

Determinants of the Outcomes of Midterm Congressional Elections*

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The outcomes of midterm congressional elections appear as a mixture of the routine and the inexplicable. In every off-year congressional election but one since the Civil War, the political party of the incumbent President has lost seats in the House of Representatives. Yet the factors explaining the variation around the usual aggregate outcome of midterms are not well understood; indeed, in *Politics, Parties and Pressure Groups*, V. O. Key suggested that the nature of the midterm verdict lacked explanation in any theory of a rational electorate:

Since the electorate cannot change administrations at midterm elections, it can only express its approval or disapproval by returning or withdrawing legislative majorities. At least such would be the rational hypothesis about what the electorate might do. In fact, no such logical explanation can completely describe what it does at midterm elections. The Founding Fathers, by the provision for midterm elections, built into the constitutional system a procedure whose strange consequences lack explanation in any theory that personifies the electorate as a rational god of vengeance and of reward.¹

Furthermore, the central facts of midterm elections—the almost invariable loss by the President's party combined with the great stability in partisan swings compared to on-year elections²—

both suggest an electorate returning to their normal partisan alignment after the more hectic presidential contest two years earlier, rather than an electorate responding to short-term national forces and acting as a "rational god of vengeance and of reward." In seeking to explain the sources of midterm loss, both Campbell and Key emphasized the differences in turnout in off-year compared to on-year elections—rather than short-run factors such as the electorate's evaluation of the performance of the President and his party.³ Following up this approach, Hinckley assessed the administration's midterm loss with reference to the prior presidential election and concluded: "... the midterm 'referendum' appears quite derivative. It is, in part, a continuation of the verdict expressed in the preceding presidential elections and, in part, an adjustment of that verdict, an adjustment built into the midterm by the preceding presidential election."⁴ Another recent analysis of midterms from 1954 to 1970 concludes that they are "non-events" and "non-elections," predictable solely from the preceding presidential election.⁵ Finally, the Stokes-Miller study of the

³ Angus Campbell, "Voters and Elections: Past and Present," *Journal of Politics*, 26 (November, 1964), 745–757; Angus Campbell, "Surge and Decline: A Study of Electoral Change," *Public Opinion Quarterly*, 24 (Fall, 1960), 397–418; and Key, pp. 568–569.

⁴ Barbara Hinckley, "Interpreting House Midterm Elections: Toward a Measurement of the In-Party's 'Expected' Loss of Seats," *American Political Science Review*, 61 (September, 1967), 700.

⁵ Mark N. Franklin, "A 'Non-election' in America? Predicting the Results of the 1970 Mid-term Election for the U.S. House of Representatives," *British Journal of Political Science*, 1 (October, 1971), 508–513. See also Anthony King, "Why All Governments Lose By-Elections," *New Society*, March 21, 1968, pp. 413–415; Nigel Lawson, "A New Theory of By-Elections," *Spectator*, November, 1968, pp. 651–652; and John D. Lees, "Campaigns and Parties—The 1970 American Mid-Term Elections and Beyond," *Parliamentary Affairs*, 24 (Autumn, 1971), 312–320. The view that midterms represent, in large measure, the electoral swing of the pendulum (or electoral surge and decline) does not seem to be held by politicians. Sam Kernell has compiled convincing evidence that a central premise among American politicians is that "the president's popularity directly affects his congressional party candidates' chances for election" in midterms: Sam Kernell, "Presidential Popularity and Negative Voting: An Alternative Explanation of the Mid-Term Electoral Decline of the President's Party," paper delivered at the 1974 annual meeting of the American Political Science Association. See also the variety of interpretations of the outcome

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¹ V. O. Key, Jr., *Politics, Parties, and Pressure Groups*, 5th ed. (New York: Thomas Y. Crowell, 1964), pp. 567–568.

² Donald E. Stokes and Warren E. Miller, "Party Government and the Saliency of Congress," *Public Opinion Quarterly*, 26 (Winter, 1962), 531–546.

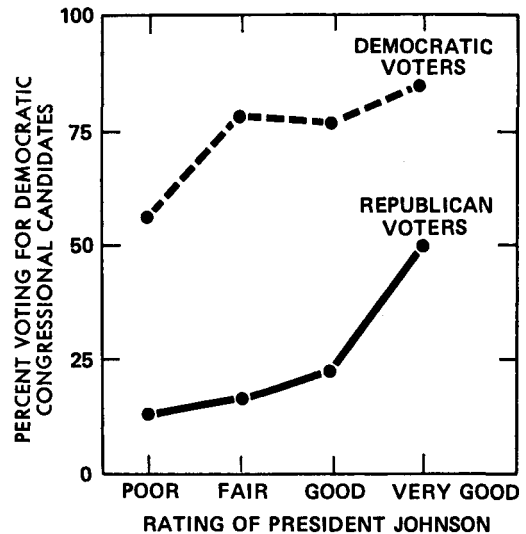
1958 midterm found that voters were simply not responding to the parties' legislative records in casting midterm ballots.

Nevertheless the prevailing view of midterm outcomes as an adjustment restoring the normal partisan equilibrium unrelated to objective events in the two years prior to the midterm is incomplete, for while it explains why the President's party should almost always be operating in the loss column, it does not account for the number of votes and seats lost by the President's party. In statistical parlance, the adjustment model of midterm congressional elections explains the location of the mean rather than variability about the mean. But, as Key indicated, "The significance of a specific midterm result comes not from the simple fact of losses by the President's party. Some loss is to be expected. It is the magnitude of the loss that is important."⁶

In this study, we seek to explain the magnitude of the national midterm loss by the President's party: why do some presidents lose fewer congressional seats at midterm than other presidents? Do the outcomes of midterm congressional elections represent the electorate's evaluation of the President's performance? Do such outcomes reflect the electorate's evaluation of the administration's management of the economy? If a relatively large proportion of the electorate approves the President's handling of his job or his management of the economy, then does his party lose less in the midterm congressional elections? Or, on the other hand, is the midterm "referendum" only "derivative" and the outcomes lacking in rational explanation? Since those citizens showing up at the polls in the midterm are probably somewhat more politically sophisticated and interested than those voting in on-year elections,⁷ the assertion that midterm outcomes are "irrational" provides a substantial challenge to the view that the electorate behaves in rational ways, or at least in ways somewhat responsive to the political environment.

Because there are no other targets available at the midterm, it is not unreasonable to expect that some voters opposed to the President might take

Figure 1. Relationship Between Evaluations of the President and Vote For Congressional Candidate, 1968.



Source: Arseneau and Wolfinger, "Voting Behavior in Congressional Elections," p. 16.

out their dissatisfaction with the incumbent administration on the congressional candidates of the President's party. Arseneau and Wolfinger, using survey data, provide some evidence that "... the public image of Congress is rather undifferentiated and, moreover, assessments of the two parties' performance are likely to be determined predominantly by evaluations of the president rather than Congress. ... congressional candidates are likely to suffer or benefit from voters' estimates of how well the president has been doing his job."⁸ Figure 1 shows their analysis of the Survey Research Center data for the 1968 election; for voters of both parties, support for Democratic congressional candidates increases by about thirty percentage points as the evaluations of President Johnson go from "poor" to "very good."

Thus our first link in the model explaining midterm outcomes is the relationship between the aggregate outcome and the electorate's evaluation of the President at the time of the election: at

of British by-elections in Chris Cook and John Ramsden, eds., *By-Elections in British Politics* (New York: St. Martin's Press, 1973). Alternative midterm models are discussed in Richard W. Boyd and James T. Murphy, "How Many Seats Will the Republicans Lose? Changes in the House: A Prediction," *New Republic*, October 24, 1970, pp. 12-14.

⁶ Key, p. 569.

⁷ This conventional description of the midterm electorate has been challenged by the evidence of Robert B. Arseneau and Raymond E. Wolfinger, "Voting Behavior in Congressional Elections," paper delivered at the 1973 annual meeting of the American Political Science Association.

