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Kevin B. Grier; Joseph P. Mc Garrity

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THE EFFECT OF MACROECONOMIC FLUCTUATIONS ON THE ELECTORAL FORTUNES OF HOUSE INCUMBENTS*

KEVIN B. GRIER
Tulane University
and Centro de
Investigación
y Docencia
Económicas

and JOSEPH P. MC GARRITY
University of
Central Arkansas

ABSTRACT

The effect of macroeconomic fluctuations on House elections is a long debated, but still unresolved, issue. We argue that return rates are theoretically superior to vote shares as measures of electoral accountability and that incumbents, not candidates of the president's party, are the legislators voters hold responsible. We develop and test an incumbent accountability model using incumbent return rates in the U.S. House from 1916 to 1994, finding a strongly significant effect of both income growth and the misery index. However, the data reject both our pure incumbency model and the traditional presidential party model, indicating that both factors are relevant to voters.

THE effect of macroeconomic fluctuations on congressional elections has been debated, without reaching a general consensus, for at least the last 20 years. The well-known exchanges between G. H. Kramer (1971) and George Stigler (1973), Francisco Arcelus and Allan Meltzer (1975) and S. Goodman and Kramer (1975), and Robert Erikson (1990) and Gary Jacobson (1990), though generally excellent and informative, do not produce a clear answer. Most recently, Alberto Alesina, John Londregan, and Howard Rosenthal (1993) and Henry Chappell and Moto Suzuki (1993) report results showing insignificant coefficients on real income growth in House elections.¹

* We wish to thank without implicating Tyler Cowen, Robin Grier, Douglas Nelson, and especially Robert Tollison for helpful feedback throughout.

¹ G. H. Kramer, Short Term Fluctuations in U.S. Voting Behavior, 65 *Am. Pol. Sci. Rev.* 131 (1971); George Stigler, Micropolitics and Macroeconomics, 67 *Am. Econ. Rev.* 2

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While the specific regression equations estimated by the above authors vary widely, two assumptions provide a common foundation for all these pieces. First, electoral fluctuations are measured by changes in the share of the two-party vote a given party receives in House elections. Second, congressional incumbents are affected differently by economic fluctuations. Incumbents who are not in the president's party are *helped* electorally by recessions or inflation, while those in the president's party are *hurt*.² The recent frequency of divided government makes this feature seem potentially perverse.

Given the existing empirical gridlock on this important issue, we believe that it is reasonable to consider a new direction. Our initial approach drastically changes the two assumptions noted above. We do not use party vote share as a dependent variable, nor do we distinguish between incumbents based on whether they are in the president's party. In our empirical work, we consider incumbent legislators as a single group of "ins" and test whether economic fluctuations significantly affect the membership of the in group as measured by incumbent return rates. We find that fluctuations in real income growth, unemployment, and inflation do significantly affect the electoral fortunes of congressional incumbents. Further, a series of tests reveal that our estimated equation is stable over a long (1916–94) sample.

However, when we test the validity of our pure incumbency model versus the Kramer-style party-only model, the data reject both specifications. We conclude that voters use both incumbency and party as cues to determine accountability for economic conditions in House elections. We also conclude that fluctuations in return rates are a better measure of electoral discipline than are changes in vote share.

In Section I, we make the theoretical case for a pure incumbency model, giving our reasons for departing from the empirical tradition of examining party vote shares and assuming that recessions help out-party incumbents.

(1973); Francisco Arcelus & Allan Meltzer, *The Effect of Aggregate Economic Variables on Congressional Elections*, 69 *Am. Pol. Sci. Rev.* 1232 (1975); S. Goodman & G. H. Kramer, *The Effect of Aggregate Economic Conditions on Congressional Elections: Comment*, 69 *Am. Pol. Sci. Rev.* 1255 (1975); Robert Erickson, *Economic Conditions and the Congressional Vote: A Review of the Macrolevel Evidence*, 34 *Am. J. Pol. Sci.* 2 (1990); Gary Jacobson, *Does the Economy Matter in Mid-Term Elections?* 34 *Am. J. Pol. Sci.* 2 (1990); Alberto Alesina, John Londregan, & Howard Rosenthal, *A Model of the Political Economy of the United States*, 87 *Am. Pol. Sci. Rev.* 12 (1993); and Henry Chappell & Moto Suzuki, *Aggregate Vote Functions for the U.S. Presidency, Senate, and House*, 55 *J. Pol.* 207 (1993).

