0 otherwise.

Having calculated the variables just described, we then ran the following regression:

$$IPV_{it} = \alpha + \beta_1 IPV_{i,t-1} + \beta_2 DEM_{it} + \beta_3 INC_{it} + \varepsilon_{it},$$

taking the estimated coefficient of β_3 as our estimate of the size of the incumbency advantage in the given state and year.[5]

The intuitive motivation behind this method of measuring the incumbency advantage is fairly straightforward. One starts by predicting the incumbent party's share of the two-party vote at time t (IPV_{it}) by its share of the two-party vote at time t–1 ($IPV_{i,t-1}$). That is, one expects the incumbent party to do better this time the larger its margin of victory last time. The DEM_{it} term simply adjusts for any net partisan swing between the two elections (t–1 and t); its coefficient will be positive in Democratic years and negative in Republican years. Finally, the incumbency dummy variable is included to allow for any advantage that might accrue to the incumbent party when it has an incumbent candidate rather than a nonincumbent candidate running; if there is such an advantage, β_3 will be positive.

The statistical properties of this estimator of the incumbency advantage are superior to other, simpler measures, such as the sophomore surge or retirement slump statistics. Indeed, Gelman and King (1990) show that these and other previously used estimators of the incumbency advantage are biased. We refer the interested reader to Gelman and King for proofs and extended explanation of these results.

Results

The results of running the regression specified above for each state and year (excluding years right after reapportionments) are given in Table 1 (which reports the estimates of the coefficient β_3). As can be seen, incumbency really is an advantage most of the time in most of the states: of the 155 estimates presented in Table 1, only 16 are negative; in all states except Montana, the average incumbency advantage was positive. In none of the states, however, was the incumbency advantage as large as that enjoyed by U.S. representatives over the same period.

TABLE 1
The Incumbency Advantage in 24 U.S. States, by Year

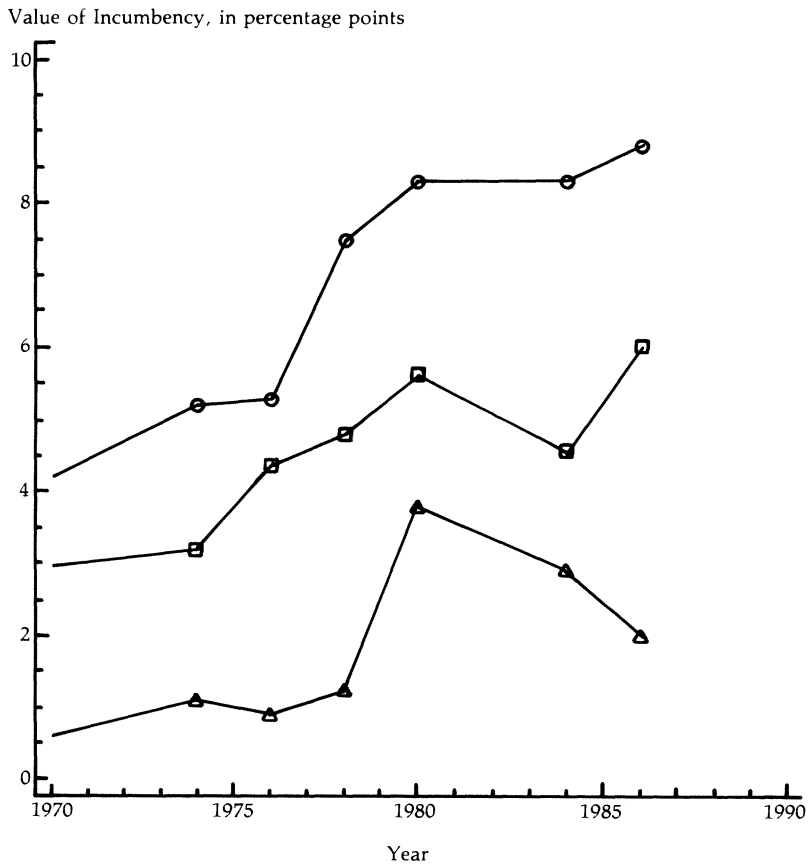
State	1970	1972	1974	1976	1978	1980	1982	1984	1986
California	9.1	8.1		4.6	8.6	8.6			8.0
Colorado	3.7			4.6	1.7	8.9		3.7	−1.4
Connecticut	0.3		2.8	−1.4	4.6	5.0		2.9	7.3
Delaware	6.8		1.6	8.4	1.7	9.3		18.6	3.0
Florida	−2.1		8.7	0.7	5.0	9.9		6.0	9.1
Indiana			0.2	6.2	0.2	5.2		−2.3	7.5
Iowa	2.9		4.5	4.5	7.5	5.1		4.4	10.8
Kansas	0.8			4.1	8.7		11.1	8.3	10.6
Kentucky	4.3		2.1		−2.0	−0.9			4.4
Michigan	3.0		5.2	2.6	5.1	3.8		1.8	8.8
Missouri	−0.6		0.8	5.5	−7.8	10.5		8.9	0.3
Montana				0.8	−2.3	3.8	1.5		−10.0
New Mexico	4.2		1.1	0.9	1.8	3.5		2.9	3.9
New York	3.8		4.0	5.3	9.8	5.6		6.0	9.2
Ohio	3.7		5.6	4.8	7.5	5.9		4.7	0.7
Oklahoma	3.4		−1.9	6.2	7.0	−5.4		1.9	7.4
Oregon	7.6		8.0	0.5	12.2	8.3		8.3	2.0
Pennsylvania	−1.6		2.4	0.8	0.2	7.2		12.2	10.1
Rhode Island	0.6		3.3	1.6	4.1	5.9		9.0	4.5
Tennessee	1.6			7.5	5.7	8.3	9.7		
Texas	−3.6		−0.6		3.0	2.7			8.4
Utah	1.3		3.2	2.4	0.8	0.0		3.5	−2.0
Washington	5.1		5.5	4.2	5.3	6.5		4.2	6.0
Wisconsin	0.6		4.1	5.0	8.0	4.2			4.8