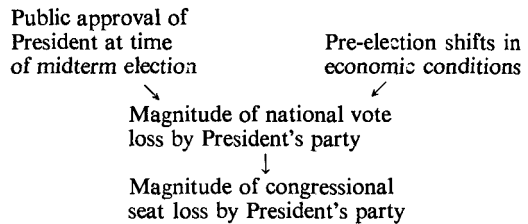
⁸ Arseneau and Wolfinger, p. 3. Several other recent studies have greatly reinforced the evidence linking evaluations of the incumbent president to electoral choices in congressional races. See Kernell, "Presidential Popularity and Negative Voting," for an extensive analysis of Gallup poll data in six midterm elections; and James E. Piereson, "Presidential Popularity and Midterm Voting at Different Electoral Levels," *American Journal of Political Science*, forthcoming, November, 1975, which uses data from the 1970 election study conducted by the Center for Political Studies at the University of Michigan.

what rate fluctuations in presidential popularity are translated into fluctuations in votes and congressional seats in off-year elections? Two kinds of evidence help assess the relationship: aggregate data for the whole nation and individual interviews in surveys of the electorate. Although this study is largely based on aggregate data, fortunately some new detailed material at the individual level also bears on the issue.

The second explanatory variable in our analysis of midterm outcomes is the performance of the economy in the year prior to the midterm. There is already available a careful study linking prevailing economic conditions to aggregate electoral outcomes, including midterms. Kramer's model explains 56 per cent of the variation in the national partisan division of vote in the midterms from 1898 to 1962.⁹ Although these results have been subjected to vigorous, but not convincing, critiques by Stigler and others, it seems clear from Kramer's analysis that midterm outcomes are responsive to changes in objective economic conditions taking place between the presidential election and the midterm itself.¹⁰

In summary, our data analysis here will estimate the impact on midterm congressional elections of the electorate's evaluations of presidential performance and of prevailing economic conditions prior to the election. Such estimates lead to predictions of the national partisan division of the congressional vote. That vote, of course, is not the ultimate measure of the midterm outcome—it is the resulting partisan distribution of seats in the House of Representatives that matters politically. As we will see, the translation of votes

into seats has changed considerably over the period covered in our study: comparable shifts in the midterm partisan division of the vote are now worth less than half as much in terms of congressional seats compared to 35 years ago¹¹—thus significantly muting the impact of midterm elections on party alignment in the House. It is therefore not enough to explain and predict the partisan division of the vote; it is necessary also to take into account the changing political consequences of that vote resulting from the changing character of the translation of votes into congressional seats. Thus the model is:



Measuring the Variables in the Model

A substantial amount of recent research has contemplated the three variables in the first stage of the model: the measurement of economic performance in relation to electoral outcomes, the meaning of the long-run Gallup poll question on approval of the President, and the proper way to interpret midterm congressional outcomes with respect to the vote and the seat loss by the President's party. It is clear from Stigler's study that the results in the aggregate analysis of congressional elections are sensitive to the particular specification of variables in the model. The problem is further complicated by the difficulty of choosing among alternative specifications, given the relatively small number of data points, the high intercorrelation between alternative measures of the same general concept, and difficulty in handling idiosyncratic problems such as third party candidacies, elections that involve unusual factors, and the like. In the face of these problems, some special attention to the particular operationalization of each variable is necessary, even though each seemingly has rather obvious empirical referents.

The most important variable to measure well is the dependent or response variable, the magnitude of the midterm loss by the President's party. As most discussions evaluating midterm losses point out, the idea of "loss" implies the question "Relative to what?"¹² The relevant comparison, it

⁹ Gerald H. Kramer, "Short-Term Fluctuations in U.S. Voting Behavior, 1896–1964," *American Political Science Review*, 65 (March, 1971), 131–143. A data error in this paper is corrected in its Bobbs-Merrill reprint (PS-498); see also Saul Goodman and Gerald H. Kramer, "Commentary on Arcelus and Meltzer, 'The Effect of Aggregate Economic Conditions on Congressional Elections,'" *American Political Science Review*, forthcoming; Gerald H. Kramer and Susan J. Lepper, "Congressional Elections," in *The Dimensions of Quantitative Research in History*, ed. William O. Aydelotte, Allan G. Bogue, and Robert William Fogel (Princeton: Princeton University Press, 1972), 256–284; and Susan J. Lepper, "Voting Behavior and Aggregate Policy Targets," *Public Choice*, 18 (Summer, 1974), 67–81.

¹⁰ George J. Stigler, "General Economic Conditions and National Elections," *American Economic Review*, 63 (May, 1973), 160–167; and further discussion by Paul W. McCracken, Arthur M. Okun, and others, pp. 169–180. Stigler's method might best be described as a "most squares" technique: find the specification that maximizes the error variance. But the outstanding work in discovering the pessimum most squares model is Francisco Arcelus and Allen H. Meltzer, "The Effect of Aggregate Economic Conditions on Congressional Elections," *American Political Science Review*, forthcoming; see the reply of Goodman and Kramer.

¹¹ On the translation of votes into seats, see Edward R. Tufte, "The Relationship Between Seats and Votes in Two-Party Systems," *American Political Science Review*, 67 (June, 1973), 540–554.

¹² Hinckley, "Interpreting House Midterm Elections;" Harvey Zeidenstein, "Measuring Congressional Seat Losses in Mid-Term Elections," *Journal of Poli-*

seems, is between the normal, long-run congressional vote for the political party of the current President and the outcome of the midterm election at hand—that is, a standardized vote loss that takes the long-run partisan trend into account:

$$\begin{array}{l} \text{standardized vote loss by} \\ \text{President's party in the } i^{\text{th}} \\ \text{midterm election} \end{array} = \begin{array}{l} \text{national congressional vote} \\ \text{for President's party in the} \\ i^{\text{th}} \text{ election} \end{array} - \begin{array}{l} \text{average national congressional} \\ \text{vote for party of current Presi-} \\ \text{dent in previous elections} \end{array}$$

Thus the loss is measured with respect to how well the party of the current President has normally done, where the normal vote is computed by averaging that party's national vote over the eight preceding both on-year and off-year congressional elections.¹³ This standardization is necessary because the Democrats have dominated postwar congressional elections; if the unstandardized vote won by the President's party is used as the response (dependent) variable, the Republican presidents would appear to do poorly. For example, when the Republicans win 48 per cent of the national congressional vote, it is, relatively, a substantial victory for that party and should be counted as such. The eight-election standardization takes this effect into account as well as yielding a model with a bit of dynamics to it.¹⁴ It is

tics, 34 (February, 1972), 272–276; and A. H. Taylor, "The Proportional Decline Hypothesis in English Elections," *Journal of the Royal Statistical Society, Series A*, 135 (1972), 365–369.

¹³ See the normalizations in William H. Flanigan and Nancy H. Zingale, "The Measurement of Electoral Change," *Political Methodology*, 1 (Summer, 1974), 49–82; also William H. Flanigan and Nancy H. Zingale, "Electoral Competition and Partisan Realignment," paper delivered at the 1973 annual meeting of the American Political Science Association. The standard discussion is, of course, Philip E. Converse, "The Concept of a Normal Vote," in Angus Campbell et al., *Elections and the Political Order* (New York: Wiley, 1966), pp. 9–39.

¹⁴ The Democratic loss in the 1938 midterm election is measured relative to the share of votes received by Democratic congressional candidates in the previous three elections (1932, 1934, and 1936), rather than the eight used for estimating the normal vote in the other midterms. The eight election normalization fails for 1938 because of the rapid and extensive realignment from 1930 to 1932; thus the averaged results of congressional elections from 1932 on gives a more reasonable estimate of the 1938 normal vote than the inclusion of several Republican dominated years prior to the realignment. The percentage share of the congressional vote received by the Democrats during that period shows the problem:

1938	50.8%
1936	56.2%
1934	56.2%
1932	56.9%
<hr/>	
1930	45.9%
1928	42.8%
1926	41.6%
1924	42.1%
1922	46.4%

straightforward, furthermore, to reconstruct the actual or predicted outcome from the standardized vote, thereby permitting pre-election predictions of the partisan division of the vote. There are many alternative ways of quantitatively as-

sessing the midterm loss.¹⁵ The elections used in the standardization could be weighted, with the heaviest weight given to the most recent elections. On-year congressional elections might be discarded altogether. A larger or smaller number of elections might be used. In general, most of the obvious alternatives are highly correlated; in addition, experiments with a variety of methods for computing the normal vote revealed that the model performed well under most reasonable alternatives. Table 1 shows the computations for the midterm elections from 1938 to 1970.

