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WHY DID THE INCUMBENCY ADVANTAGE IN U.S. HOUSE ELECTIONS GROW?

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1 Introduction

In the last twenty years, scholars have scrutinized the electoral advantages conferred by incumbency–both at the federal and at the state level–more than perhaps any other factor affecting U.S. legislative elections.[1] Much of the literature focuses on explaining why the incumbency advantage in U.S. House elections grew so substantially, starting in the mid-1960s. The dominant contenders in the literature are two, one emphasizing resources of various kinds (Mayhew 1974) and opportunities to perform constituency services (Fiorina 1977; 1989), one emphasizing partisan dealignment (Erikson 1972; Burnham 1974; Ferejohn 1977). While not incompatible, these explanations do point to significantly different factors as key, and neither has emerged as a clear winner.

In this paper, we suggest a new approach to measuring the incumbency advantage, one that disaggregates the total value of incumbency into three components. By examining the trends over time in these three components we find evidence suggesting that much of the growth in the incumbency advantage at the federal level cannot be accounted for by resource growth; rather, some version of the dealignment story will have to be employed.

A sketch of our logic is as follows. Incumbency confers valuable resources and media exposure, and these can be expected to have both a direct and an indirect effect on the vote. The direct effect arises because legislative resources (e.g., personal staff) can be

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[1] On the incumbency advantage at the federal level, see Alford and Brady (1989); Alford and Hibbing (1981); Ansolabehere, Brady and Fiorina (1988); Born (1979); Cain, Ferejohn and Fiorina (1987); Collie (1981); Erikson (1971, 1972); Ferejohn (1977); Fiorina (1977); Garand and Gross (1984); Gelman and King (1990); Jacobson (1987, 1990); King and Gelman (1991); Krehbiel and Wright (1983); and Mayhew (1974). On the incumbency advantage at the state level, see Breaux (1990); Cox and Morgenstern (1993a, 1993b); Garand (1991); Holbrook and Tidmarch (1991, 1993); Jewell and Breaux (1988); King (1991a, b); Niemi, Jackman and Winsky (1991); Weber, Tucker and Brace (1991)

used in electorally useful ways (e.g., to perform casework). The indirect effect arises because potential challengers, knowing that incumbents can derive large direct benefits from the resources at their disposal, will be less inclined to enter the fray–and this will be particularly true of potential challengers with higher opportunity costs, hence higher quality. That incumbents can scare off quality opponents seems to be generally appreciated in the literature. What has been less clearly recognized is that how much this boosts the incumbency advantage depends on how much candidate quality matters in determining the vote. The incumbency advantage may have increased because incumbents had more resources and opportunities to perform constituency services (a direct effect); or because knowledge of these resources and opportunities scared off high-quality challengers (an indirect effect); or both. But even holding constant these factors, the incumbency advantage may also have increased if a given quality differential between candidates mattered more to the final outcome. That such a "third" effect might have existed seems plausible from the extensive literature depicting the evolution of U.S. House elections from party-centered to candidate-centered contests. Yet none of the current methodologies for measuring the incumbency advantage separates the total incumbency advantage into direct, scare-off, and quality effects, so that one can assess the relative contribution over time of each component.

This paper seeks to fill that gap. Our results show that most of the increase in the incumbency advantage, at least down to 1980, came through increases in the quality effect. Thus, if one wants to explain the overtime development of the incumbency advantage in U.S. House elections, it is crucial to understand why having had previous electoral experience–our operational measure of candidate quality–became more and more important in predicting vote shares. This is a different way of posing the explanatory task than is commonly encountered in the literature and it leads, as we shall show, to different conclusions regarding the relative importance of growing resources and partisan dealignment in explaining the growth of the incumbency advantage.

The paper proceeds as follows. We first review the literatures on what caused the incumbency advantage to increase (section 1) and how best to measure this advantage (section 2). We then suggest improvements in both domains, elaborating a simple path-analytic model of the incumbency advantage that isolates the direct and indirect effects in which we are interested (section 3). After discussing our operational model (section 4), we give our results (section 5), discuss a theoretical point raised by those results (section 6), and conclude (section 7).

2 Causes of the Increase in the Incumbency Advantage

Shortly after the discovery in the 1970s that the value of incumbency had increased substantially beginning in the mid-1960s (Erikson 1972; Mayhew 1974), a cottage industry arose to explain the upward trend. There are now two main contenders in the literature.

One school of thought emphasizes the resources that incumbency confers: The franking privilege may be used to subsidize what are in essence campaign mailings; staff and office allowances may be used to provide various electorally valuable services to constituents; committee positions may be used to help raise campaign funds; the House bank can be used in various creative ways; and so forth. Many of these resources increased during the 1960s and 1970s, providing a plausible explanation for the increase of the incumbency advantage (Mayhew 1974). A variant on this line emphasizes the growth of the federal bureaucracy: more bureaucrats meant more red tape to be cut through by helpful, non-partisan, and competent representatives (disposing of more resources to do the cutting), hence more votes from grateful constituents (Fiorina 1977; 1989).

The evidence for the resources/opportunities school is largely positive at the state level. Holbrook and Tidmarch (1991), in a study of thirty-two states, find that the sophomore surge (a downwardly-biased estimator of the incumbency advantage; see Gelman and King 1990) increases with allowances for staff and for trips back to the constituency. King (1991a), in a study of thirteen states, finds that the incumbency advantage is statistically related to the size of legislative operating budgets, measured on a per legislator basis. Cox and Morgenstern (1993; N.d.), in studies of twenty-four and forty states, respectively, find that the incumbency advantage increases with the size of legislative operating budgets, measured on a per constituent basis. Finally, Holbrook and Tidmarch (1993), in a study of thirty-nine states, find that margins of victory are higher for party leaders and chairs of standing committees, especially in states where these posts are endowed with special staff resources.

At the federal level, the evidence for an incumbency advantage derived through the provision of constituency services is more mixed but still on balance positive. Fiorina (1989, pp. 85-90) notes that "between the 1950s and the 1970s personal staffs of members expanded and their constituency presence surged" and that this has led to "(1) a higher incidence of constituent and district services reported, (2) an increased tendency to evaluate representatives in terms of constituency attentiveness, and (3) a greater impact of constituency service evaluations on House voting." At the same time, Fiorina (p. 94) concedes that "scholars have failed to find a clear, direct link between constituency service in each district and the corresponding electoral outcome." While some see this as a crucial flaw in the evidence, Fiorina (pp. 95-97) points to the crudity of the district-level variables available for analysis[2] and the likely simultaneity bias in micro-level studies: members who perform more casework may do so precisely because they are electorally vulnerable, so that the zero-order correlation between casework and vote is attenuated (see also Rivers and Fiorina 1991).