² Some authors do this by picking a specific party's vote share to be the dependent variable and then multiplying the economic variables by -1 (to change their sign) when the incumbent president is from the party the author did not pick. Other authors simply make their dependent variable the percentage of the two-party vote received by the incumbent president's party. In either case, electoral discipline is felt through vote share fluctuations, and out-party incumbents are rewarded for poor economic performance.

Section II contains a description of our data and preliminary stationarity tests. Section III presents in detail the statistical analysis, Section IV is a discussion and Section V a conclusion.

I. DO THE ASSUMPTIONS OF THE KRAMER MODEL MAKE SENSE FOR THE U.S. CONGRESS?

Kramer's paper³ is a seminal contribution that provides the foundation for the modern empirical literature. His assumptions that macroeconomic fluctuations affect House members according to their party affiliation and that vote share is a viable time-series measure of electoral discipline are the standards for research. However, we argue that these assumptions may be causing misestimation of the effect of economic fluctuations on elections in the U.S. House of Representatives.

A. *Vote Share as Electoral Discipline*

The essence of economic voting is that voters provide incentives for incumbent politicians to work for economic prosperity. Elections, at least in part, involve *ex post* settling up between voters and politicians. The problem is that vote share is not necessarily a good measure of *ex post* settling up. First, electoral discipline may involve removing incumbent politicians, and the relationship between vote share and seat change (the "swing ratio"), is not constant over time.⁴ Tufte⁵ reports that swing ratios vary widely in twentieth-century U.S. congressional elections, both over time and between midterm and presidential election dates. For example, Tufte reports a swing ratio of 1.1 (1.9) for off-year (on-year) elections from 1912 to 1930 which rises to 3.0 (3.3) for off-year (on-year) elections from 1932 to 1950 and then falls back down to 1.7 (2.1) for off-year (on-year) elections from 1952 to 1970. A 5 percentage point decline in average vote share may mean little when the swing ratio is 1, but the same swing can be an electoral catastrophe when the swing ratio is 3.

Gary Jacobson⁶ shows that the average incumbent's vote share in House elections rose from 60.8 percent in the 1950s to 63.2 percent in the 1960s to 65.5 percent in the 1970s. Yet the percentage of incumbents defeated in

³ Kramer, *supra* note 1.

⁴ The swing ratio is defined as the percentage change in seats for a group in a legislature divided by the percentage change in the vote share of that group in a given election.

⁵ Edward Tufte, *The Relationship between Seats and Votes in Two-Party Systems*, 67 *Am. Pol. Sci. Rev.* 540 (1973).

⁶ Gary Jacobson, *The Marginals Never Vanished: Incumbency and Competition in Elections to the U.S. House of Representatives: 1952–1982*, 31 *Am. J. Pol. Sci.* 126 (1987).

their reelection bids was almost constant; 7.7 percent in the 1950s, 8.5 percent in the 1960s, and 7.7 percent in the 1970s. Jacobson argues that despite higher average margins, incumbents are not any electorally safer, because the volatility of vote share has risen by a roughly similar amount.⁷ A 57 percent vote share can represent tremendous electoral security when the standard deviation of vote share is 2 percentage points. However, if the standard deviation of vote share is 5 or 6 percentage points, 57 percent is an extremely tenuous margin.

Since almost all the empirical work in the literature uses a time series of elections, vote share is an inappropriate proxy variable.⁸ In our empirical work, we will use reelection rates instead of vote share to measure electoral discipline.

B. Is Presidential Party the Dominant Force in American Electoral Politics?

The second assumption of the Kramer model that has been virtually universally adopted is that the party controlling the White House is the governing party. Kramer had some reservations about this approach in 1971; we argue that subsequent events make his assumption extremely questionable. There are two relevant historical trends that have intensified since Kramer wrote. The first is the decline of party discipline in the House (that is, the emergence of autonomous incumbents). The second is the greatly increased frequency of voters electing a president from one party and a majority of House members from the other party in the same election.