Let us now consider the explanatory variables, the public's approval of the President and the economic conditions prevailing at the time of midterm election.

The only long-run consistent measure of the public's evaluation of the President's general performance is the standard Gallup poll question asked in their monthly surveys: "Do you approve or disapprove of the way [the incumbent] is handling his job as President?"¹⁶ While the Gallup

From this series, it seems clear that a reasonable estimate of the normal Democratic vote for the 1938 election should be based on the elections of 1932, 1934, and 1936, rather than earlier years.

¹⁵ See Harvey M. Kabaker, "Estimating the Normal Vote in Congressional Elections," *Midwest Journal of Political Science*, 13 (February, 1969), 58–83.

¹⁶ The presidential approval ratings from 1946 to 1970 are from *The Gallup Opinion Index*, 64 (October, 1970), 16; the 1938 approval rate, 57 per cent, was averaged (because of inconsistencies in question wording and survey dates) from two surveys: September, 1938—"Are you for or against Roosevelt today?" 55.2 per cent; and October, 1938—"In general do you approve or disapprove of Roosevelt as President?" 59.6 percent. The source for the 1938 data is George Gallup, *The Gallup Poll* (New York: Random House, 1972), pp. 118, 122. Similar, but not identical figures are reported in a fine study by Wesley C. Clark, "Economic Aspects of a President's Popularity" (Ph.D. dissertation, University of Pennsylvania, 1943), p. 47, which also contains an extensive discussion of the early years of the series. A flawed analysis of the factors affecting the ratings is given in John E. Mueller, "Presidential Popularity from Truman to Johnson," *American Political Science Review*, 64 (March, 1970), 18–34; and in John E. Mueller, *War, Presidents and Public Opinion* (New York: Wiley, 1973). The substantive and statistical difficulties in Mueller's analysis are discussed in Richard A. Brody and Benjamin I. Page, "The Impact of Events on Presidential Popularity: The Johnson and Nixon Administrations," paper delivered at the 1972 annual

Table 1. Data for Midterm Elections

Year	V_i Nationwide Midterm Congressional Vote for Party of Incumbent President	N_i^8 Mean Congressional Vote for Party of In- cumbent President in 8 Prior Elections	$Y_i = V_i - N_i^8$ Standardized Vote Loss (-) or Gain (+) by President's Party in Midterm Election	P_i Gallup Poll Rating of Presi- dent at Time of Election	ΔE_i Yearly Change in Real Dispos- able Income Per Capita
1938	50.82%	Democratic 57.18%*	-6.36%	57%	-\$82
1946	45.27%	Democratic 52.57%	-7.30%	32%	-\$36
1950	50.04%	Democratic 52.04%	-2.00%	43%	\$99
1954	47.46%	Republican 49.79%	-2.33%	65%	-\$12
1958	43.90%	Republican 49.83%	-5.93%	56%	-\$13
1962	52.42%	Democratic 51.63%	+0.79%	67%	\$60
1966	51.33%	Democratic 53.06%	-1.73%	48%	\$96
1970	45.68%	Republican 46.66%	-0.98%	56%	\$69

* For 1938, mean is based on last three elections only. See note 14.

poll has asked for evaluations of the President since 1935 (thereby limiting our study to the midterms since 1938), the wording of the question has shifted and it was only in 1945 that the standard wording was adopted. The wording used immediately prior to the 1938 midterm, however, differs only slightly from the postwar surveys and consequently our analysis includes the 1938 survey results.¹⁷

Table 1 shows the approval ratings from the surveys taken prior to each midterm election. The simple correlation between the normalized midterm loss by the party of the President and the pre-election approval rating is .50, indicating that larger losses are associated with lower popularity.

Although we have only a single relatively consistent indicator over the years of the public's evaluation of the President, there are available, on the other hand, many different possible measures for the other dependent variable, the performance of the economy. Neither theory nor data strongly suggest a good choice. The discussions of the studies of Kramer and Stigler by McCracken, Okun, Riker and Ireland reveal many speculations and little theory—beyond the observation, agreed upon by all, that general economic conditions might somehow have an effect on some elections—that suggest specific hypotheses about which economic variables should be important or what kinds of time perspectives voters might use in evaluating the pre-election

performance of the economy.¹⁸ Kramer's empirical work has shown the political importance of inter-election shifts in real income and of inflation; both seem to have more impact on congressional elections than do shifts of ordinary magnitude in unemployment.¹⁹ The best measure of economic conditions for our model therefore appears to be pre-election changes in real disposable income per capita.²⁰ This measure may reflect the economic

¹⁸ Stigler's article itself, as well as the commentary, makes clear the lack of theoretical specificity found in current models correlating economic time series to electoral outcomes; see Stigler, "General Economic Conditions and National Elections," pp. 160-167; and further comments, 168-180. Stigler uses a two-year difference to compute the change in economic conditions for his model, on the view that voters compare the change in the economy in the current election year with that at the time of the previous election two years before. That model seems doubtful, attributing an excessively long time perspective to voters, especially for moderate economic changes. Another way to look at the matter is to consider the voter's problem as the generation of an estimate of the rate of real economic change immediately prior to the election—in order to estimate what can be expected with respect to the performance of the economy under the incumbent administration. If those expectations are good, the party of the incumbent President receives a vote; otherwise the out-party gets the vote. If this is a reasonable description of the problem facing the voter, then the voter would probably not use Stigler's method—a two-year difference in economic changes—to estimate expected or immediately past economic performance. A one-year difference is at least slightly more realistic. Additional progress on this question can probably be made by examining survey evidence at the individual level rather than by still more specifications of aggregate models.

¹⁹ Kramer, p. 139; see also Goodman and Kramer.

²⁰ The yearly change in real disposable personal income per capita (in 1958 dollars) was computed from data in *The Annual Report of the Council of Economic Advisers, 1973* (Washington, D.C.: U.S. Government Printing Office, 1973), p. 213; and *The Annual Report of the Council of Economic Advisers, 1971*, p. 215.

meeting of the American Political Science Association; and in Douglas A. Hibbs, Jr., "Problems of Statistical Estimation and Causal Inference in Time-Series Regression Models," in *Sociological Methodology, 1973-1974*, ed. Herbert Costner (San Francisco: Jossey-Bass, 1974), pp. 252-308.

¹⁷ The details of the shifting wording are in Clark, *Economic Aspects of a President's Popularity*, pp. 47, 55-60.

concerns of many voters, for it assesses the short-run shift in average economic conditions, measured in terms of real purchasing power, prevailing at the individual level—a shift in conditions for which some voters might hold the incumbent administration and the political party of the incumbent administration responsible.

In summary, our model explaining the midterm vote received by the political party of the incumbent President is:

$$Y_i = \beta_0 + \beta_1 P_i + \beta_2 (\Delta E_i) + u_i \quad (1)$$

where

Y_i = standardized midterm vote for the political party of the incumbent President in the i^{th} midterm congressional election,
 $Y_i = V_i - N_i^s$;

V_i = nationwide share of the two-party congressional vote received by political party of the incumbent President in the i^{th} midterm;

N_i^s = normal congressional vote for the political party of the incumbent President at the time of the i^{th} midterm; computed as the average, over the preceding eight congressional elections (both on- and off-years) prior to the i^{th} midterm, of the na-

tionwide share of the two-party congressional vote received by the political party of the President in office at the time of the i^{th} midterm;

P_i = percentage of sample in Gallup poll in September prior to the i^{th} midterm who approve of the job the incumbent President is doing;

ΔE_i = yearly change in real disposable personal income per capita between the year of the midterm and the previous year; and

u_i = residual or error term.