The second major school of thought concerning the incumbency advantage holds that

[2]One study that has a particularly strong research design at the district-level is Cover and Serra (1989). They provide convincing evidence that constituents helped by caseworkers are more likely both to recognize the incumbent's name and to evaluate him or her favorably. Another recent and positive study is that of Alvarez and Schousen (1993), who find that larger flows of federal grants into a district improve the sitting member's name recognition, likes/dislikes ratio, and vote, especially among Democrats. Indirect evidence of the importance of resources is provided by Hart and Munger (1989)

it increased because of partisan dealignment in the electorate. Voters became less party-oriented and more candidate-oriented. They weighed party affiliation less and information about the personal characteristics of candidates — including their incumbency status — more in making their voting decisions. The earliest and most frequently encountered version of this argument suggested a simple substitution of an incumbency cue for a party cue: "Voters dissatisfied with party cues could [have reached for] other cues that [were] available in deciding how to vote. The incumbency cue [was] readily at hand" (Mayhew 1974, p. 313).

In principle, dealignment might have come about either through a distributional change in partisan affiliation within the electorate — e.g., through a decline in the proportion of strong identifiers and an increase in the proportion of weak and independent-leaning identifiers; or through a behavioral change, with voters in all categories of partisan identification putting less weight on the partisan affiliation of candidates, and more weight on their personal characteristics (Ferejohn 1977; Cover 1977; Krehbiel and Wright 1983). The latter idea, if one takes it seriously, suggests that voters have additively separable utility functions of the following form: $U(c,p) = au(c) + (1-a)v(p)$. Here, the total utility from a candidate with characteristics c and party affiliation p is expressed as a weighted average of an evaluation $u(c)$ of the candidate's personal characteristics and an evaluation $v(p)$ of the candidate's party, with a being the weight on personal characteristics ($0 < a < 1$). If voters put more weight on candidates' personal characteristics, this would lead to an increased incumbency advantage on the assumptions that (1) incumbents either had always had superior personal characteristics, or developed such an advantage (via an increase in resources) in the 1960s; and (2) the average incumbent's "personal quality advantage" exceeded his or her "party differential advantage".

It is not possible directly to observe the weights that voters place on partisan affiliation and personal characteristics. One can, however, observe the behavior of various categories of self-identified partisans. Using this approach, Cover (1977) and Krehbiel and Wright (1983) both find that changes in the distribution of voters across categories of partisan identification account for little of the change in reported vote. They conclude that there has been a more-or-less across-the-board change in a pro-incumbent direction. This change in behavior may reflect an across-the-board decrease in the weight placed on partisan affiliation; but it is also consistent with the various resource hypotheses: greater resources may have given incumbents greater advantages on the personal quality side of the ledger, without necessarily increasing the weight that voters put on that side.

3 Measuring the Incumbency Advantage

In this section, we consider the estimator proposed by Gelman and King (1990). They seek an estimate of the total effect of incumbency, including any scare-off and quality effects, by running the following regression for a given election t:

$$v_{j,t} = \beta_0 + \beta_1 v_{j,t-1} + \beta_2 P_{j,t} + \beta_3 I_{j,t} + u_{j,t}. \quad (1)$$

Here, $v_{j,t}$ is the Democratic share of the two-party vote at election t; $v_{j,t-1}$ is the Democratic share of the two-party vote at election $t-1$;$P_{j,t}$ equals 1 if the Democrats are the incumbent party (i.e., a Democratic candidate won at election $t-1$) and -1 if the Republicans are the incumbent party; $I_{j,t}$ equals 1 if there is a Democratic incumbent, 0 if there are no incumbents, and -1 if there is a Republican incumbent seeking reelection in district j at election t (this definition ignores the possibility of two or more incumbents in a given district since redistricting years are excluded from the analysis); and $u_{1j,t}$ is an error term.

The regression in equation (1) can be interpreted as follows. Suppose $P_{j,t}$ equals 1 (i.e., the Democrats are the incumbent party). The value of the OLS estimate will reflect a cross-sectional comparison between two subsets of the "$P_{j,t} = 1$" districts: those in which the winning Democratic candidate at time t-1 seeks reelection at time t ($I_{j,t} = 1$), and those in which he or she does not ($I_{j,t} = 0$). As the regression controls for $v_{j,t-1}$, one can think of the comparison as being between districts that are similar in terms of their normal vote,[3] differing only in whether or not the incumbent sought reelection. The value of will thus reflect any direct benefits of incumbency in the form of resources that can be turned to electoral use. If the presence of an incumbent tends to scare off high-quality challengers, leaving the incumbent an easy contest against a patsy, whereas the absence of an incumbent brings forth strong, well-qualified competitors from both sides, then this too will be reflected in the value of . As noted above, Gelman and King seek to measure the overall impact of incumbency, not just the direct value of the pot of resources to which office-holders have access.

Obviously, the cross-sectional comparison contrived by equation (1) would be misleading if all the districts with incumbents this time were without incumbents last time, while all the districts without incumbents this time had incumbents last time. For then the lagged vote ($v_{j,t-1}$) would not mean the same thing in the "with incumbent" and "without incumbent" districts: a Democrat getting, say, a 52% share of the vote when there is no incumbent says one thing about the normal vote in the district, getting the same share against an incumbent says something else. In particular, on the hypothesis that the incumbency advantage is positive, the normal vote will be higher in the latter than in the former district. In order to take account of possible diversity in the previous incumbency status of districts, Gelman and King note (pp. 1151-52) that one could simply add the lagged incumbency variable, $I_{j,t-1}$, to equation (1)–and further that one ought to do so "if including [$I_{j,t-1}$] had an effect on the estimates [of the coefficient of $I_{j,t}$]." Adding $I_{j,t-1}$ to the equation yields what we refer to as the full Gelman-King model:

$$v_{j,t} = \gamma_0 + \gamma_1 v_{j,t-1} + \gamma_2 P_{j,t} + \gamma_3 I_{j,t-1} + \gamma_4 I_{j,t} + u_{j,t} \qquad (2)$$

Gelman and King find that the correlation between $I_{j,t}$ and $I_{j,t-1}$ is in fact modest, when one controls for $P_{j,t}$, and accordingly opt for the simpler equation 2, at least when

[3]The normal vote is defined as the expected vote in a district when short-term forces have a net impact of zero. It is intended to represent the long-term balance of partisan forces in a district. As we shall note below, exactly what one considers to fall in the category of short-term forces affects how one measures and interprets a normal vote

estimating incumbency in the U.S. House.

A possible problem with Gelman and King's specification is as follows. Suppose that the vote received by a candidate can be broken down into components due to partisan factors, personal factors, and incumbency status. The Gelman-King specification controls for partisan factors in estimating the impact of incumbency status, but it does not control for candidate quality. If the same candidate(s) persist(s) runs in several consecutive elections, then candidate quality effects will influence both $v_{j,t-1}$ and $v_{j,t}$. In particular, the quality of any incumbent candidate will constitute an excluded variable that affects both $v_{j,t-1}$ and $v_{j,t}$. There will thus be a positive correlation between $v_{j,t-1}$ and $u_{j,t}$.

If this claim is true, then the Gelman-King estimator is biased. Even if one's goal is to provide an overall measure of the incumbency advantage, including the scare-off and quality effects, the OLS coefficient estimate from equation 1 or 2 may reflect the higher quality of incumbents as campaigners–something that inheres in themselves rather than in the office they hold.