Consider first the notion of cohesive party teams. Kramer does note that "because of lack of party discipline . . . candidates who are nominally members of the same party frequently do not campaign at all like members of the same electoral 'team.'" However, he concludes, "in general, it seems that most Congressional candidates appear to most voters simply as Democrats or Republicans, and not as clearly defined personalities with

⁷ Stephen Ansolabehere, David Brady, & Morris Fiorina, *The Vanishing Marginals and Electoral Responsiveness*, 22 *Brit. J. Pol. Sci.* 21 (1993), take issue with Jacobson's specific conclusions but reinforce the two ideas presented here: that neither the swing ratio nor the cross-sectional volatility of House election results are constant over time.

⁸ There are papers that do examine the effect of real income growth on seat swings in House elections; see, for example, Michael S. Lewis-Beck & Tom Rice, *Forecasting U.S. House Elections*, 9 *Legis. Stud. Q.* 475 (1984); or James Campbell, *Predicting Seat Gains from Presidential Coattails*, 38 *Am. J. Pol. Sci.* 165 (1986), but they are mainly concerned with seat losses by presidential party incumbents in midterm elections. Beyond this, W. Mark Crain, Thomas Deaton, & Robert Tollison, *Macroeconomic Determinants of Tenure in the U.S. House of Representatives*, 6 *Atlantic Econ. J.* 79 (1978), is the only paper we have seen that advocates using incumbent turnover as a measure of electoral discipline.

their own policy views and records.” Subsequent research showing the decline of party unity in House roll call votes, the incumbency advantage, the decline of straight party voting in House elections, and the importance of constituent service presents a different scenario. Classic books, such as those by David Mayhew, Morris Fiorina, and Bruce Cain, John Ferejohn, and Fiorina⁹ all make the distinction between incumbents and challengers rather than the older split of Democrats and Republicans. The assumption that voters look only at the party label, rather than the record, of the incumbent is difficult to sustain given modern scholarship on congressional elections.¹⁰

Second, divided government, a rarity in the past, is now a modern commonplace. Before 1956, there is only one case in American electoral history where the party winning the presidency did not also carry the House.¹¹ In the 10 presidential elections from 1956 through 1992, there are six cases where a Republican president and a Democratic House were simultaneously elected. In three of those six cases, the Senate also went Democratic. In Kramer’s 1896–1964 sample, he notes that in eight of the 35 elections at least one chamber of the Congress is held by a different party than the party holding the presidency, so that divided government was a factor only about 22 percent of the time. In the 1916–94 sample we use in our empirical work, party control of the presidency and the House of Representatives is split about 43 percent of the time! In these circumstances, it is difficult to see how holding only members of the president’s party accountable for adverse economic fluctuations can be a reasonable voting strategy when they are frequently the minority party in the House.

Consider the incentives the Kramer voting rule gives to congressional incumbents of the party that does not hold the White House (out-party incumbents). With the Kramer rule, the electoral interests of out-party incumbents are *advanced* by poor economic conditions! To the extent that reelection drives congressional behavior, out-party incumbents have incentives to work to promote poor economic performance under the Kramer voting rule. Given the fact that out-party incumbents are now frequently the majority in

⁹ David Mayhew, *Congress: The Electoral Connection* (1974); Morris Fiorina, *Congress, Keystone of the Washington Establishment* (1989); and Bruce Cain, John Ferejohn, & Morris Fiorina, *The Personal Vote* (1987).

¹⁰ Mayhew puts this point as follows in his analysis of Congress, “The fact is that no theoretical treatment of the United States Congress that posits parties as analytic units will go very far. So we are left with individual congressmen, with 535 men and women rather than two parties, as units to be examined.” Mayhew, *supra* note 9, at 27. We can only add that we believe no empirical analysis based purely on party will get very far either.

¹¹ In 1848, Zachary Taylor won the presidency for the Whig party while the Democrats carried the House and Senate. See Fiorina, *supra* note 9, at 113 and 158, for a discussion of this and the controversial 1876 election.

the House (and often in the Senate as well) the Kramer voting rule often pits the president against the House on macroeconomic issues. It may not be reasonable to assume that voters would systematically reward out-party incumbents when economic conditions worsen, especially when these incumbents frequently control the House and to a lesser degree the Senate as well.