Note that the model can be rewritten to estimate the nationwide congressional vote for the President's party:

$$V_i = \beta_0 + \beta_1 P_i + \beta_2 (\Delta E_i) + \beta_3 N_i^s + u_i \quad (2)$$

Thus, while equation (1) leads to estimates of Y_i , the standardized vote loss by the President's party, equation (2) estimates V_i , the nationwide proportion of the congressional vote for the party of the President. The two models are identical, however, if β_3 is unity—for then N_i^s can be moved, in equation (2), from the right-hand to the left-

hand side of the equation. The data were used to fit equation (2) and β_3 was, in fact, very close to unity; and therefore equation (1) will be the model developed in the remainder of the analysis. Equation (1) estimates one less parameter than equation (2), an advantage since the model must be estimated on the basis of a very small number of cases. The small N and the potential fragility of the model also suggest that extraordinary tests of the model's explanatory and predictive capacity are necessary. Many such tests will be conducted, including an assessment of the model in predicting the outcome of the 1974 midterm congressional elections.

Fitting the Model and Confirming the Results

We now use the data of Table 1 to estimate the β 's, the regression coefficients, in the model.²¹ The estimate, $\hat{\beta}_1$, assesses the impact of presidential approval rating on the midterm vote; and $\hat{\beta}_2$, the impact of the pre-election change in real disposable personal income per capita on the midterm vote.

$$\text{Standardized vote loss by President's party in the midterm} = \beta_0 + \beta_1 \left[\begin{array}{c} \text{Presidential} \\ \text{popularity} \end{array} \right] + \beta_2 \left[\begin{array}{c} \text{Yearly change} \\ \text{in economic} \\ \text{conditions} \end{array} \right]$$

The idea is, of course, that the lower the approval rating of the incumbent President and the less prosperous the economy, the greater the loss of support for the President's party in the midterm congressional elections.

Table 2 shows the estimates of the model's coefficients. The results are statistically secure since the coefficients are at least four times their standard errors. The fitted equation indicates:

—A change in presidential popularity of 10 percentage points in the Gallup poll is associated with a national change of 1.3 percentage points in national midterm vote for congressional candidates of the President's party.

—A change of \$100 in real disposable personal income per capita in the year prior to the midterm election is associated with a national change of 3.5 percentage points in the midterm vote for congressional candidates of the President's party.

The fitted equation explains statistically 91.2 per cent of the variance in national midterm out-

²¹ The midterm of 1942 is omitted from the analysis because of the special effect of wartime controls on the economy and of wartime conditions on evaluations of the incumbent President. Kramer also dropped wartime years; see Kramer, p. 137.

Table 2. Multiple Regression Fitting Standardized Vote Loss by President's Party in Midterm Elections

$$Y = \beta_0 + \beta_1(P) + \beta_2(\Delta E)$$

	Regression Coefficient and (Standard Error)	Simple Correlation with Midterm Loss
Presidential approval rating (P)	$\hat{\beta}_1 = .133^*$ (.033)	.503
Yearly change in real disposable personal income per capita (ΔE)	$\hat{\beta}_2 = .035^*$ (.006)	.795

Constant ($\hat{\beta}_0$) = -11.083.

$R^2 = 0.912$.

* Statistically significant at the .01 level.

comes from 1938 to 1970;²² or, to put it another way, the correlation between the actual election results and those predicted by the model is .955, as shown in Figure 2. Since the fitted equation uses two meaningful explanatory variables, it seems reasonable to believe that in this case a successful statistical explanation is also a successful substantive explanation.

Before turning to the substantive consequences of the fitted equation, it is necessary to test the soundness of the model. Such tests are important because the model is based on a relatively short series of elections (although more than many studies of midterms)—and also because the model is apparently so successful in terms of the variance explained. Are the findings the result of some artifact?

The overall equation and the estimates of the individual regression coefficients are statistically significant at the .01 level. Let us consider four additional tests of the model: the independent replication of the estimated regression coefficients, and tests assessing the stability, postdictive quality, and predictive quality of the regression equation.

Some independent studies are consistent with estimates of the regression coefficients in this model. Kramer finds that, in congressional elections from 1896 to 1964 (including both on- and off-year congressional elections), "a 10% decrease in per capita real personal income would cost the incumbent administration 4 to 5 per cent of the congressional vote, other things being

²² In regressions of this sort, involving such a small number of degrees of freedom, some prefer to use a corrected R^2 that takes into account the loss in degrees of freedom as the coefficients are estimated. In our case, the corrected R^2 is 0.88. See Carl F. Christ, *Econometric Models and Methods* (New York: Wiley, 1966), pp. 509–510.

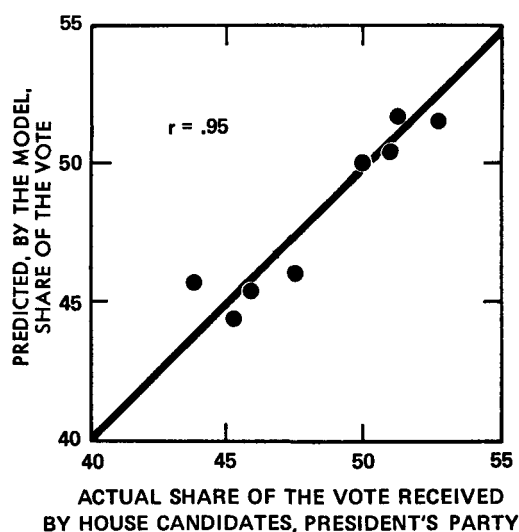


Figure 2. Actual and Predicted Share of the Two-Party Vote Received by Congressional Candidates of President's Party, Midterm Elections, 1938–1970

equal.”²³ Since the average real disposable personal income per capita in the period under study here is around \$1800, Kramer's model estimates that a shift of approximately \$180 in real disposable income would produce a shift of 4 to 5 per cent in the congressional vote. Our regression indicates that a shift of \$180 in income would produce a shift of about 6 per cent in the congressional vote. Given the differences between the studies with respect to the period and types of elections covered, the results seem quite comparable. Our short-term (1938–1970) estimate approximately matches Kramer's long-term (1896–1964) estimate of the impact of economic conditions on congressional elections.

An independent confirmation of the estimated effect of the presidential approval level on the midterm outcome comes from a study based on survey interviews from national samples of individual voters. Kernell computed voter defection rates by analyzing responses to the interviews in the Gallup poll's samples prior to the midterms of 1946, 1950, 1954, 1958, and 1962. He finds that “for every nine point change in the percentage approving the president, his party's congressional vote will change 1.4 percentage points.”²⁴ Our estimate, using aggregate data, is virtually identical. The two estimates—one based on individual interviews recording respondent's claimed vote choice in the midterm and the evaluation of the incumbent president, the other based on the aggregate approval rating and the actual vote result—were arrived at completely independently.

²³ Kramer, p. 141.

²⁴ Kernell, p. 32.

Table 3. After-the-Fact Predictive Error of the Model

Year	Actual Vote for House Candidates, President's Party	Gallup Poll Prediction*	Model Prediction	Gallup Absolute Error	Model Absolute Error
1938	50.8	54	50.8	3.2	0.0
1946	45.3	42	44.5	3.3	0.8
1950	50.0	51	50.1	1.0	0.1
1954	47.5	48.5	46.9	1.0	0.6
1958	43.9	43	45.7	0.9	1.8
1962	52.4	55.5	51.6	3.1	0.8
1966	51.3	52.5	51.7	1.2	0.4
1970	45.7	47	45.4	1.3	0.3

Average absolute error, Gallup = 1.9 percentage points.

Average absolute error, Model = 0.6 percentage points.

* National survey taken 7 to 10 days prior to the election. The question asked is "If the elections for Congress were being held today, which party would you like to see win in this congressional district, the Democratic or the Republican party?"

In our small data set, based on single readings taken once every four years immediately prior to each midterm, there is no relationship between the presidential approval rating and the pre-election shift in real disposable income. (Note that the approval rating is measured in absolute terms, rather than as a pre-election shift.) For example, the Eisenhower midterms of 1954 and 1958 reflect a popular president and a mediocre short-run economic performance. More generally, it appears that presidential approval ratings are a function of many different factors, including performance in foreign affairs, the President's personality, scandals, and large downward shifts in economic conditions.