Note: Standard errors are available from the senior author on request. The median t-statistic (and number of years in which t-statistic was at least 2) are, for each state in order, 3.41 (6), 1.30 (2), 2.29 (4), 2.26 (4), 2.40 (4), 2.74 (3), 3.12 (6), 3.56 (6), 0.88 (1), 2.70 (4), 0.54 (3), 0.42 (0), 0.83 (1), 3.38 (7), 2.82 (6), 0.87 (1), 2.75 (4), 2.05 (4), 1.32 (2), 2.21 (3), 0.70 (0), 0.84 (0), 2.50 (6), 1.51 (2).

If one eyeballs the figures in Table 1 for trends over time, one finds more states in which the incumbency advantage seems to grow (e.g., Connecticut) than states in which it seems to diminish (e.g., Colorado). This impression is borne out if one runs separate regressions, one for each state, of the incumbency advantage on a constant and a time trend: 17 states show a positive slope, of which 7 are statistically significant; 7 states show a negative slope, of which none are statistically significant.

A sense of the overall trend in the state-level incumbency advantage is given in Figure 1, which plots the median and first and third quartiles of the distribution of incumbency advantage, by year. As can be seen, the median incumbency advantage starts off at almost

FIGURE 1
The Median Value of Incumbency in 24 U.S. States, by Year



○ Third quartile of distribution of incumbency advantage.
□ Median of distribution of incumbency advantage.
△ First quartile of distribution of incumbency advantage.

3% in 1970 and increases almost monotonically until it reaches 6% in 1986.

A more refined measure of the overall increase in the incumbency advantage in the states is provided in Table 2, which displays results of a regression of INCAD_{it} (the incumbency advantage in the *i*th state, *t*th election) on a time trend T_{it} (the year in which the *t*th election

TABLE 2
Estimating a Common Trend in the
State-Level Incumbency Advantage

Independent Variable	Coefficient Estimate	Standard Error
Intercept	5.31	1.28
Time Trend	0.27	0.05
Colorado	−3.72	1.93
Connecticut	−4.98	1.37
Delaware	−0.11	2.25
Florida	−3.03	1.64
Indiana	−4.97	1.72
Iowa	−2.12	1.54
Kansas	−1.75	1.75
Kentucky	−4.13	2.23
Michigan	−2.98	1.51
Missouri	−4.12	1.62
Montana	−7.09	1.91
New Mexico	−4.66	1.90
New York	−1.69	1.57
Ohio	−3.48	1.53
Oklahoma	−4.53	2.26
Oregon	−1.33	2.00
Pennsylvania	−4.47	1.41
Rhode Island	−4.00	1.75
Tennessee	−1.10	2.57
Texas	−7.06	2.12
Utah	−6.31	1.62
Washington	−2.92	1.62
Wisconsin	−3.53	1.89
N	155	
Adjusted R^2	.30	
Standard error of estimate	1.38	