We cannot prove that there is a correlation between $v_{j,t-1}$ and $u_{j,t}$. It is simply a suspicion on our part, based on a theoretical argument. If there is no such correlation, then the approach that we propose below will still differ in what it seeks to achieve–a decomposition of the total incumbency effect into direct and indirect components–but will not have any advantages from a purely econometric standpoint.[4]

4 Causation and Measurement

Conceptually, the vote-denominated incumbency advantage can be decomposed into two main parts–one direct, one indirect. What we shall call the direct value of incumbency derives from the electorally valuable resources of which incumbents dispose. The indirect value of incumbency arises because everyone knows that incumbents possess electorally valuable resources and this scares off high-opportunity cost challengers — which is typically to say better-qualified and more formidable challengers — leaving only patsies to take on most incumbents seeking reelection.

The scare-off effect of incumbency does not operate only in the sense that incumbents are sometimes unopposed–in which case they have scared off any competition at all. It

[4] Gelman and King explicitly defend their specification against several other possible objections. In particular, they consider the endogeneity of candidate entry: if incumbents decide whether or not to run for reelection (thus determining the value of $I_{j,t}$) partly on the basis of their forecasts of the vote ($v_{j,t}$), then the OLS estimates of $I_{j,t}$'s coefficient will be inconsistent. It should be noted, however, that forecasting House election results at the time entry decisions must be made (i.e., before the primaries) is an inexact science at best, so one may well wonder if many incumbents receive a strong enough signal to nudge them from the field. Gelman and King consider those incumbents implicated in scandals–presumably a pretty strong signal — and find little to worry about. They conclude that "the complications entailed in making a correction [for endogenous entry] would be more trouble than it is likely to be worth" (p. 1152). We agree.

also operates in that the challengers who do come forth are weaker than might otherwise be the case.[5] To see this, consider a simple rational entry model (a là Schlesinger 1966 or Rohde 1979) in which N potential candidates must decide whether to challenge an incumbent in district j. Let ω_j be the opportunity cost to the j'th potential challenger of competing for the seat (i.e., the value of the job currently held by that person, less expected retention costs). The expected value of trying for the seat is $p_j b - c$, where p_j is the probability of winning, b is the value of the seat, and c is the cost of running a campaign.[6] We assume that p_j is a function, among other things, of: the direct value of incumbency at time t, denoted by ψ_t; the national partisan swing, denoted by δ_t; the "quality" of the incumbent candidate; and the "quality" of the challenger. Quality in this context refers to anything about candidates that enable them to garner votes: can they kiss babies without being awkward, speak effectively in public, look good on TV, figure out the appropriate issue positions to take for their constituency, develop an effective "home style" (Fenno 1978), run an effective campaign (or hire a campaign manager who can), and so forth? Holding constant partisan factors, higher quality candidates will outperform lower quality candidates.

A potential candidate will enter the fray only if $p_j b - c > \omega_j$. Thus, if ψ_t increases, p_j decreases, and high opportunity cost (typically also high quality) candidates will not enter. In words, if the electoral value of the pot of resources that incumbents enjoy increases, then the probability that any given challenger will defeat a particular incumbent decreases, hence the expected benefit of challenging decreases, and hence only potential candidates with low opportunity costs will make a run at the seat. In particular, local and state office-holders in good positions, who would make the most formidable competitors for the incumbent, are less likely to challenge as ψ_t increases.[7]

To measure the direct and indirect effects of incumbency separately one needs a model in which both incumbency status and candidate quality differentials are explicitly considered. We suggest a way of doing this in the next section.

[5] Our distinction between a direct effect of incumbency, due to the resources of office being converted to electoral use, and an indirect effect of incumbency, due to anticipation of the value of those resources scaring off strong challengers, is thus distinct from that made by King (1991b) between a "contested-election incumbency advantage" and a "scare-off effect," where the former means the advantage of incumbents given they face some opposition and the latter means the advantage of incumbents in scaring off any competition at all. In our terms, the contested-election incumbency advantage still embodies both a direct and an indirect or scare-off effect: not scaring off all competitors but scaring off high-quality competitors

[6] One might of course allow probability of victory and cost of campaigning to be functions of effort, but this (and other) refinements are unnecessary for present purposes

[7] Another refinement we ignore here is the possibility that b might increase with ψ_t, leaving the total change in expected benefit of challenging unclear. We consider this a second-order effect

5 An Estimator of the Incumbency Advantage

In this section, we modify Gelman and King's equation 1 by adding explicit measures of the lagged and current Democratic quality advantages in each district. We first describe the operational measure of quality that we use, then present the equation to be estimated.

Although quality in the sense that we have defined it is an elusive variable, there are some attempts to measure it in the literature. The simplest measure of the quality of a candidate is whether or not he or she has held a previous elective office, hence waged a successful campaign before. This variable has been used extensively in Jacobson's work (e.g., 1980, 1990a). It codes a candidate as either of high quality (1) or of low quality (0).[8]

Using Jacobson's measure of candidate quality, the Democratic quality advantage in district j at time t can be operationalized by a variable $DEMQA_{j,t}$ coded as follows: $+1$ if the Democratic candidate has previously held elective office while the Republican candidate has not; 0 if neither or both candidates have previously held elective office; -1 if the Republican candidate has previously held elective office while the Democratic candidate has not. In coding this variable it should be noted that incumbents are always of quality 1 because they have previously held elective office–their current office if none else.

If we are going to add $DEMQA_{j,t}$ to the specification, then it also makes sense to add $DEMQA_{j,t-1}$, for essentially the same reason that it makes sense to include $I_{j,t-1}$: If $v_{j,t-1}$ is to proxy for the normal vote in the district, it should be controlled for both incumbency status and the Democratic quality advantage, since the normal vote is the expected vote for the Democrats given an open seat and no quality advantage for either side.

Adding $DEMQA_{j,t}$ and $DEMQA_{j,t-1}$ to equation 2, one gets the following estimable equation:

$$v_{j,t} = \delta_0 + \delta_1 v_{j,t-1} + \delta_2 P_{j,t} + \delta_3 I_{j,t-1} + \psi_t I_{j,t} + \theta_t DEMQA_{j,t} + \epsilon_{j,t}. \qquad (3)$$

Estimating equation 3 by OLS for a single year will run afoul of the same criticism we made of Gelman and King's specification above. We can hope that including a proxy for the excluded quality variable will lessen the degree of autocorrelation in the error term, hence the degree of correlation between $v_{j,t-1}$ and $\epsilon_{j,t}$, but it would be unrealistic to suppose that we have entirely got rid of the problem (if there was one to begin with). In any event, the parameters of interest are ψ_t and θ_t: ψ_t will provide an estimate of the

[8]Another, more elaborate measure of candidate quality has been proposed by Krasno and Green (1988). We have opted for the simpler measure, as it performs similarly to the more elaborate measure (see Jacobson 1990b), is easier to interpret, and is available for many more years than is the Krasno-Green measure (which is available only for 1978 and — from Krasno 1994 — for 1988). Unfortunately, because Krasno and Green did not measure quality in open seat contests, we cannot replicate our analyses on the 1978 data for which their measure is available: absent the open seat districts, we end up with a singularity in the data matrix.

direct effect of incumbency — the value of the pot of resources — θ_t while will indicate how valuable having a quality advantage is to the Democrats.