To check the stability of the fitted equation, the model was re-estimated after excluding one election at a time from the computations.²⁵ The regression coefficients remained very stable and statistically significant, and the R^2 did not go below .89 in the re-estimates. It is clear that the estimates for the overall model are not dominated by a single set of outlying values for one election.

As another check of the adequacy of model, its after-the-fact predictions of midterm outcomes were compared with the pre-election predictions made by the Gallup poll in the national survey conducted a week to ten days before each elec-

tion.²⁶ As Table 3 shows, the model outperforms the pre-election predictions based on surveys directly asking voters how they intend to vote. Now all this is, of course, after the fact and it would be more useful to have a genuine prediction in hand prior to the election to test the model. This leads to our strongest test of the model—for we can examine its *predictive* powers in a series of historical experiments.

Suppose the model had been estimated prior to the 1970 election, using the data from the midterm elections from 1938 to 1966. The fitted equation prior to the 1970 election was:

$$\text{Standardized midterm loss} = -11.06 + .133(P) + .035(\Delta E).$$

Now let us use this model, generated from the experience from 1938 to 1966, to predict the outcome of the 1970 election. The September, 1970, level of presidential approval was 56 per cent; the 1969–1970 shift in real disposable personal income per capita was \$69. Plugging those values into the pre-1970 equation leads to a pre-election forecast of the 1970 outcome:

$$\begin{aligned} \text{Predicted 1970 normalized midterm loss} \\ &= -11.06 + .133(56) + .035(69) \\ &= -1.20 \text{ per cent.} \end{aligned}$$

Since the actual normalized loss was -0.98 per cent, the model performed well in this predictive trial. To translate these results to the actual partisan division of the vote, the pre-1970 model predicted the 1970 outcome to be 45.4 per cent of the vote for the party of the President, the Republicans; in fact, they won 45.7 per cent of the vote in 1970.

Table 4 shows the outcome of this historical

²⁶ Polls reported in Gallup, *The Gallup Poll*.

²⁵ The discarding of observations one at a time coupled with re-estimation is the first step in producing a "jackknife" estimate of a complex statistic along with a confidence interval; see Frederick Mosteller and John W. Tukey, "Data Analysis, Including Statistics," in Gardner Lindzey and Elliot Aronson, eds., *The Handbook of Social Psychology*, 2nd ed. (Reading, Massachusetts: Addison-Wesley, 1968), pp. 133–160; and Rupert G. Miller, Jr., "The Jackknife—A Review," Technical Report No. 50 (August 28, 1973), Department of Statistics, Stanford University, Stanford, California.

Table 4. Before-the-Fact Predictions of the Model

Model Based on Years	$\hat{\beta}_1$	$\hat{\beta}_2$	R^2	Predicting Election of	Vote for President's Party		Model Absolute Error	Gallup Absolute Error*
					Predicted %	Actual %		
1938-1954	.12	.032	.98	1958	46.0	43.9	2.1	0.9
1938-1958	.11	.032	.85	1962	50.8	52.4	1.6	3.1
1938-1962	.13	.036	.90	1966	51.9	51.3	0.6	1.2
1938-1966	.13	.035	.90	1970	45.4	45.7	0.3	1.3
1938-1970	.13	.035	.91	1974	39.2	41.1	1.9	1.1

* Average absolute error, Gallup = 1.5 percentage points.
Average absolute error, Model = 1.3 percentage points.

experiment for three other midterm elections—1958, 1962, and 1968. In each case, the predictions are based on a model estimated *prior* to the election predicted—that is, they are honest predictions. Note how stable the model is over the years, even though it is based on fewer and fewer elections as we go backwards in time. Table 4 shows that the model performs very well indeed in its predictions, doing even somewhat better than pre-election polls directly asking voters what party's candidate they intend to support in the upcoming midterm election. Table 4 thus provides a very strong test of an explanatory model based on non-experimental data—a test of predictive success. The before-the-fact predictive trials of the model show the following: in the four midterm elections from 1958 to 1970, the pre-election forecast generated by the model deviated by an average of 1.1 percentage points from the actual partisan division of the vote. In these tests, based on genuine prediction, the model performs successfully.

The model for the years 1938-1970 has performed well in all our statistical tests:

- high explanatory power, $R^2 = .91$
- statistical significance (.01 level) of all estimates

- independent replication, using other data or models, of parameter estimates
- no multicollinearity
- no outliers dominating estimates; stability of estimates when parts of data are discarded
- historical experiments: successful postdictions
- historical experiments: successful predictions.

This is all very nice, but how well did the model do in its predictions of the 1974 midterm congressional elections?

**The Model and the 1974 Elections:
A Difficult Test in a Landslide Election**

In the fall of 1973, I constructed Table 5—showing what the model would predict for the 1974 midterm, given varying levels of presidential approval ratings and performance of the economy. It was possible, then, to track the vote estimates for the huge changes in approval ratings and economic conditions as both President Nixon and the economy collapsed. Using data for approval rating and economic conditions, a pre-election prediction for the 1974 midterm was generated from the model. The calculations and the prediction were made public two weeks before

Table 5. Predicted Republican Congressional Vote in 1974

Predicted national congressional vote for Republicans in 1974 = $35.04 + .133 P + .035 \Delta E$, where P = per cent approving the job the President is doing ΔE = yearly change in real disposable personal income per capita					
Percentage Approving the Job President is Doing (P)	Yearly Change in Real Disposable Personal Income Per Capita (ΔE)				
	—\$100	—\$50	\$0	\$50	\$100
25%	34.9	36.6	38.4	40.1	41.9
30%	35.5	37.3	39.0	40.8	42.7
35%	36.2	37.9	39.7	41.5	43.2
40%	36.9	38.6	40.4	42.1	43.9
45%	37.5	39.3	41.0	42.8	44.5
50%	38.2	39.9	41.7	43.4	45.2
55%	38.9	40.6	42.4	44.1	45.9
60%	39.5	41.3	43.0	44.8	46.5

the election; in addition, several other people used the model on their own to generate pre-election predictions. All in all, the election of 1974 provided a particularly stern test—both explanatory variables had undergone very large short-term shifts and had reached historical extremes in the period before the election. And Mr. Ford had only been in office for three months.

The prediction for the 1974 midterm was constructed from the model:

Standardized midterm loss in 1974 (predicted)

$$= \text{predicted Republican vote in 1974} - \text{average Republican congressional vote in prior elections, 1958–1972} \\ = -11.083 + .133P + .035(\Delta E).$$

The average Republican vote over the last eight congressional elections (from 1958 to 1972) is 46.12 per cent. Substituting this value into the above equation yields the estimates shown in Table 5. The predicted Republican share of the congressional vote in 1974 is shown for a variety of combinations of popularity levels and economic conditions and the exact prediction is determined by the approval level and economic conditions prevailing immediately before election. In the months before the 1974 elections, President Ford's popularity shifted greatly:²⁷

August 16	71%
September 6	66%
September 27	50%
October 22	55%

The condition of the economy also changed greatly prior to the election; real disposable income in March, 1974 had declined about \$45 over the preceding year, but by the time of the November elections the decline was \$90. Putting the pre-election values for the approval rating and economic conditions into the equation led to the following late-October prediction for the 1974 midterm vote:

$$\text{Predicted Republican congressional vote} \\ = 35.04 + .133(55) + .035(-90) \\ = 39.2\%$$

The final pre-election Gallup poll predicted 60 per cent Democratic, 40 per cent Republican; a national phone poll by Decision Making Information led to a 62–38 prediction; and our midterm model predicted 60.8 to 39.2.²⁸ The actual vote was 58.9 to 41.1 in 1974.²⁹ Thus the error of the midterm model was 1.9 percentage points; of the Gallup poll, 1.1 points; and of the DMI poll, 3.1 points. Although the predictive error of the model

for the 1974 election was slightly above its previous average, the model still performed very well in a most difficult election.