in the *ith* state is held, minus 1969) and a series of state dummy variables (thereby allowing each state's intercept term to shift). In this specification, the 24 state-by-state regressions mentioned above are combined, with state intercepts allowed to vary but a single pooled slope coefficient being estimated. Following King (1991, 126–27), we weight each observation by the reciprocal of the standard error of the incumbency advantage estimate; thus, observations for which the value of the dependent variable is more uncertain are given less weight in the estimation procedure.

As it turns out, the coefficient estimate for the pooled slope is statistically significant at the .0001 level. Its value (.27) indicates that

the incumbency advantage has grown, on average, by over a quarter of a percentage point per year in the 24 states investigated—or by more than half a percentage point per two-year election cycle.

This estimate of course hides variation among the states. California, for example, exhibits a high and stable incumbency advantage, Utah a low and, if anything, declining advantage. But the answer to the first question posed at the outset of this paper is nonetheless clear: on balance, the advantage of incumbency in the U.S. states has been increasing.

Explaining the Increased Value of Incumbency

The obvious next question is why the incumbency advantage has increased. Our strategy in answering this question is simple. The literature on U.S. House elections provides several distinct and well-known theories regarding the growth of the incumbency advantage at the federal level. We propose to review two of these theories with an eye to what might be generalizable to experience in the states. We will then be in a position to operationalize each theory at the state level and see how far it takes us.

The two theories that we begin with concern the effects of advertising and personal service. Although they are far from mutually exclusive, they do emphasize different aspects of political experience as key to the incumbency advantage.

The first theory sees the ample opportunities that members of Congress have to advertise themselves—both by use of such perquisites as the frank and by taking advantage of the free press exposure that naturally comes their way—as the key to their electoral advantages (cf. Mayhew 1974). There is nothing peculiarly federal about this line of thinking, since free publicity is presumably valuable in state elections too. Thus, we decided to look at variations among the states in the quantity of free exposure that legislators receive.

We did not find any usable data on the quantity of franked mail or the number of column inches of press coverage. But a crude handle on the amount of free exposure can be obtained simply by looking at how long the state legislature is in session. In states where the legislature sits only a short while, the advantage in free exposure (at least from the press) is presumably less than it is in states where the legislature sits nearly year-round. Thus, one variable that we look at is SESSION_{it}, the number of days during which the *ith* state's legislature sat during the year preceding the *tth* election.

The second theory sees the ability of members of Congress to perform personal services for their constituents (e.g., casework, project and grant facilitation) as the key to the incumbency advantage. As elaborated by Fiorina (1977), this theory cites the size of the federal bureaucracy (more red tape to be cut through for grateful constituents) and the amount of resources in the forms of staff, office budget, etc. of which legislators dispose (more ability to cut red tape) as important. Both of these variables can be measured at the state level, too: the size of a state's bureaucracy by the total number of state and local employees per 10,000 state inhabitants (yielding a variable we label BURSIZE_{it}); the amount of legislative resources by the legislative operating budget divided by the number of legislators (BUDGET_{it}, measured in units of 10,000 1983 inflation-adjusted dollars).[6] The logic of examining these variables would seem to be the same as it is at the federal level: larger bureaucracies and larger legislative resources should confer larger advantages on a state's incumbent candidates.

If one takes a quick preliminary look at the aggregate relationship between the three variables just defined and the size of the state-level incumbency advantage, one finds some reason to hope that the full regression analysis to come will pan out. Both the average number of state and local employees per 10,000 population and the average legislative operating budget grow briskly through most of the 1970s.

Moreover, King (1991) has already investigated the impact of the size of the legislative budget per legislator on the incumbency advantage in a smaller dataset (13 states), with positive results. He uses a regression specification precisely the same as that in Table 2, except for three features: the time trend (T) is not included, the budget variable is included, and an additional control variable, giving the constant-dollar salary of the state's legislators, is included. He finds a positive and significant slope for the budget variable, suggesting that budget growth and growth in the incumbency advantage have gone hand in hand.