We believe that retrospective voting on national economic conditions is a rational way for voters to influence incumbent politicians to act in the general interest. The realization that there will be an *ex post* settling up with voters is one of the best incentives incumbent politicians have to serve voter interests. Work by Robert Barro, Ferejohn, and Kenneth Rogoff¹² establishes the relevance of retrospective voting by rational agents. However, any given retrospective strategy is not rational if powerful subsets of politicians (that is, out-party incumbents) are not held accountable for poor economic performance as is the case with the Kramer rule. Even more perversely, out-party incumbents are helped by poor economic performance because their hapless presidential party challengers are held accountable.

In sum, the Kramer voting rule, used almost uniformly in the literature, creates perverse incentives for large groups of powerful politicians. In our empirical work below, we model incumbents as a single group of "ins" and investigate whether macroeconomic fluctuations significantly affect reelection rates in the House of Representatives.

II. DATA AND EMPIRICAL MODEL

A. *Dependent Variable*¹³

We use House incumbents' return rates to test the hypothesis that voters hold incumbents responsible for economic conditions. The incumbent return rate measures the percentage of incumbents in Congress $t - 1$ that re-

¹² Robert Barro, *The Control of Politicians: An Economic Model*, 14 *Pub. Choice* 19 (1973); John Ferejohn, *Incumbent Performance and Electoral Control*, 50 *Pub. Choice* 5 (1986); and Kenneth Rogoff, *Equilibrium Political Budget Cycles*, 80 *Am. Econ. Rev.* 21 (1990).

¹³ We calculate the variable described below directly from source materials. To check on our accuracy, we turn to Nelson Polsby's classic article, *The Institutionalization of the United States House of Representatives*, 62 *Am. Pol. Sci. Rev.* 144 (1968). Polsby presents data on the percentage of first-term members in each Congress through 1965. While we do not use this exact variable, we construct it from the same data we use to derive incumbent return rates. For the 25 observations where our samples overlap, we find a correlation coefficient of .981 between our percentage of first-term members and Polsby's tabulation of that variable. The high correlations between the two variables provide a measure of assurance in the accuracy of both data sets.

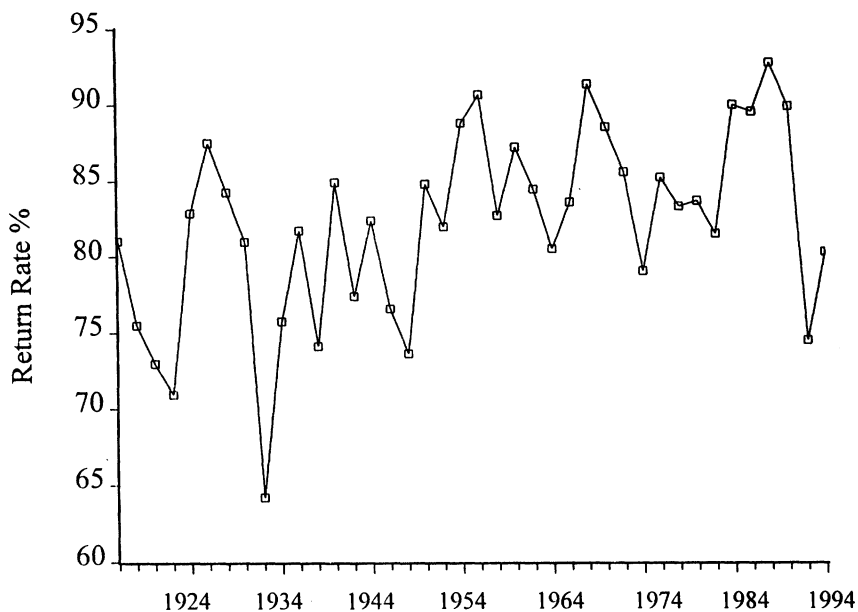


FIGURE 1.—Incumbent return rates, 1916–94

turn to Congress t .¹⁴ Over our full sample the mean return rate is .82. Figure 1 displays incumbent return rates from 1916 to 1994. As we will be using stationary regressors to explain these series, it is important to ensure the stationarity of the dependent variables. Augmented Dickey-Fuller (ADF) tests confirm that the incumbent return rate is trend stationary.¹⁵