The full effect of incumbency can be derived as follows. First regress $DEMQA_{j,t}$ on a vector of regressors including $I_{j,t}$, in order to determine how much of the observed Democratic quality advantage is due to incumbency status. The coefficient on $I_{j,t}$ in this regression, say $\hat{\sigma}_t$, is one measure of the scare-off effect: how much the presence of an incumbent tends to deteriorate the quality of challengers. Multiplying this coefficient by θ_t then converts this impact on quality into an impact on vote percentages. The overall effect of incumbency can thus be written in standard path-analytic fashion as $\hat{\psi}_t + \hat{\theta}_t\hat{\sigma}_t$.[9]

The particular model of $DEMQA_{j,t}$ that we shall employ assumes that the Democratic quality advantage is sensitive to all predetermined variables that affect the Democratic vote, along with the lagged Democratic quality advantage. Thus, we have:

$$DEMQA_{j,t} = \gamma_0 + \gamma_1 v_{j,t-1} + \gamma_2 P_{j,t} + \gamma_3 I_{j,t-1} + \gamma_4 DEMQA_{j,t} + \sigma_t I_{j,t} + \pi_{j,t} \qquad (4)$$

where the equation is to be run separately for each year. The constant term γ_0 captures any scare-off effect due to a net swing to the Democrats. The coefficient σ_t gives the impact of incumbency status, holding previous Democratic vote share, party incumbency status, previous candidate incumbency status, and previous Democratic quality advantage constant.[10]

6 Results

The basic results from estimating the two equations specified above are given in summary form in Table 2. Our estimate of the total effect of incumbency (column 6) is very similar to Gelman and King's estimates (which are displayed in column 8).[11] The average difference between the two sets of estimates is a little over half a percentage point. As can be seen in Figure 1, both estimates move in tandem over time (they correlate at 0.99). The similarity of our estimates to those of Gelman and King suggests that, if there is a problem with the Gauss-Markov assumptions in the Gelman- King specification which

[9]It should be noted that this estimate of the "total" effect of incumbency is conditional on there being a contested election. Another advantage of incumbency may be that incumbents scare off any competition at all. The current measure does not capture this component of the incumbency advantage.

[10]We have also estimated DEMQA using an ordered probit (OP) approach. The OP and OLS results are very similar. For example, the correlation between the OLS estimate of the Democratic quality advantage in the i'th district and the OP estimate (calculated as the expected value:$1 \cdot Pr(DEMQA = 1|X_i) + 0 \cdot Pr(DEMQA = 0|X_i) + -1 \cdot Pr(DEMQA = -1|X_i)$ where X_i is the data vector for the ith district) 0.998.

[11]The figures given in column 8 are those we get running Gelman and King's basic model on Gary Jacobson's data. As there are a few differences between Gelman and King's dataset and Jacobson's, these figures do not correspond exactly to Gelman and King's published numbers (which appear only in the form of a graph, Figure 2, on p. 1158). Our numbers, however, correlate at .97 with those given by Gelman and King (Figure 2).

our specification ameliorates, it is not a very large problem practically speaking — or, alternatively, our respecification does little to ameliorate it.

An indication that the tripartite decomposition displayed in Table 2 is sensible is that the direct and scare-off effects are positively correlated (at +0.41). If our story is correct, they should be: a larger direct effect, after all, reflects a larger pile of resources attached to congressional seats, which should be one factor (among many) that scares off quality challengers. So it is comforting to find that there is a properly-signed (and significant) correlation.

The most striking features of our results are two. First, growth in the total incumbency advantage stems substantially, if not primarily, from growth in the indirect effect. Second, growth in the indirect effect stems primarily from growth in the quality effect.

The relatively large growth rate of the indirect effect can be seen in column 7 of Table 2, which gives the percentage of the total incumbency advantage (direct plus indirect effects) that is accounted for by the indirect effect. These numbers, graphed in Figure 2, show an average upward trend from 1950 to 1990 of 0.41 percentage points per year (the standard error on this slope is 0.17, so it is statistically discernible from zero at conventional levels of significance). Whereas the indirect effect constituted only 9.5% of the total incumbency effect in 1950, it constituted 28.2% in 1990.

Another way to show the importance of growth in the indirect effect is to compute the average rate of growth in both effects — indirect and direct — over various time periods, and compare them. We take four different starting points before the "big jump" in 1966 — *viz.*, 1956, 1958, 1960 and 1964 — and calculate average growth rates over the succeeding twenty years. As can be seen in panel A of Table 3, growth in the direct effect is never statistically discernible from zero, whereas growth in the indirect effect always is. Taking the point estimates of the rate of growth for both effects at face value, growth in the indirect effect accounts for somewhere between 42% and 116% of total growth in the incumbency advantage over the four twenty-year periods examined.

If the indirect effect was growing as fast or faster than the direct effect from the mid-1950s to the mid-1980s, what was driving it? The answer is apparent from Figure 3, which plots the scare-off effect, quality effect, and their product (the indirect effect) all together. As can be seen, the scare-off effect appears to increase little, and that erratically, whereas the quality effect more than doubles from 1968 to 1976, fluctuating substantially thereafter but around a higher mean than previously observed. Visual impressions are corroborated by some simple regressions against time (see panel B of Table 3). Over the period from 1960 to 1980, for example, a regression of the scare-off effect on time yields a virtually nil *negative* coefficient, whereas a similar regression of the quality effect on time yields a positive and significant coefficient of +0.19. Virtually all of the systematic increase in the indirect effect, at least in the four twenty-year periods examined from the mid-1950s to the mid-1980s, is due to increases in the quality effect.

7 Quality Counts

If one wants to explain why the incumbency advantage grew from the mid-1960s on — which is the usual puzzle posed in the literature — our figures show that one must be primarily interested in explaining why the quality advantage grew. Over the period from 1960 to 1980, a regression of the direct effect on time yields a virtually zero (actually *negative*) slope, as does a regression of the scare-off effect on time. The only component of the incumbency advantage that exhibits systematic growth over this time period is the quality effect. While it is true that different time periods do not yield such stark results, the basic point is not altered regardless of the time period chosen: the bulk of the systematic change appears due to increases in the quality effect.[12]

So how does one explain the increase in the quality effect? There are two main possibilities upon which we shall focus. First, there may have been a decline in partisanship within the electorate. This would have meant that the personal characteristics of candidates mattered more. That a candidate had held office previously (was of "high quality") would then be a cue that he or she was not entirely unlovely, having been able to win election at least once before. It may be that the difference in quality between those who had and had not held previous office did not change over the postwar era, and that the entire effect is due to voters' putting more weight on a quality differential that had always existed. But if in fact voters *were* putting more weight on candidate quality, then the value of the cue should have increased too: those candidates who had previously held some office were more likely to have good personal characteristics, because it was more necessary that they have them in order to win whatever office they held (cf. Payne 1980).

A second possible explanation of the growth in the quality effect has to do with managing campaigns. Those who had held previous office had overseen at least one election campaign before. In the 1950s, a candidate might have been able to rely on the local party organization to run his or her campaign. Thus, executive abilities were not required and previous campaigning experience may have mattered little. By the 1970s, however, a candidate had to put together his or her own organization, and executive abilities were at a premium (see, e.g., Fowler 1993, p. 76; Stewart 1989). The holding of previous office, by this story, signalled someone who could raise money, design or oversee the design of a campaign strategy, hire and fire as needed, and so on. As campaigning became more and more involved and expensive, high-quality candidates became stronger and stronger relative to inexperienced candidates (who could no longer rely on the local party to pull them through to a respectable showing).