To further explore the relationship between the incumbency advantage and the two federal-level theories articulated above, we regressed the incumbency advantage variables on those for the size of the state bureaucracy, the size of the legislative operating budget, the length of the legislative session, and all previously included variables (i.e., T_{it} and the series of state dummy variables).[7] If the new variables do explain movements in the incumbency advantage, then, ideally, their inclusion should reduce the time trend variable to insignificance.

Our results, listed under Model 1 in Table 3, show coefficients of the expected sign for all three new variables. Increased budgets,

TABLE 3
Explaining Variations in the Advantage of Incumbency in 24 U.S. States

Variable	Model 1 Coefficient Estimate	Model 1 Standard Error	Model 2 Coefficient Estimate	Model 2 Standard Error
Intercept	−3.79	6.87	1.24	5.05
Time Trend	0.18	0.08	−0.01	0.08
Size of Legislative Operating Budget per Legislator	0.52	0.51		
Size of Operating Budget per District Inhabitant			17.38	4.13
Length of Legislative Session	0.00	0.01	−0.00	0.01
Size of State Bureaucracy	0.01	0.01	0.00	0.01
Colorado	−0.20	4.37	−1.38	2.09
Connecticut	−0.30	4.30	−5.36	1.70
Delaware	3.59	4.75	1.01	2.43
Florida	−0.19	3.54	−2.09	1.85
Indiana	−0.86	4.47	−3.06	2.06
Iowa	1.71	4.21	−1.79	1.67
Kansas	1.87	4.37	−2.80	1.93
Kentucky	0.68	4.56	−3.21	2.45
Michigan	−0.06	3.03	−4.34	1.52
Missouri	0.13	4.13	−4.89	1.78
Montana	−3.52	4.50	−10.32	2.18
New Mexico	−1.08	4.70	−3.54	2.26
New York	−1.55	2.05	−6.88	2.06
Ohio	0.90	4.05	−0.47	1.81
Oklahoma	−0.63	4.58	−4.14	2.30
Oregon	3.05	4.27	1.51	2.11
Pennsylvania	−1.19	2.99	−11.31	2.58
Rhode Island	0.53	4.51	−5.60	1.97
Tennessee	3.05	4.78	1.13	2.65
Texas	−4.06	3.93	−6.16	2.14
Utah	−1.92	4.64	−3.93	1.99
Washington	0.85	4.02	−1.04	1.86
Wisconsin	0.34	4.18	−4.07	2.06
N	146		146	
Adjusted R^2	.30		.38	
Standard error of estimate	1.40		1.31	

increased bureaucracies, and increased sessions all have a positive impact on the incumbency advantage. Moreover, the coefficient on the time trend is reduced to .18, suggesting that the newly included variables may explain some portion of the previously identified trend.

Nonetheless, only the time trend attains conventional levels of statistical significance. So Model 1 certainly does not lend much support to either of the hypotheses advanced above.

It is worth reconsidering the operationalization of the budget variable, however. We can begin to indicate why by comparing the impact of money implied by the coefficient for this variable to that implied by results in the literature on the electoral effects of campaign expenditures.

The coefficient estimate for the budget variable in Model 1 (.52), although about one-third of the estimate given by King (1.54), still suggests a substantial effect: an extra $10,000 per legislator added to a state legislature's operating budget gives that state's incumbents an additional .52 percentage point advantage in the next election.

The interpretation of this budget variable that we suggested when it was first introduced was as a proxy for casework activity. Following this interpretation, a $10,000 per legislator increase in the legislative operating budget is divided equally among the legislators, who then each have more money ($20,000 more over a two-year election cycle) to spend on casework. The coefficient estimate of .52 then suggests that $20,000 spent on casework over two years buys half a percentage point at the next election.

The natural question is whether this estimate of the efficacy of money gibes with the estimates given in the literature on campaign expenditures. Would an exogenous contribution of $20,000 to each incumbent in a state election boost their average vote percentage by half a percentage point? This impact is about a quarter of what Jacobson estimates as the efficacy of campaign expenditure by challengers in U.S. House elections: "challengers are expected to gain a little over 1 percent of the vote for every $10,000 they spend" (1978, 472). It is about equal to what Jacobson estimates for federal incumbents in 1974 (the year in which the impact of incumbents' expenditures was by far the largest): $20,000 more for a typical incumbent in the 1974 election was estimated to buy .56 percentage points.