During 1973–74, both explanatory variables in the midterm model moved toward historical extremes, both high and low: presidential approval ratings ranged between 24 and 71 per cent; and ΔE between +\$198 and -\$90; and as these variables changed, the projected midterm vote shifted. These shifts can be compared with a series of polls

taken during 1973–74 in which respondents were asked what party's candidate they intended to support in the upcoming congressional elections. Although the different polls themselves are not always consistent with one another, the projections of the midterm model follow rather well the shifts in the vote recorded in the polls (Table 6).³⁰ The dynamics of the midterm model show how economic conditions and the electorate's changing evaluations of Nixon and Ford shaped the Democratic landslide of 1974: while Ford's replacement of Nixon helped congressional Republicans by nearly six percentage points, most of that gain was offset by a declining economy and by the 15-point loss in Ford's approval rating following the pardon of Nixon.

Table 6 also indicates that the midterm model may over-respond to very extreme values in approval ratings and particularly in economic conditions; the model's projection computed in May 1973 deviates quite substantially from the Gallup poll (although less so from the Harris survey of the same month). Nevertheless the important point is not only that the model did survive the really difficult test of the 1974 midterm, but that it also helped assess the electoral effects of the

³⁰ Data sources: Gallup approval rating for October, 1974 from "Gallup Says Poll Shows Ford Popularity on Rise," *The New York Times*, October 24, 1974; other months from *The Gallup Opinion Index*, 103 (January, 1974), 3; 108 (June, 1974), 1; and 111 (September, 1974), 12. The change in real disposable income per capita is available only by quarters and the monthly values are interpolated; it should also be noted that the quarterly figures are quite unstable, with provisional and final estimates often differing substantially. The computations are based on data in Bureau of Economic Analysis, *Business Conditions Digest*, January, 1975 (Washington, D.C.: U.S. Government Printing Office, 1975), p. 69. The reports of polls asking people how they intended to vote in the 1974 congressional election are from "Poll Confirms GOP Fears," *The Washington Post*, November 4, 1974, p. A-5; "Poll: Democrats Will Sweep Into the House," *New York Post*, August 8, 1974, p. 24; and *The Gallup Opinion Index*, 110 (August, 1974), 1–4. Nonresponses have been divided equally between the two parties.

²⁷ "Gallup Says Poll Shows Ford Popularity on Rise," *The New York Times*, October 24, 1974.

²⁸ "Poll Confirms GOP Fears," *The Washington Post*, November 4, 1974, p. A5.

²⁹ Vote as reported in *The Gallup Opinion Index*, 118 (April, 1975), p. 27.

Table 6. 1974 Election Projections from the Midterm Model and Polls, 1973-1974

Date	Per Cent Approving President	Change in Real Income (Δ <i>E</i>)	Projection of Midterm Model, % Democratic	Polls, % Democratic in Upcoming Election (G = Gallup, H = Harris, DMI = Decision-Making Information)
October, 1974	55%	-\$90	61%	60%, 62% (G, DMI)
July, 1974	24%	-\$91	65%	63% (H)
May, 1974	27%	-\$78	64%	60%, 64% (H, G)
March, 1974	26%	-\$44	62%	62% (H)
January, 1974	27%	+\$22	60%	59%, 65% (H, G)
October, 1973	28%	+\$168	55%	64% (G)
September, 1973	34%	+\$168	54%	58% (H)
May, 1973	44%	+\$198	51%	55%, 60% (H, G)

political and economic earthquakes in the months prior to the election. And, of course, the experience of 1974 is clearly contrary to the textbook view of midterms—that off-year congressional elections are not much more than the electoral swing of the pendulum, mainly the consequence of differences in off-year compared to on-year turnout.

In summary, the tests of the midterm model confirm that even though the fitted equation is based on a relatively short series of elections, the quantitative results are quite secure—as indicated by the independent replications of both regression coefficients, the postdictive and predictive trials, the conventional tests of statistical significance, the pre-election predictions for the 1974 midterm, and the model’s ability to move with changing events.³¹ The midterm model also explains most of the variance in midterm outcomes. Few models of political behavior have passed such tests, particularly those of fairly complete statistical explanation, replication, and honest prediction.

We now consider the political significance of the midterm.

From Votes to Seats

The political consequences of a midterm election flow from the resulting partisan distribution of seats in the House of Representatives, rather than from the partisan distribution of the na-

tional congressional vote. Since, as we shall see, the character of the translation of votes into seats has shifted greatly over the years, the political meaning of the midterm has itself shifted.

For midterms from 1938 to 1970, the relationship between seats and votes is a moderately strong one—variations in votes explain 76 per cent of the variation in seats. Much of the strength of that relationship comes from the more extreme outcomes of 1946 and 1958; omitting those years, the vote explains less than 4 per cent of the variance in seat shares. The lack of a really strong and consistent relationship between votes and seats in midterms is a reflection of changes in the swing ratio—the rates at which votes are translated into seats—over the years. The change in the value of the midterm vote in terms of seats can be seen by comparing the gain in the nationwide congressional vote made by the out-party with their gain in House seats. In the 1938 midterm, for example, the Republicans gained 7.7 percentage points in their national congressional vote compared to their 1936 congressional vote—and the result was an 18.1 per cent gain in their share of seats in the House. This yielded a swing ratio of:

Swing ratio for 1938 midterm

$$= \frac{\% \text{ change in seats, 1936 to 1938}}{\% \text{ change in votes, 1936 to 1938}}$$
$$= \frac{18.1}{7.7} = 2.4.$$

In the 1970 midterm, the Democrats gained 3.4 percentage points in their share of the congressional vote over 1968, but only 2.8 percentage points in seats:

$$\text{Swing ratio in 1970 midterm} = \frac{2.8}{3.4} = 0.8.$$

Thus a comparable change in the midterm vote in

³¹ The model appears to over-respond to very large short-run improvements in economic conditions. Such improvements have been more typical of on-years than off-years. The model performs acceptably for ups and downs of less than \$150 per capita in real disposable income, which has been the case for all midterms since 1938. In addition, the model might be examined comparatively—for example, in British by-elections. Finally, the model could be extended for on-year elections (although Gallup did not ask the presidential approval question for incumbent presidents in the six months prior to on-year elections until the 1960s). On-year elections are clearly a much more complex problem; and the midterm model is best seen as an alternative to “surge and decline” and the similar approaches cited in footnotes 1-5.

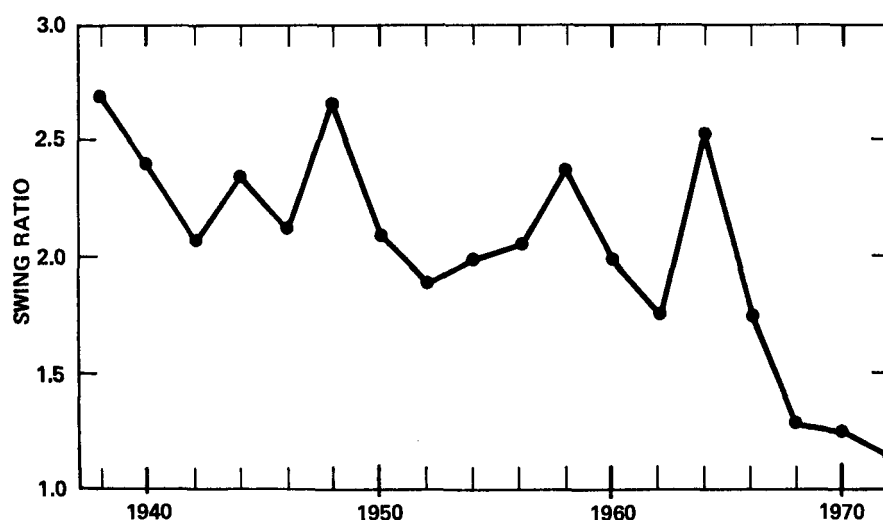


Figure 3. Swing Ratio in Congressional Elections, 1938-1972*

* The swing ratio is the percentage change in congressional seats associated with a one per cent change in the nationwide congressional vote.

the 1970 midterm was worth one-third what it was in 1938. The trend in the swing ratio over all the midterms has been:

1938	2.4
1942	2.0
1946	2.0
1950	2.1
1954	1.6
1958	2.2
1962	0.2
1966	1.8
1970	0.8
1974	1.5 (approximately)

Figure 3, recording the results of alternative estimates of the swing ratio, reveals the same pattern: a significant decline in the swing ratio over the years. The estimates of Figure 3 are computed as the least-squares slope calculated in the region within five percentage points of the actual nationwide congressional vote.³² The estimates indicate that, in a normal election, shifts in the congressional vote are worth about half of what they were twenty years ago in terms of seats in the House of Representatives.