[12]It has been suggested to us that a linear time trend may not be what one should look for. Rather, the data may show a pre-1964 plateau, a steep increase 1964–72, and another plateau after 1972 (cf. Aldrich and Niemi N.d.). We have run regressions allowing for breaks (in the constant term only, in the slope only, in both) in the sixties, and also plotted robust lowess regression lines (cf. Cleveland 1979), without finding any stronger evidence that the direct effect was of primary importance. Indeed, if there is a mid-sixties structural break in any of the data series, it is in the quality effect or indirect effect series–as is suggested by Figure 3. Thus, whether one looks at linear trends only, or allows also for structural breaks in the time series, growth in the indirect effect seems to account for the bulk of the growth in the overall incumbency advantage

A corollary to this story would be the pattern of increasing volatility in House elections noted by Jacobson (1987). When incumbents faced inexperienced challengers, their vote margins were increasingly large from the mid-1960s on. When they faced experienced challengers, however, they were still in for a real fight. Thus, the average margin for incumbents increased, but so did the standard deviation of their vote swings, leaving them little more secure than before. More and more, elections turned on whether the incumbent could scare off a quality challenger. The inexperienced could no longer make a good showing, absent the help of a strong local party organization.

Finally, we should note something that does *not* appear to explain the growth in the quality effect: resources. Growth in the resources attached to office should push the coefficient on incumbency status (the direct effect) up, and thereby boost the scare-off effect of holding office. There is no theoretical reason, however, to suppose that it would increase the quality effect. The coefficient on the Democratic quality advantage should reflect the value of running an experienced against an inexperienced candidate, holding incumbency status (and thereby the pot of resources attached to incumbency) constant.

There may be some artifactual reasons to suspect that a growth in resources may have pushed the quality effect up. For example, consider the following four subsets of districts: those in which $DEMQA_{j,t} = 1$ and $I_{j,t} = 1$ (D11), those in which $DEMQA_{j,t} = 0$ and $I_{j,t} = 1$ (D01), those in which $DEMQA_{j,t} = 1$ and $I_{j,t} = 0$ (D10), and those in which $DEMQA_{j,t} = I_{j,t} = 0$ (D00). The coefficient on the Democratic quality advantage reflects a comparison between districts D11 and D01, and between districts D01 and D00. Suppose that the percent of districts falling in the D11 and D01 categories (both incumbent-defended) increased secularly over time and that the quality advantage was larger in incumbent-defended seats. Then the change in the composition of districts would lead to a perceived increase in the quality effect. Alternatively, perhaps the quality effect in incumbent-held but not in open seats increased. Either story would suggest that resources may have had something to do with boosting the quality effect.

As it turns out, there is no substantial increase in the proportion of incumbent-held versus open seats over the postwar period (recall that only uncontested races make it into the data set). Nor is it the case that the quality effect is larger in incumbent-held districts: indeed, in the modal year the quality effect is larger in open seats than in held seats. Thus, whatever else can be said about our results, they appear to say that the bulk of the increase in the U.S. House incumbency advantage must be chalked up to partisan dealignment of one kind or another, rather than to a growth in resources and constituency service.

How plausible are the particular stories of partisan dealignment that we have told? Can either explain the over-time trends in the size of the quality effect–and in particular the substantial jump in the quality effect between 1970 and 1974 (or 1968 and 1976)?

A full defense of the general plausibility of the dealignment hypotheses is beyond the scope of this paper. There is a large literature to which Wattenberg (1984) and Jacobson (1990a) provide introductions.

A more specific defense of the plausibility of the dealignment hypotheses, in terms of the overtime trend in the quality effect, is necessarily rather speculative. We note one possibility, similar to Tufte's (1974) redistricting hypothesis. It is not that the wave of redistricting sparked by the Supreme Court's decisions in *Baker v. Carr* (1962) and *Wesberry v. Sanders* (1964) advantaged incumbents, it is that it may have discombobulated established local party organizations. Much of the congressional redistricting in the 1960s occurs in 1966 and 1968, in response to *Wesberry v. Sanders*. By previous standards, the quality effect is large in 1966 and 1968, and it continues to grow thereafter, reaching new highs in 1970, 1974, 1976, and 1978. Perhaps the partial redistrictings in 1966 and 1968, along with the full redistricting in 1972, opened up new political niches in the new districts, making the old party organizations less relevant and each candidate's campaigning skills more relevant.

A smidgen of evidence in favor of the idea that redistricting may have accelerated the personalization of campaigns, thus widening the performance differential between experienced and inexperienced candidates, is the following. If one splits the 1968 sample into two groups–those districts which were and were not redistricted in 1966–and runs the regression specified in equation (3) on both subsamples separately, one finds that the quality effect is over twice as large in the redrawn as in the unchanged districts. Similarly, if one splits the 1970 sample into two groups–districts which were redrawn in either 1966 or 1968, and districts which were not–and runs equation (3), one finds a quality effect of essentially zero in the unchanged districts, a quality effect of 3.73 in the redrawn districts. Perhaps there is something worth looking at here, rather subtler than the mechanism suggested in Tufte's original hypothesis.

8 Conclusion

In this paper, we have argued that the vote-denominated incumbency advantage can be decomposed conceptually into a direct and an indirect effect. The direct effect reflects the value of the resources attached to legislative office, such as personal staff, the franking privilege, and so on. The indirect effect is the product of a scare-off effect — the ability of incumbents to scare off high-quality challengers–and a quality effect — reflecting how much electoral advantage a party accrues when it has an experienced rather than an inexperienced candidate.

Using a simple two-equation model, we estimate the size of the direct, scare-off, and quality effects for postwar U.S. House elections (1946-1990), finding that the bulk of the increase in the overall incumbency advantage, at least down to 1980, can be traced to increases in the quality effect. This brings us to an important conclusion: the task for those wishing to explain the growth in the vote-denominated incumbency advantage down to 1980 is to explain why the quality advantage grew — why having an experienced as opposed to an inexperienced candidate became more and more important in determining a party's vote share.

We think the most plausible explanation of why the quality advantage increased when it did — rather abruptly in the 1968–1976 period — has to do with a restructuring of the organizational bases of U.S. House campaigns. In broad brush strokes, the story is this: before the wave of court-mandated redistrictings in the 1960s, many House districts had changed little over the previous generation or so. Candidates running in these districts often found stable and relatively influential party organizations that could run a campaign. Thus, for the most part, party organizations–rather than candidate organizations — structured campaigns. After the redistrictings of the 1960s, however — which, in order to eradicate what were sometimes enormous levels of malapportionment, had to completely redraw district lines — the old party organizations were no longer as well-adapted to the available electoral niches. Candidates who could step in and build their own campaign organization, sometimes no doubt combining old party resources in new ways, had an advantage over those who simply relied on "the party." Thus, rather abruptly, the value to a party of having an experienced candidate grew. This increased value of experience led in turn to an increased value of incumbency: not only were incumbents by definition experienced themselves but also their presence could scare off experienced challengers from the other party. When experience meant little, these considerations contributed little to the incumbency advantage; but when experience became more important, the value of incumbency grew accordingly.