These comparisons with federal election results are problematic for at least two reasons, however. First, they involve comparing expenditures of nominal 1974 dollars to expenditures of constant 1983 dollars. The latter are smaller than the former, so the comparison allows the 1974 U.S. House incumbents to spend more than the 1970–86 state incumbents. If we give the House incumbents 20,000 1983 dollars, it amounts to only about 9,860 1974 dollars, yielding an increase of only .28 percentage points in the incumbent's vote percentage.

A second, and counteracting, difficulty with the federal-state comparison sketched above is that it does not take account of the much larger constituencies that members of Congress serve. One percentage point in a typical 1974 congressional election would have been perhaps 1,000 votes; one percentage point in a 1982 Colorado House election would have been about 150 votes. Thus, if we assess votes gained instead of percentage points gained, the comparison is between (1) 20,000 1983 dollars buying a 1982 Colorado incumbent 78 votes (.52 $\times$ 150) and 20,000 1983 dollars buying a 1974 federal incumbent 280 votes (.28 $\times$ 1,000).

A similar exercise can be run through using state-level estimates of the efficacy of campaign expenditures. For example, Caldeira and Patterson's (1982) estimates of the impact of money in California elections (which do not distinguish between challengers and incumbents) suggest that 20,000 1983 dollars would translate into between .39 and .65 percentage points at the next election, or between 310 and 520 votes.

One thing that these comparisons tell us is that Table 3's estimate of the value of money spent on casework does not exceed previous estimates of the value of money spent on campaigns. The results suggest that such expenditures are less than a quarter as effective in producing votes as are equivalent amounts of money spent on general campaign activities.

Another thing the comparisons tell us, however, is that the budget variable in Model 1 is probably not the best that could be used. If money buys votes, not percentage points, then the value of the money that an incumbent has ought to be measured on a per voter basis. That is, we should divide the legislative operating budget per legislator by the average number of eligible (or registered) voters in the *ith* state's electoral districts at election t. In this way we would account for the differences between states (although not those within states) in district population, on the theory that a given amount of money will be more valuable in a smaller than in a larger constituency.

Because we could not get information on the number of eligible or registered voters for all states in our sample, we have actually used a variable (BUDPER_{it}) equal to 10,000*$\text{BUDGET}_{it}/\text{DSIZE}_{it}$. The numerator of this quotient equals the number of operating budget dollars of which a typical legislator in the *ith* state disposes at the *tth* election (recall that BUDGET is in units of 10,000 dollars, so multiplying by 10,000 simply converts back to dollars). The denominator of the above quotient, DSIZE_{it}, equals the average population per district in the *ith*

state, t*th* election. So the units of BUDPER are simply "1983 dollars per district inhabitant."

If the regression in Table 3 is run again, with this new budget variable replacing the former one, the results are dramatically different. The coefficient on the time trend becomes statistically insignificant and is actually slightly negative. The coefficient on the budget per district inhabitant is strongly significant and bespeaks a large substantive effect, one similar to that of general campaign expenditures.[8] The other (nondummy) variables are further reduced in value and remain statistically insignificant.

All told, our results show that the increasing electoral advantages of state incumbents revealed in Tables 1 and 2 are largely explained by substantial increases in real legislative operating budgets. The straightforward interpretation of these budgets as money with which to do casework is no doubt an overstatement and simplification. But it is clear that a substantial portion of these budgets do go for casework, and the other activities that they support are probably also electorally valuable. Absent a systematic investigation of exactly what these budgets do go for, state by state, we shall continue to interpret them as financing constituent services of various kinds. With this interpretation, our results corroborate King's previous results, and support the generalization of Fiorina's theory of the incumbency advantage to the state level.[9]

Scaring off the Competition

Thus far, our analysis has ignored uncontested races. But, as we noted before, one of the advantages of incumbency is the ability to scare off serious challengers—hence, the ability to produce uncontested races. To the extent that this is so, our estimates of the incumbency advantage understate the full impact of incumbency. In this section, we briefly explore this possibility.