B. Independent Variables

We employ two categories of independent variables: (1) economic performance variables and (2) variables that control for the political environment. The economic performance variables are taken from Kramer. We use INFLATION, UNEMPLOYMENT, and INCOME. INFLATION is

¹⁴ Appendix B gives exact definitions and summary statistics for all our variables. In calculating incumbent returns, we excluded incumbents who died in office or left to accept another political job, or who ran for a different elective office. However, we do not distinguish between retirement and losing a reelection bid. For some interesting evidence on the degree of strategic House retirements, see Timothy Groseclose & Keith Krehbiel, *Rubber Checks and Golden Parachutes*, 38 *Am. J. Pol. Sci.* 75 (1994).

¹⁵ Incumbent return rate, INCOME, and MISERY all reject the null hypothesis that they contain a unit root at least at the 0.05 level for ADF tests using 0 through 3 lagged difference terms. These results are reported in Appendix C.

the growth rate of the consumer price index in the year of the election. UNEMPLOYMENT is the unemployment rate in the year of the election. INCOME is the growth in real per capita personal income in the year of the election. We also examine specifications where the inflation rate is added to the unemployment rate to create the so-called MISERY index. Our ADF tests show that all of these variables are trend stationary over our sample.

There are a myriad of methods for incorporating economic fluctuations into voting equations. Some argue that rational voting requires that only current surprise fluctuations or expected future fluctuations can influence voters. Others have argued that rational voting requires voters to take into account economic fluctuations over the full 2-year term and not just the year of the election. It is not our purpose to address these issues here.¹⁶ We are trying to demonstrate the viability of incumbent rather than presidential party responsibility for economic conditions using return rates rather than vote shares. We therefore simply use the most common measure of economic variables: the actual variable in the year of the election. We do, however, want to introduce two political variables that are new to the literature and are relevant given our new approach to the question.

These political variables are REDIST and SPLIT. REDIST is a dummy variable that equals one during the first election affected by a redistricting and equals zero for all other elections. Redistricting will hurt incumbents on average because seats move across state lines but incumbents cannot. In a state losing seats, there is often an incumbent running for reelection against another incumbent, while in states gaining seats there are more seats than incumbents to run for them.¹⁷

SPLIT is a dummy variable equal to one when the majority party in the House and the party of the president are different. Divided government indicates a large degree of split-ticket voting (that is, a lessening of pure party

¹⁶ Our results are not substantively changed by redefining the economic variables over the full 2 years between elections instead of the year of the election. See Henry Chappell & William Keech, A New View of Political Accountability for Economic Performance, 79 *Am. Pol. Sci. Rev.* 10 (1986); and Sam Peltzman, How Efficient Is the Voting Market? 33 *J. Law & Econ.* 27 (1990), have excellent discussions of these specification issues.

¹⁷ As an example of the effects of redistricting, suppose state A has five seats in the House and state B has three seats. Further suppose that over time some of state A's population migrates to state B. A new census will report this shift, and seats will be reallocated between the states. The new apportionment may leave state A with only three seats and increase state B's allotment to five seats. In the election after this redistricting, state A has five incumbents and only three seats for these incumbents. Two congressmen must either not run because they do not have a district left or challenge another incumbent. In this challenge, one incumbent will win and one will lose. No matter what happens, a total of at least two incumbents will lose their seats. State B, on the other hand, will get two additional seats. Two members who are elected have to be freshmen members, since state B had only three seats before the election and can have only three nonfreshmen members.