Figure 4 shows how the electoral systems of individual states have contributed to the nationwide change in the swing ratio in midterm congressional elections over the years. The graphs compare the translation of votes into seats for the midterm congressional elections of 1950 and 1970 in four large states. Note the difference between the seats-votes curves in the midterm of 1950 com-

pared to 1970: a flat spot in the middle of the 1970 seats-votes curve has developed and, on that plateau, changes in the congressional vote in that state yield no changes at all in the partisan distribution of seats. Some of those flat spots are rather large; a party can gain ten or twelve per cent of the vote in every congressional district in a state and still not gain a single additional congressional seat. The swing ratio in such states is, for all practical purposes, zero: any change of ordinary magnitude in the vote results in no change in seats. The plateaus in the 1970 seats-votes curves are found in the region between 40 and 60 per cent of the vote for each party—right where the statewide congressional vote falls in most relatively competitive states. That is, elections are taking place on the section of the seats-votes curve that has the lowest swing ratio. The effect of all this is to secure the tenure of incumbent representatives, since they are invulnerable to vote swings occurring in typical congressional elections.³³

³² The causes of recent increases in congressional tenure are not yet clear; see David R. Mayhew, "Congressional Elections: The Case of the Vanishing Marginals," *Polity*, 6 (Spring, 1974), 295-317; Walter Dean Burnham, "Communication," and Edward R. Tufte, "Communication," *American Political Science Review*, 68 (March, 1974), 207-213; and Robert S. Erikson, "Malapportionment, Gerrymandering, and Party Fortunes in Congressional Elections," *American Political Science Review*, 66 (December, 1972), 1234-1255. Some consequences of seat changes are described in David W. Brady and Naomi B. Lynn, "Switched-Seat Congressional Districts: Their Effect on Party Voting and Public Policy," *American Journal of Political Science*, 17 (August, 1973), 528-543.

³³ This technique is described in Tufte, "Seats and Votes," pp. 549-551.

Thus the electoral system—the arrangements for the aggregation of the votes of citizens into seats in the House—does not respond consistently (and hardly responds at all in some states) to changes in the aggregate preferences of voters, even though the voters themselves are casting their ballots in a systematic and focused way in midterm congressional elections. No wonder midterm outcomes—especially when they were evaluated in terms of changes in seats rather than votes—appeared, in V.O. Key's words, as "a procedure whose strange consequences lack explanation in any theory that personifies the electorate as a rational god of vengeance and reward."³⁴

³⁴ Key, p. 568.

Conclusion

Our fundamental finding is that the vote cast in midterm congressional elections is a referendum on the performance of the President and his administration's management of the economy. Although the in-party's share of the nationwide congressional vote almost invariably declines in the midterm compared to the previous on-year election, the magnitude of that loss is substantially smaller if the President has a high level of popular approval, or if the economy is performing well, or both. The fitted model indicates that the aggregate midterm outcomes from 1938 to 1970 (omitting the wartime election of 1942) are explained by—and are predictable from—the economic condi-

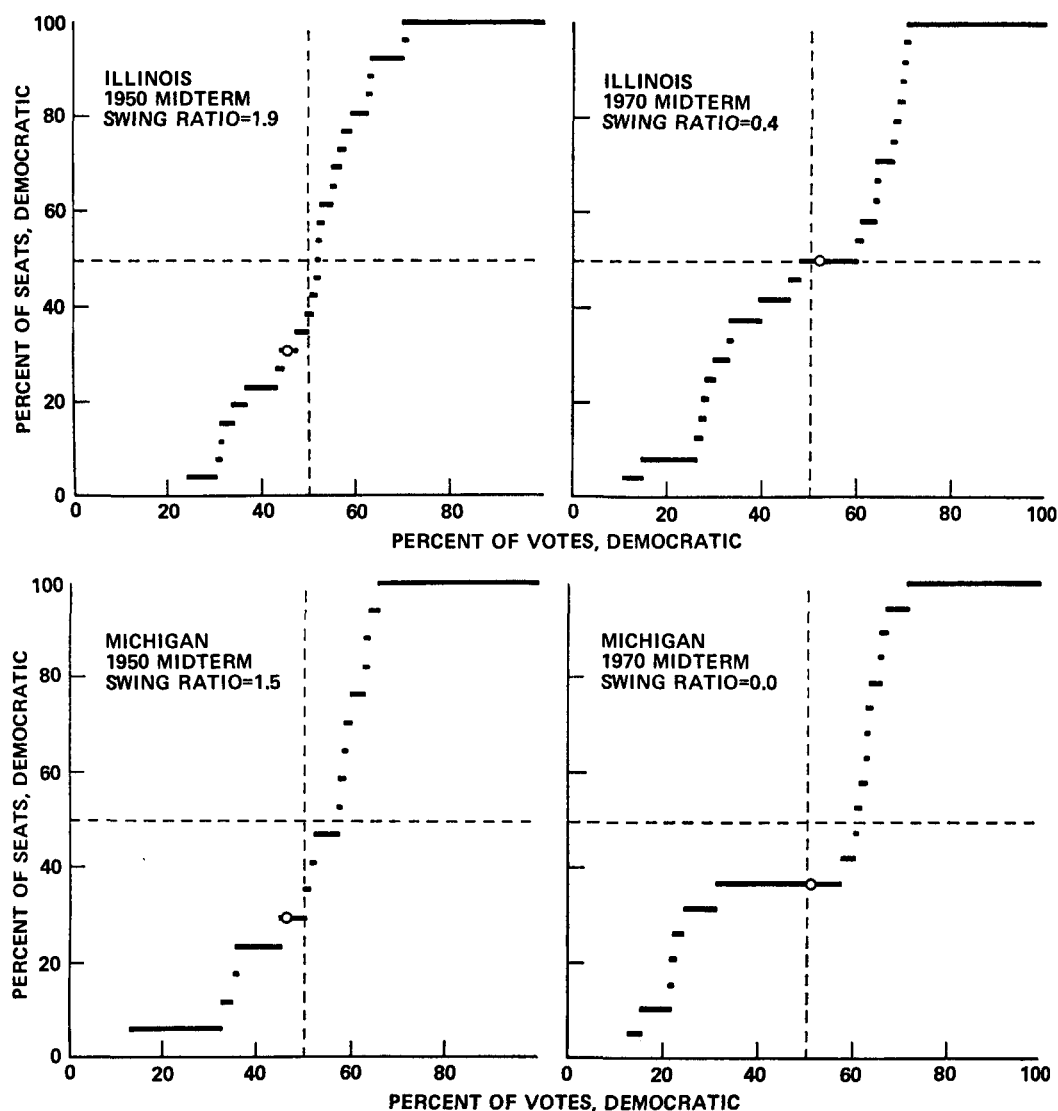


Figure 4. Votes-Seats Curves for the 1950 and 1970 Midterm Congressional Elections: Illinois, Michigan, Ohio, and Pennsylvania