We do so by asking whether the probability of a particular district being contested is depressed by the presence of an incumbent candidate. Of course, the probability of contestation is not directly observable and so the dependent variable, CONTEST_{it}, is dichotomous (coded as 1 if the i*th* district was contested in the t*th* election, 0 if not) and the method of estimation is probit. The model includes as control variables the percentage of the two-party vote garnered by the incumbent party in the immediately preceding election ($\text{IPV}_{i,t-1}$, defined above) and whether or not the Democrats were the incumbent party (DEM_{it}, defined above).

TABLE 4
How the Presence of an Incumbent Candidate Affects the Probability of a Contest

Year	Coefficient Estimate for Presence of Incumbent	Standard Error of Coefficient	Estimated Impact of Presence of Incumbent on Probability of Contest
1970	−.33	.11	−.08*
1974	−.08	.10	−.02
1976	−.42	.10	−.14*
1978	−.36	.10	−.12*
1980	−.58	.11	−.21*
1984	−.47	.11	−.18*
1986	−.44	.10	−.17*

Note: The dependent variable is CONTEST_{ijt} (= 1 if the tth election in the jth district in the ith state was contested, 0 otherwise).

The following probit equation was estimated for each year:

$$\text{PR}[\text{CONTEST}_{ijt}=1] = \text{F}(a+b_1\text{IPV}_{ij,t-1}+b_2\text{PARTY}_{ijt}+b_3\text{INC}_{ijt}).$$

The coefficient estimate and standard error for INC are reported in the second and third columns of the table. In the fourth column of the table, we give the estimated impact of the presence of an incumbent on the probability that a district will be contested, calculated as follows. For each year, the proportion of districts contested—PDC—was ascertained. Imagining that a particular district without an incumbent candidate had a probability PDC of being contested, we then calculated the probability of this district being contested should an incumbent enter as $\text{PINC} = \text{F}(\text{F}^{-1}(\text{PDC})-\text{E})$, where F is the cumulative normal distribution function, F^{-1} is the inverse of F, and E is the absolute value of the coefficient estimates given in the second column. The fourth column reports the difference PDC−PINC. This is essentially equivalent to the "first differences" approach except as regards the choice of the baseline.

*$p \leq .01$.

We ran the probit regression just specified for each year, pooling all states.[10] The results, in Table 4, show two things. First, there is a systematic scare-off effect detectable in the states. In all years the coefficient estimate for the presence of an incumbent is negative, and in all years except 1974, the estimate is statistically discernible from zero. Moreover, these coefficient estimates translate into sizable probability impacts. For example, in 1970 the presence of an incumbent lowered the probability that an average district (in the states studied) would be contested from .866 to .782, a difference of .084.

Second, the scare-off effect increases with time, just as the estimates of the incumbency advantage presented in Table 1 do. This is

not surprising in light of Jewell and Breaux's previous finding that uncontested races were on the rise in the 1968–86 period.

Our results raise more questions than they answer. For example, what is the relationship between our estimates of the incumbency advantage in Table 1 and similar election by election estimates of the scare-off effect? Do they correlate positively or negatively and what does this tell one about the advantages of incumbency? Can one construct an "overall" measure of the advantage of incumbency? Does the casework hypothesis shed light on the scare-off effect too? As answers to these (and related) questions require more space than we have in this paper, we defer them to another.

Conclusion

This paper has used district-level electoral returns to estimate the size of the incumbency advantage in 24 U.S. states over the period from 1970 to 1986. Our major findings are two.

First, the incumbency advantage in the median state roughly doubled over the time period investigated. Although some states saw no increase in the incumbency advantage, the vast majority did, and the entire incumbency advantage distribution shifts upward over time, as Figure 1 depicts.

Second, this increase in the electoral advantage of incumbency can be explained statistically in terms of the growth of legislative operating budgets. To the extent that these budgets reflect a growth in resources with which state legislators can provide casework, facilitate projects, and perform other parochial services to their constituents, our findings, like King's (1991), support Fiorina's (1977) view of how incumbency advantages are generated.