Regardless of what one thinks of the particular explanation we have offered of why the quality effect grew (which stresses a restructuring of the organizational bases of American campaigns), or indeed what one thinks of the particular explanation we have offered of why campaign organizations became more candidate-centered (which stresses the effects of redistricting), we do think a final point bears emphasis. If we are correct in saying that most of the growth in the incumbency advantage 1964–1972 is due to a fairly abrupt increase in the quality effect, rather than to an (abrupt) increase in the direct effect, then this suggests that one should look less to explanations based on increasing resources, or opportunities to perform constituency services, and more to events (such as redistricting) capable of explaining shifts in the importance of the campaigning skills of individual candidates.

References

Aldrich, John and Richard G. Niemi. N.d. "The Sixth American Party System: Electoral Change, 1952-1988." Forthcoming in *Broken Contract? Changing Relationships between Citizens and Their Government in the United States*. Edited by Stephen C. Craig. Boulder, CO: Westview Press.

Alford, John R. and Brady, David W. 1989. "Personal and Partisan Advantage in US Congressional Elections." In *Congress Reconsidered*, 4th edition. Edited by Lawrence C. Dodd and Bruce I. Oppenheimer. Washington, DC: CQ Press. 153-169.

Alford, John R. and Hibbing, John R. 1981. "Increased Incumbency Advantage in the House." *Journal of Politics*. 43(4):1042-1061.

Alvarez, R. Michael, and Schousen, Mathew M. 1993. "Policy Moderation or Conflicting Expectations?: Testing the Intentional Models of Split-Ticket Voting." *American Politics Quarterly* 21(4) 410-438.

Ansolabehere, Steve, Brady, David and Fiorina, Morris P. 1988. "The Vanishing Marginals and Electoral Responsiveness." *British Journal of Political Science* 22:21-38.

Born, Richard. 1979. "Generational Replacement and the Growth of Incumbent Reelection Margins in the US House." *American Political Science Review* 73(3):811-817.

Breaux, David 1990. "Specifying the Impact of Incumbency on State Legislative Elections." *American Politics Quarterly* 18:270-286.

Burnham, Walter D. 1974. "Communication." *American Political Science Review* 68:207-213.

Cain, Bruce E, Ferejohn, John A., and Fiorina, Morris. 1987. *The Personal Vote*. Cambridge: Harvard University Press.

Cleveland, W. S. 1979. "Robust Locally Weighted Regression and Smoothing Scatterplots." *Journal of the American Statistical Association* 79:829-836.

Collie, Melissa P. 1981. "Incumbency, Electoral Safety, and Turnover in the House of Representatives, 1952-76. " *American Political Science Review* 75(1):119-131.

Cover, Albert D. 1977. "One Good Term Deserves Another: The Advantage of Incumbency in Congressional Elections." *American Journal of Political Science* 21(3):523-541.

Cox, Gary W., and Morgenstern, Scott. 1993. "The Increasing Advantage of Incumbency in the U.S. States." *Legislative Studies Quarterly* 18(4):495-514.

Cox, Gary W., and Morgenstern, Scott. nd. "The Incumbency Advantage in Multimember Districts: Evidence from the U.S. States." *Legislative Studies Quarterly* forthcoming.

Erikson, Robert S. 1971. "The Advantage of Incumbency in Congressional Elections." *Polity* 3(3):395-405.

Erikson, Robert S. 1972. "Malapportionment, Gerrymandering, and Party Fortunes in Congressional Elections." *American Political Science Review* 66(4):1234-1245.

Fenno, Richard F. Jr. 1978. *Home Style: House Members in Their Districts*. Boston: Little, Brown and Company.

Ferejohn, John A. 1977. "On the Decline of Competition in Congressional Elections." *American Political Science Review* 71(1):166-176.

Fiorina, Morris P. 1977. "The Case of the Vanishing Marginals: The Bureaucracy Did It." *American Political Science Review* 7(1):177-181.

Fiorina, Morris P. 1989. *Congress: Keystone of the Washington Establishment*. 2nd edition. New Haven: Yale University Press.

Fowler, Linda L. 1993. *Candidates, Congress and the American Democracy*. Ann Arbor: University of Michigan Press.

Garand, James C. 1991. "Electoral Marginality in State Legislative Elections." *Legislative Politics Quarterly* 16(1):7-28.

Garand, James C. and Gross, Donald A. 1984. "Changes in the Vote Margins for Congressional Candidates: A Specification of Historical Trends." *American Political Science Review* 78(1):17-30.

Gelman, Andrew and King, Gary. 1990. "Estimating Incumbency Advantage without Bias." *American Journal of Political Science* 34(4):1142-1164.

Hart, Douglas B., and Munger, Michael C. 1989. "Declining Electoral Competitiveness in the House of Representatives: The Differential Impact of Improved Transportation Technology." *Public Choice* 61:217-228.

Holbrook, Thomas M. and Tidmarch, Charles M. 1991. "Sophomore Surge in State Legislative Elections, 1968-86." *Legislative Politics Quarterly* 16(1):49-63.

Holbrook, Thomas M. and Tidmarch, Charles M. 1993. "The Effects of Leadership Positions on Votes for Incumbents in State Legislative Elections." *Political Research Quarterly* 46(4):897-909.

Jacobson, Gary C. 1972. The Impact of Radio and Television on American Election Campaigns. Unpublished Ph.d. dissertation. Yale University.

Jacobson, Gary C. 1980. *Money in Congressional Elections.* Boston: Little, Brown.

Jacobson, Gary C. 1987. "The Marginals Never Vanished: Incumbency and Competition in Elections to the U.S. House of Representatives, 1952-82." *American Journal of Political Science* 31:126-141.

Jacobson, Gary C. 1990a. *The Electoral Origins of Divided Government: Competition in U.S. House Elections, 1946-1988*. Boulder: Westview Press.

Jacobson, Gary C. 1990b. "The Effects of Campaign Spending in House Elections: New Evidence for Old Arguments." *American Journal of Political Science* 34:334-62.

Jewell, Malcolm E. and Breaux, David. 1988. "The Effect of Incumbency on State Legislative Elections." *Legislative Studies Quarterly* 13(4):495-514.

King, Gary and Gelman, Andrew. 1991. "Systematic Consequences of Incumbency Advantage in U.S. House Elections." *American Journal of Political Science* 35:110-138.

King, Gary. 1991a. "Constituency Service and Incumbency Advantage." *British Journal of Political Science.* 21(1):119-128.

King, Gary. 1991b. "Political Gerrymandering and Pairing Incumbents: A Proposed Threshold for Legal Action." Unpublished typescript. Harvard University.

Krasno, Jonathan S. and Green, Donald P. 1988. "Preempting Quality Challengers in House Elections." *Journal of Politics* 50:920-936.

Krasno, Jonathan S. 1994. *Challengers, Competition, and Reelection: Comparing Senate and House Elections*. New Haven: Yale University Press.

Krehibiel, Keith and Wright, John R. 1983. "The Incumbency Effect in Congressional Elections: A Test of Two Explanations." *American Journal of Political Science.* 27:140-157.