TABLE 1
THE EFFECT OF ECONOMIC FLUCTUATIONS ON HOUSE INCUMBENTS'
REELECTION, 1916-94

Variable	Eq. (1), Incumbent Return Rate	Eq. (2), Incumbent Return Rate	Eq. (3), Incumbent Return Rate
Constant	65.108 (7.43)	66.551 (8.87)	66.686 (8.97)
Trend	.249 (3.03)	.224 (2.66)	.224 (2.67)
Growth of real per capita income	.294 (2.99)	.320 (2.68)	.313 (3.66)
INFLATION	-.303 (2.13)	-.432 (2.32)	...
UNEMPLOYMENT	-.468 (2.92)	-.402 (2.81)	...
MISERY index	-.416 (3.23)
SPLIT	...	3.075 (2.01)	2.987 (2.19)
REDIST	...	-4.522 (3.06)	-4.491 (3.02)
R^2	.441	.576	.575

NOTE.— $N = 40$ elections. Numbers in parentheses are the absolute values of t -statistics calculated using the Newey-West heteroskedasticity and autocorrelation consistent standard errors with the lag truncation parameter set at 3.

voting) and increased opportunity for incumbents to optimize individually. $SPLIT=1$ implies that constraints placed by parties on incumbent's electoral activities are relaxed and that on average, incumbents are more free to tailor their activities to their own unique constituencies and therefore should, on average, do better. We expect higher incumbent return rates under split government.

III. RESULTS

A. Basic Regressions

We estimate the model outlined above using data on 40 House elections from 1916 through 1994. Table 1 presents the ordinary least squares (OLS) estimates of our model coefficients. The reported t -statistics are generated using Newey-West heteroscedasticity and autocorrelation consistent standard errors. The dependent variable is the incumbent return rate. In equation (1) the independent variables are limited to the economic variables plus the linear trend term that proved significant in the stationarity testing. In this specification $INCOME$ is positive and significant at the .01 level, while

INFLATION is negative and significant at the .05 level and UNEMPLOYMENT is negative and significant at the .01 level. The equation explains about 44 percent of the variation in incumbent return rates and plainly demonstrates that macroeconomic conditions significantly affect the electoral fortunes of House incumbents.

Equation (2) adds our two political variables, REDIST and SPLIT, to the economic variables. These control variables significantly increase the explanatory power of the model. UNEMPLOYMENT, INFLATION, and INCOME are each properly signed and significant at least at the .05 level. As a group, the three economic variables are significant at the .01 level. SPLIT is positive and significant at the .05 level, and REDIST is negative and significant at the .01 level.

In equation (2), the coefficients on INFLATION and UNEMPLOYMENT are virtually identical, as they should be if the MISERY index (their sum) is to be a valid regressor. In equation (3) we replace the components with the MISERY index. The data do not begin to reject this restriction, and we will use MISERY as a composite macroeconomic performance index.

B. Equation Stability Tests

The results shown above are strong evidence in favor of our hypothesis that the electorate disciplines all incumbents with respect to macroeconomic fluctuations. However, we are putting data from 74 years into a single sample. To provide further evidence on the strength of our results we conduct several Chow tests of coefficient stability over our sample. We consider seven different events that may affect the accountability of incumbent members of Congress. We use the event as a break point and split the data up into two different data sets. We then perform a Chow test to test the stability of the coefficients across the two samples. Three of the seven events analyzed break the data up into subsamples before and after an event, where the first subsample contains observations before an event and the second subsample contains observations after an event. These events are the midpoint of the sample (1952), the Legislative Reorganization Act of 1970, and the Federal Election Campaign Act (FECA) of 1971. The remaining four events, war, Democratic president, divided government, and presidential elections occur several times throughout the sample. In these cases, one sample subset contains observations that concur with the event and the other subsample contains observations that do not coincide with the event.

Table A1, column 1, in Appendix A contains the relevant *F*-tests for equation (3) in Table 1 with incumbent return rate as the dependent variable. The critical value for rejecting, at the 0.05 level, the null hypothesis

of stable coefficients across both subsamples is 2.45. Given that the highest F -statistic observed is 1.13, none of the reported F -statistics are high enough to reject the null hypothesis of coefficient stability, even at the 0.10 level.

C. Incumbent Return Rates by Party

When electoral discipline is measured by turnover, and the accountable class of politicians is defined as all House incumbents, macroeconomic conditions affect House elections in a very significant and very stable manner. Our approach uncovers a more widespread role of economic conditions in House elections than can be found using the traditional model. In this respect, our model “works” better than the traditional model that regresses vote share on economic conditions mediated by presidential party. For example, in Kramer’s work, only real income growth is a significant regressor in his vote share equations. Inflation is negative but insignificant, and unemployment is actually positive, but insignificant.¹⁸ Further, Stigler managed to make many of Kramer’s results disappear in his study.