A secondary concern of the paper was to demonstrate that current methods of measuring the incumbency advantage understate that advantage by excluding uncontested races from the analysis. The measures presented here and in most of the previous literature are conditional on there being a contest. In addition to this conditional advantage, however, incumbents benefit from the ability to scare off serious challengers to begin with. We show that this advantage, too, has been growing.

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APPENDIX

The data used in this paper are taken from the Inter-university Consortium for Political and Social Research (ICPSR) dataset on state legislative election returns for the years 1968–86. This data set contains almost 123,000 records and provides, among other information, the candidates' party affiliations, vote totals, and incumbency status along with the type of district in which the candidate ran (post, multimember, or single-member). From this dataset we took all lower house contests occurring in either single-member or post-position districts. We discarded contests immediately following state redistricting, and contests for which we did not have information from the previous time period (which removed all observations for 1968 from the final data set). If these restrictions left us fewer than 20 observations with which to estimate the incumbency advantage in a given state and year, we eliminated that state-year. Finally, we included only those states (24 in all) for which we could estimate the incumbency advantage in at least four years.

Among the 24 states, 16 used single-member districts exclusively throughout the time period covered (1968–86). The others used a combination of single-member, post-position, and other types of multimember districts. The table on the following page details the types of districts in those states that did not use single-member districts exclusively.

TABLE A1
Types of Districts in States
That Did Not Use Single-Member Districts Exclusively

State	1968	1970	1972	1974	1976	1978	1980	1982	1984	1986
Florida	<--	---	---	S,P,M	---	---	-->	<--	-S--	-->
Indiana	<--	---	---	---	S,M	---	---	---	---	-->
Kansas	<S,P>	<--	---	---	---	-S-	---	---	---	-->
Montana	<--	---	S,M	-->	<--	---	---	-S--	---	-->
Oregon	<S,P	-->	<--	---	---	---	-S--	---	---	-->
Tennessee	<S,P	M->	<--	---	---	---	-S--	---	---	-->
Texas	<--	---	-S,P	---	-->	<--	---	-S--	---	-->
Washington	<--	---	---	---	-S,P	---	---	---	---	-->

S = single-member districts

P = post-position districts

M = multimember districts

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1. Other multistate studies that are relevant to assessing the advantages of incumbency without being specifically about such advantages include Hyneman 1938; Ray 1974, 1976; and Chubb 1988. We discovered the articles in the February 1991 issue of this journal too late for review here.

2. For definitions of the sophomore surge, retirement slump, and slurge measures, see, for example, Gelman and King 1990. Breaux's sample of states is approximately the same as that used by Jewell and Breaux; he adds Kansas, New Mexico, Oregon, and Tennessee, deleting New York.

3. One state, Nebraska, satisfied all the criteria stated in the text but was excluded because its elections are nonpartisan. Jewell and Breaux do not include Oklahoma, as we do, because there are no data on uncontested races for Oklahoma; this poses no problem for our method of estimation, which throws such races out in any event.

4. In post elections, there are two or more seats (posts) available, but each candidate must file for exactly one post and voters can vote once for each post. Thus, in effect, post elections are a bunch of concurrent single-member district elections, similar to the elections occurring when two U.S. senators are to be elected at once from a given state.

5. Our estimates of the incumbency advantage differ slightly from those presented by King 1991 for the 13 states he reports. The median difference is half a percentage point; the correlation between his estimates and ours is .92. The reason there are any differences at all in our estimates is that we use a later version of the ICPSR dataset, in which a number of errors were corrected, and define uncontested races differently (we defined a race as uncontested if the Democratic percentage of the two-party vote fell below 10% or above 90%; King used 5% and 95%).

6. Data on the number of state and local employees was taken from the *Book of the States.* The nominal BUDGET variable was supplied to us by Gary King, for which we thank him.

7. We again weighted each observation by the reciprocal of the standard error of the incumbency advantage estimate from Table 1.

8. A unit increase in the legislative operating budget per district inhabitant leads to a 17 percentage point increase in the incumbency advantage for state incumbents. An equivalent increase in campaign expenditure by 1974 federal incumbents would yield a 25.8 percentage point increase.

9. If one does not interpret legislative operating budgets narrowly as money with which to do casework, the alternative would seem to be to take them as proxies for professionalization. In this case, our results say that something about the professionalization process boosts the incumbency advantage.

10. Only the 17 states using single-member districts exclusively were included in this analysis.

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