Mayhew, David. 1974. "Congressional Elections: The Case of the Vanishing Marginals." *Polity* 6:295-317.

Niemi, R.G., Jackman, S., and Winsky, L.R. 1991. "Candidacies and Competitiveness in Multimember Districts." *Legislative Politics Quarterly* 16(1):91-109.

Payne, James L. 1980. "The Personal Electoral Advantage of House Incumbents, 1936–1976." *American Politics Quarterly*. 8(4):465-482.

Rivers, Douglass and Fiorina Morris P. Fiorina. 1989. "Constituency Service, Reputation, and the Incumbency Advantage." In *Home Style and Washington Work*. Edited by Morris P. Fiorina and David Rohde. Ann Arbor: University of Michigan Press. 17-45.

Rohde, David. 1979. "Risk-Bearing and Progressive Ambition: The Case of Members of the United States House of Representatives." *American Journal of Political Science* 23:1-26.

Schlesinger, Joseph 1966. *Ambition and Politics: Political Careers in the United States*. Chicago: Rand McNally.

Serra, George, and Cover, Albert D. 1992. "The Electoral Consequences of Perquisite Use: The Casework Case." *Legislative Studies Quarterly* 17(2):233-246.

Stewart, Charles, III. 1989. "A Sequential Model of U.S. Senate Elections." *Legislative Studies Quarterly* 14:567-601.

Tufte, Edward 1974. "Communications." *American Political Science Review* 68:212.

Tufte, Edward R. 1973. "The Relationship Between Seats and Votes in Two-Party Systems." *American Political Science Review* 67:540-554.

Wattenberg, Martin P. 1984. *The Decline of American Parties, 1952-1984*. Cambridge: Harvard University Press.

Weber, Ronald E., Tucker, Harvey J., and Brace, Paul. 1991. "Vanishing Marginals in State Legislative Elections." *Legislative Politics Quarterly* 16(1):29-47.

Table 1: Decompostion of Incumbemcy Advantage in U.S. House Election, 1946–1990

Year	Direct Effect	Quality Effect	Scare Off Effect	Total Indirect Effect	Total Effect	Percent Indirect of Total	GK Total Effect
1946	−1.22	0.53	2.24	1.19	−0.03	–	−0.49
	(0.64)	(0.05)	(0.67)				
1948	−0.54	0.51	2.12	1.08	0.54	–	0.55
	(1.25)	(0.11)	(0.65)				
1950	1.52	0.07	2.28	0.16	1.68	9.5	1.33
	(1.03)	(0.09)	(0.66)				
1954	−0.05	0.36	1.82	0.66	0.61	–	1.96
	(0.91)	(0.09)	(0.56)				
1956	2.25	0.31	0.78	0.24	2.49	9.6	2.46
	(0.94)	(0.10)	(0.61)				
1958	2.26	0.38	1.99	0.76	3.02	25.2	3.09
	(0.94)	(0.09)	(0.56)				
1960	5.69	0.47	1.15	0.54	6.23	8.7	5.32
	(1.02)	(0.04)	(0.63)				
1964	3.51	0.21	1.10	0.23	3.74	6.2	3.92
	(1.15)	(0.09)	(0.79)				
1966	11.79	0.63	2.25	1.42	13.11	10.8	11.92
	(1.66)	(0.11)	(1.01)				
1968	2.91	0.26	2.28	0.59	3.50	16.9	4.55
	(1.81)	(0.15)	(0.88)				
1970	6.86	0.57	2.61	1.49	8.35	17.8	8.08
	(1.06)	(0.08)	(0.74)				
1974	3.06	0.51	4.13	2.11	5.17	40.8	5.94
	(1.21)	(0.07)	(0.92)				
1976	6.23	0.40	5.12	2.05	8.28	24.8	8.20
	(1.22)	(0.08)	(0.83)				
1978	7.76	0.35	5.37	1.88	9.64	19.5	8.90
	(1.30)	(0.07)	(1.06)				
1980	5.08	0.43	3.06	1.32	6.40	20.6	7.26
	(1.44)	(0.08)	(1.01)				
1984	7.76	0.38	7.76	2.95	10.71	27.5	9.29
	(1.68)	(0.10)	(1.04)				
1986	9.24	0.53	5.41	2.87	12.11	23.7	12.27
	(1.27)	(0.08)	(0.86)				
1988	9.11	0.64	2.69	1.72	10.83	15.9	11.11
	(1.56)	(0.10)	(0.88)				
1990	6.08	0.73	3.28	2.39	8.47	28.2	8.13
	(1.45)	(0.07)	(1.08)				

Notes: Standard Errors are in parentheses.

Table 2: Decompostion of Incumbemcy Advantage in U.S. House Election, 1946–1990

Year	Direct Effect	Quality Effect	Scare Off Effect	Total Indirect Effect	Total Effect	Percent Indirect of Total	GK Total Effect
1946	−1.22	0.53	2.24	1.19	−0.03	–	−0.49
	(0.64)	(0.05)	(0.67)				
1948	−0.54	0.51	2.12	1.08	0.54	–	0.55
	(1.25)	(0.11)	(0.65)				
1950	1.52	0.07	2.28	0.16	1.68	9.5	1.33
	(1.03)	(0.09)	(0.66)				
1954	−0.05	0.36	1.82	0.66	0.61	–	1.96
	(0.91)	(0.09)	(0.56)				
1956	2.25	0.31	0.78	0.24	2.49	9.6	2.46
	(0.94)	(0.10)	(0.61)				
1958	2.26	0.38	1.99	0.76	3.02	25.2	3.09
	(0.94)	(0.09)	(0.56)				
1960	5.69	0.47	1.15	0.54	6.23	8.7	5.32
	(1.02)	(0.04)	(0.63)				
1964	3.51	0.21	1.10	0.23	3.74	6.2	3.92
	(1.15)	(0.09)	(0.79)				
1966	11.79	0.63	2.25	1.42	13.11	10.8	11.92
	(1.66)	(0.11)	(1.01)				
1968	2.91	0.26	2.28	0.59	3.50	16.9	4.55
	(1.81)	(0.15)	(0.88)				
1970	6.86	0.57	2.61	1.49	8.35	17.8	8.08
	(1.06)	(0.08)	(0.74)				
1974	3.06	0.51	4.13	2.11	5.17	40.8	5.94
	(1.21)	(0.07)	(0.92)				
1976	6.23	0.40	5.12	2.05	8.28	24.8	8.20
	(1.22)	(0.08)	(0.83)				
1978	7.76	0.35	5.37	1.88	9.64	19.5	8.90
	(1.30)	(0.07)	(1.06)				
1980	5.08	0.43	3.06	1.32	6.40	20.6	7.26
	(1.44)	(0.08)	(1.01)				
1984	7.76	0.38	7.76	2.95	10.71	27.5	9.29
	(1.68)	(0.10)	(1.04)				
1986	9.24	0.53	5.41	2.87	12.11	23.7	12.27
	(1.27)	(0.08)	(0.86)				
1988	9.11	0.64	2.69	1.72	10.83	15.9	11.11
	(1.56)	(0.10)	(0.88)				
1990	6.08	0.73	3.28	2.39	8.47	28.2	8.13
	(1.45)	(0.07)	(1.08)				

Notes: Standard Errors are in parentheses.