Most recent work does not even consider inflation or unemployment as potential regressors and considers only real income growth as the relevant economic factor. Even here, results using the traditional Kramer setup are mixed at best. Erikson and Jacobson cannot agree about whether income growth is significant in postwar regressions explaining vote share. Alesina, Londregan, and Rosenthal conclude that “the state of the economy does not affect House elections,” though again they only consider income growth in their equations. Lewis-Beck and Rice¹⁹ do find income growth to be a positive and significant predictor of presidential party seat change in postwar House elections.²⁰

However, we have not yet conclusively supported our pure incumbency model. We need to explicitly test whether economic conditions have the same effect on House incumbents both inside and outside of the president’s

¹⁸ Kramer does report specifications with a negative and significant inflation coefficient, but these are cases where he has replaced real income growth with nominal income growth.

¹⁹ Alesina, Londregan, & Rosenthal, *supra* note 1, at 22. Lewis-Beck & Rice, *supra* note 8, at 475–86.

²⁰ John Hibbing & John Alford, *The Electoral Impact of Economic Conditions: Who Is Held Responsible?* 25 *Am. J. Pol. Sci.* 423 (1981), argue that presidential party incumbents should be held responsible for economic performance to a greater degree than presidential party challengers. They regress nonsouthern state vote share on real income growth over a 17-election sample running from 1946 to 1978. Their coefficient for in-party incumbent is 1.4 and statistically significant. Their coefficient for out-party incumbents is $-.95$ and not significant. They also find no effect of income growth on open seat elections.

TABLE 2
 THE EFFECT OF ECONOMIC FLUCTUATIONS ON HOUSE INCUMBENTS' REELECTION,
 1916-94, BY PRESIDENTIAL AND NONPRESIDENTIAL PARTY

Variable	Eq. (1), Presidential Party Incumbent Return %	Eq. (2), Nonpresidential Party Incumbent Return %
Constant	50.239 (4.39)	89.15 (15.6)
Trend	.396 (3.19)	.142 (.20)
Growth in real per capita income	.828 (5.12)	-.345 (2.06)
MISERY index	-.582 (2.85)	-.385 (2.41)
SPLIT	-1.185 (.56)	6.221 (3.25)
REDIST	-8.824 (2.68)	-.656 (.25)
Presidential election	5.006 (2.71)	-4.888 (2.27)
R^2	.604	.420

NOTE.— $N = 40$ elections. Numbers in parentheses are the absolute values of t -statistics calculated using the Newey-West heteroskedasticity and autocorrelation consistent standard errors with the lag truncation parameter set at 3.

party.²¹ To perform such a test we must recalculate incumbent return rates by party. The results of this exercise are presented in Table 2. In equation (1) the dependent variable is the return rate for incumbents in the president's party. Equation (2) contains results for the nonpresident's party incumbent return rate. We have added PELECT, a dummy variable indicating a presidential election, to our specification from Table 1. PELECT is positive and significant in the presidential party incumbent regression and negative and significant in the nonpresidential party incumbent regression. Each equation passes the same set of stability tests we reported for the overall incumbent return rate regression. These results are shown in columns 2 and 3 of Table A1 in Appendix A.

Our pure incumbency model predicts that the coefficients on INCOME and MISERY should be identical across the two incumbent types. The Kramer-style presidential party model predicts that the coefficients on our economic variables should have the same magnitude but opposite signs across the two incumbent types. The data reject both hypotheses. INCOME has the wrong sign for the incumbency model in equation (2), while

²¹ We are indebted to Sam Peltzman for suggesting this test.

TABLE 3

THE IMPORTANCE OF CONSIDERING INCUMBENCY AND RETURN RATES WHEN STUDYING THE RELATIONSHIP BETWEEN ECONOMIC CONDITIONS AND HOUSE ELECTIONS

Variable	Eq. (1), Vote % of All Candidates from the President's Party	Eq. (2), Vote % of All Incumbents from the President's Party	Eq. (3), Return Rate of All Incumbents from the President's Party
Constant	62.99 (8.59)	50.819 (9.60)	53.723 (4.62)
Trend	-.139 (1.53)	.153 (2.88)	.333 (2.69)
Growth in real per capita income	.245 (2.09)	.316 (2.80)	.864 (3.26)
MISERY index	-.267 (1.15)	-.263 (2.41)	-.602 (2.84)
Presidential election	.508 (.49)	2.980 (1.81)	4.653 (1.99)
R^2	.277	.381	.506

NOTE.— $N = 40$ elections. Numbers in parentheses are the absolute values of t -statistics calculated using the Newey-West heteroskedasticity and autocorrelation consistent standard errors with the lag truncation parameter set at 3.