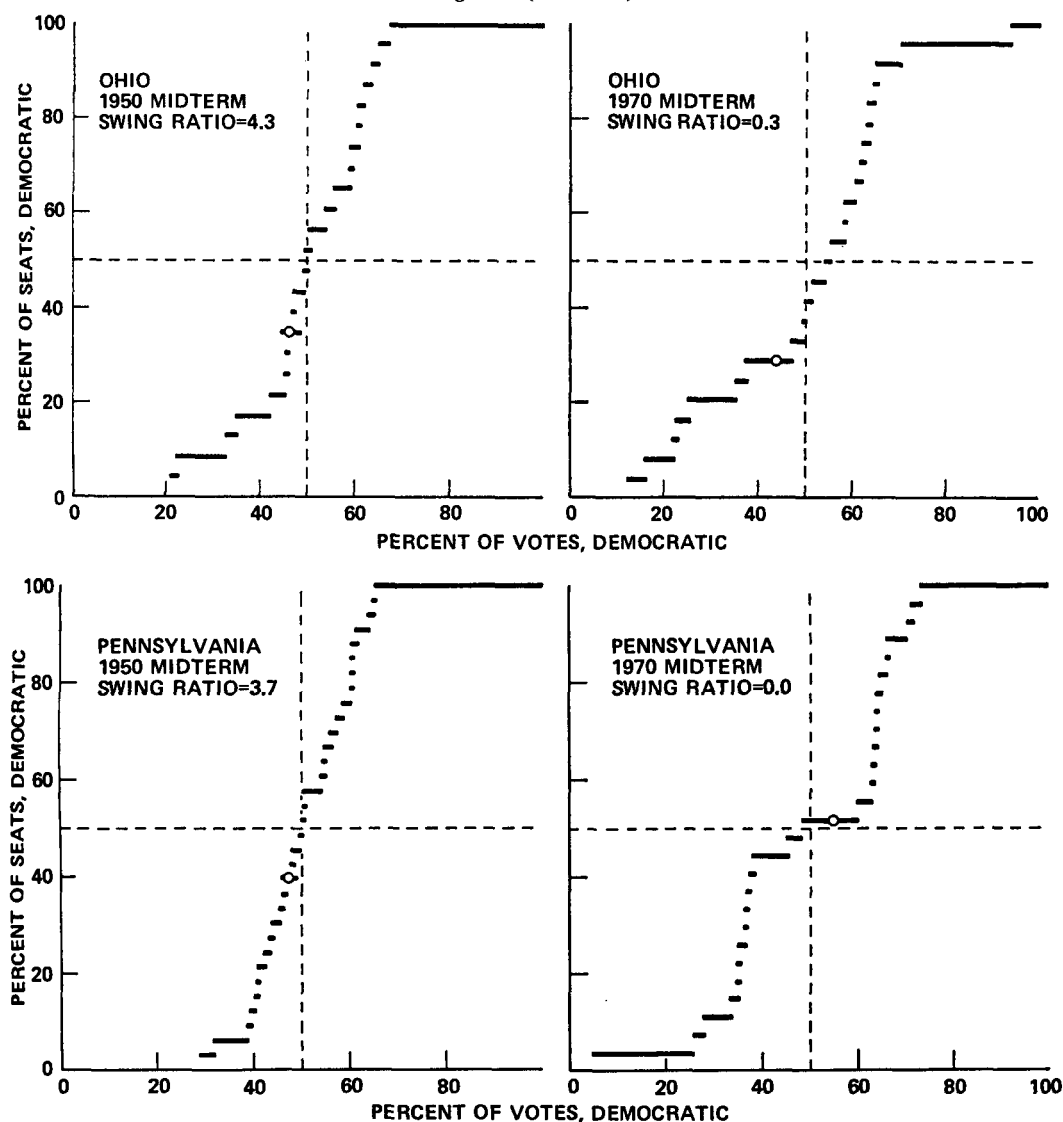
tions and the level of approval of the President prevailing at the time of the election. To be specific: a change of ten percentage points in the President's approval rating in the Gallup poll is related to a change of 1.3 percentage points in the national midterm congressional vote for the President's political party; and a change of \$50 in real disposable personal income per capita in the year of the election is related to a change of 1.8 percentage points in the vote. These estimates, although based on a relatively short series of elections, appear to be very stable and are confirmed by independent replication and by genuine predictive tests. From a statistical point of view, the model constitutes a virtually complete explanation of the aggregate vote in midterm elections: the

model explains 91 per cent of the variation in the partisan division of the vote in midterms from 1938 to 1970; the model performed successfully in predicting the outcome of the 1974 congressional election.

Our second main finding is that the midterm referendum of the nationwide congressional vote is often poorly reflected in the resulting partisan distribution of seats in the House of Representatives. Thus even though the voters, in aggregate at least, have done their best to make the midterm a referendum on the performance of the administration, their efforts are greatly muted by the structure of the electoral system.

The finding that the midterm vote does, in fact, constitute a referendum—albeit a sometimes hid-

Figure 4. (Continued)



den referendum because of shifts in the votes-seats translation—on the performance of the President and his administration's management of the economy is especially significant when compared to the political science textbook view of midterms. The standard view is, of course, that the midterm outcome derives from the prior on-year election, mostly a residual product of an electorate from which the short-term forces prevailing in the prior on-year have been subtracted. But our evidence indicates that the midterm is neither a mystery nor an automatic swing of the pendulum; the midterm vote is a referendum.

Along much more speculative lines, the midterm model also suggests a partial explanation of the fundamental fact of midterm elections, the loss of votes by the President's party. The model indicates that the loss occurs because the electorate's approval of the President has declined since the prior on-year election and because the economy is performing less well at the time of the midterm than it was two years earlier during the presidential election. Mueller has estimated the yearly decline of presidential approval at about six percentage points per year in office.³⁵ And, in general, the economy—measured here in terms of the yearly increase in real disposable income per capita—has historically performed better in on-years than in off-years.³⁶ At present, such an application of the midterm model is very speculative; I suspect that a satisfactory explanation of why the President's party always operates in the loss column in off-years will grow from a combination of the midterm model and a revised version of Campbell's "surge and decline" model (which, in revision, might place more emphasis on the surge and decline of coattail effects and less on turnout effects).

Let us conclude by considering the relevance of the findings for the eternal issue of voter rationality.

Stokes and Miller demonstrated that the midterm election could hardly be regarded as the electorate's evaluation of the legislative record of the two parties in Congress because an embarrassing number of voters lacked the minimal information required to cast a ballot informed by a judgment of a party's legislative performance. For example, a majority of those surveyed failed to recall which party controlled Congress. Less political information is demanded of voters, however, if they are to cast their midterm ballots as a referendum on the performance of the administration—only knowledge of what political party

the President belongs to. And the link between the President's party and the congressional candidate is easy, because each congressional candidate's party is printed on the ballot along with the name of the candidate.³⁷ Thus the information necessary to cast an off-year congressional vote for or against the party of the President is at hand for most voters. If the information demands on voters are minimal enough (in this case, knowing the name of the President's political party), then the aggregate performance of the electorate can be consistent with objective factors prevailing at the time of the election.

The basic idea behind the model—that, in midterm congressional elections, at least some voters reward or punish the party of President by casting their votes for representatives in line with their perceptions and evaluations of the President and economy—is a theory about the behavior of individual voters. It is important to realize, however, that all we observe in these data is the totally aggregated outcome of the individual performances of the forty million voters who turn out in midterm elections. Many different models of the underlying electorate are consistent with electoral outcomes that are collectively rational; and the observation of aggregate rationality clearly does not imply a unique specification or description of individual voters or of groups of voters making up the electorate. Aggregate studies provide evidence about aggregates. And surely for many citizens of voting age the midterm is not a referendum on the performance of the incumbent administration: some do not have the opportunity for a referendum vote since they find only one party's candidate on their ballots; others rely entirely on party affiliation, name recognition, and incumbency to guide their decisions; and a majority do not show up at the polls in the off-year.

Consequently, our highly aggregated evidence speaks only most indirectly to the central political questions concerning the rationality of voters as individuals:

- What kinds of decision rules do individual voters use?³⁸ Which voters use what decision rules?
- What conditions encourage voter rationality?
- How may these conditions be nurtured?

These concerns once again emphasize the theoretical interest (as well as the continuing practical interest) in ticket splitters, swing voters, and citizens who fail to vote in some elections—for it is, after all, the aggregate combination of these individual effects that leads to the striking collective rationality apparent in our findings here.

³⁵ Mueller, "Presidential Popularity," p. 25.

³⁶ Edward R. Tufte, "The Political Manipulation of the Economy: Influence of the Electoral Cycle on Macroeconomic Performance and Policy," manuscript, Princeton, 1974.

³⁷ Stokes and Miller, pp. 544–546.

³⁸ See Stanley Kelley, Jr. and Thad Mirer, "The Simple Act of Voting," *American Political Science Review*, 68 (June, 1974), 572–591.