Table 3: Rates of Frowth in the Direct and Indirect Effects

Growth Rate in:	1956–1976	1958–1978	1960–1980	1964–1984
Direct Effect	0.12	0.11	−0.01	0.04
Indirect Effect	0.09*	0.08*	0.07*	0.10*
Scare-off Effect	0.01	0.00	−0.00	0.00
Quality Effect	0.18*	0.21*	0.19*	0.26*
Indirect Growth as % of Total	42.0%	42.0%	116.0%	71.0%

Note: The first four entries give estimated slope coeficents from a regression of the various effects on a constant and a time trend. For example, over the 1956–1976 period, the direct effec grew at an average rate of 0.12 percentage points per year. Coeffients marked with an astrisk are significant at the 0.01 level.

Figure 1: Two Estimates of Total Incumbency Advantage in U.S. House Elections

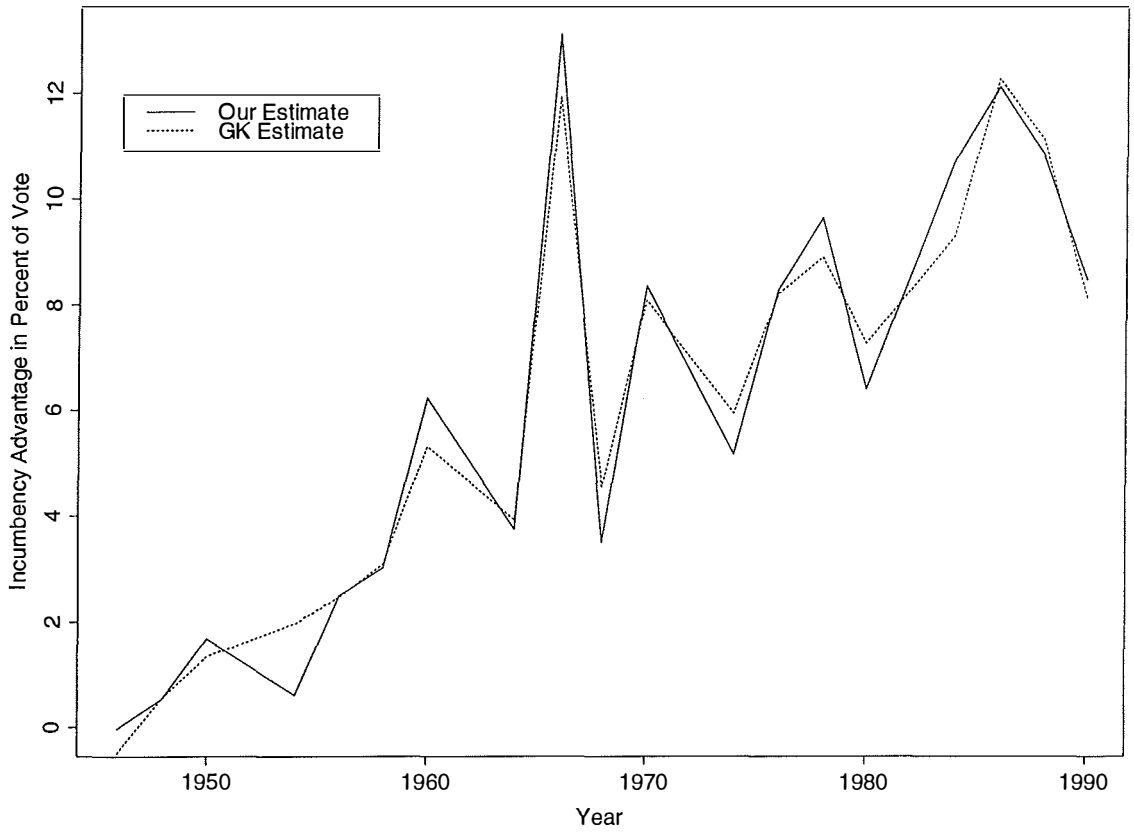

Figure 2: The Percent of Total Incumbency Advantage Due to Indirect Effects
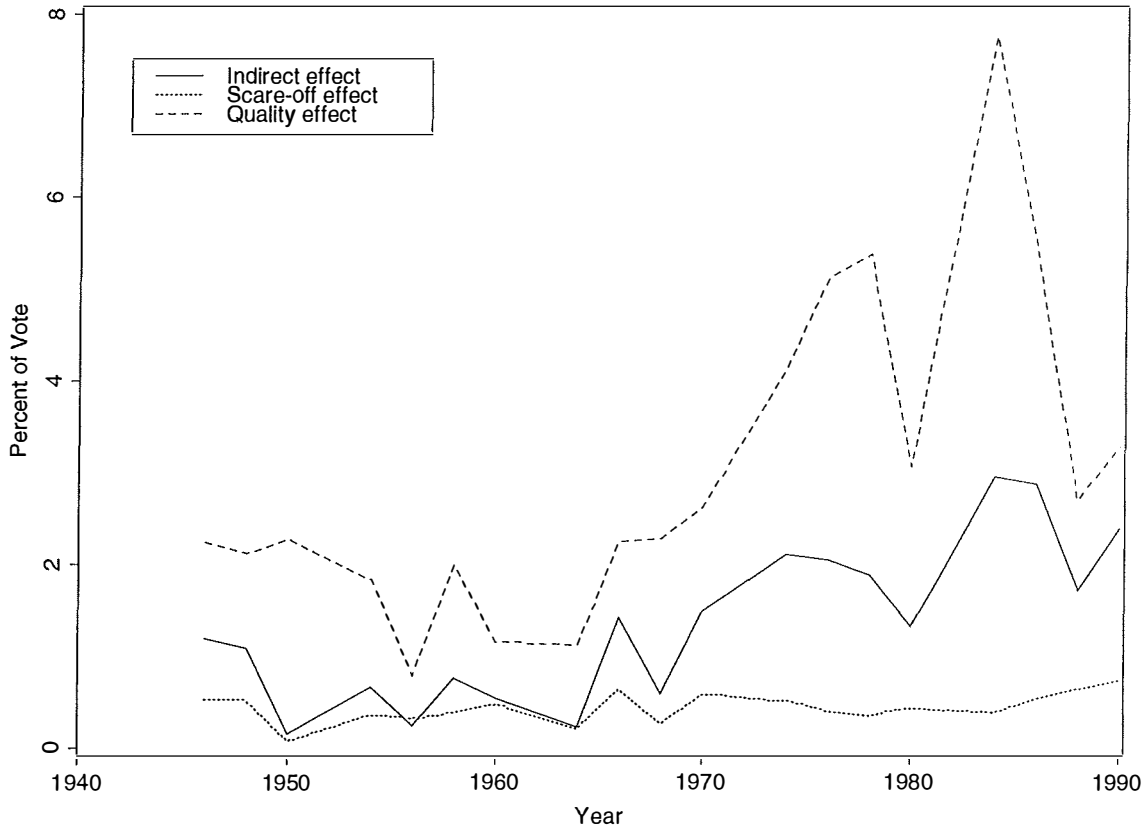
Figure 3: The Scare-off, Quality, and Indirect Effects