MISERY has the wrong sign for the presidential party model. Formal hypothesis tests reject both models at the 0.01 level. Our argument that the president's party is not a relevant factor and the common assumption in the literature that incumbency is not a relevant factor must be modified.

IV. DISCUSSION

We have shown that accounting for inflation, unemployment, and incumbency creates a model where economic conditions have a strongly significant impact on House elections. We have done this using a different dependent variable (the incumbent return rate) than the vote share variable generally employed in the literature. Table 3 shows how our modeling choices take us from the typical result in the literature, that economic conditions have at best a marginally significant impact on House elections, to our different conclusions.²²

In equation (1) of Table 3, we estimate a traditional Kramer-style model where the dependent variable is vote share of the president's party and incumbency is ignored. INCOME is barely significant, MISERY is com-

²² We are indebted to an anonymous referee for the suggestion to examine incumbent vote share as well as return rate.

pletely insignificant, and the R^2 is about .28. In equation (2), we take a first accounting for incumbency by defining the dependent variable as the vote share of all incumbents of the president's party. INCOME is now significant at the .01 level, MISERY at the .05 level, and the R^2 is about .38. Accounting for incumbency in a Kramer-style model reveals a much stronger effect of economic conditions on House elections than is typically found.

The dependent variable in equation (3) is the return rate of all incumbents in the president's party. INCOME and MISERY are both significant at the .01 level, and the R^2 is about .50. Consistent with the arguments we made at the beginning of the article, return rates measure ex post settling up better than vote shares, in that a change in return rates means the same thing throughout the sample.

V. CONCLUSION

It is an ironic fact that at the same time theory is providing a rationale for rational retrospective voting, the empirical evidence for macroeconomic influence on House elections is being perceived as weaker and weaker. We argue here that this weakness is due to the underlying empirical model that is commonly used. We advance a two-pronged argument that (1) all incumbents, regardless of party, should be held accountable for economic conditions and that (2) return rates are better than vote shares for reflecting electoral discipline.

While our pure incumbency model is not fully supported by the data, neither is the Kramer-style pure party model. We find that both incumbency and party mediate the effects of economic conditions on House elections. Further, we find that once both incumbency and party are considered, a range of economic conditions (namely, inflation and unemployment) wider than just per capita income growth significantly influences House election outcomes.²³ Our article provides an unambiguously positive answer to the question of whether macroeconomic fluctuations influence House elections, and it also provides a reasonable explanation of why the answer has been so elusive in the literature.

²³ In both the overall incumbent return rate regression and the presidential party return rate equation, we can redefine the economic variables over the full 2-year congressional term and still get a positive and significant coefficient on INCOME and a negative and significant coefficient on MISERY. These results are available from the authors on request.

APPENDIX A

TABLE A1
EQUATION STABILITY TESTS

Sample Splitting Event	Incumbent Return % (Eq. [3] of Table 1) (1)	President's Party Incumbent Return % (Eq. [1] of Table 2) (2)	Out-party Incumbent Return % (Eq. [2] of Table 2) (3)
Sample midpoint	.76 (.60)	1.21 (.33)	1.03 (.44)
Legislative reorganization of 1970	.66 (.68)	.47 (.85)	.60 (.75)
FECA 1971	.71 (.67)	.53 (.80)	.62 (.74)
Wars	.52 (.79)	.32 (.94)	1.35 (.27)
Democratic president	1.13 (.37)	.52 (.81)	.46 (.85)
Presidential election	.96 (.47)	1.34 (.27)	1.97 (.10)
Divided government	.44 (.81)	.39 (.88)	1.61 (.18)

NOTE.—The entries in the cells are the calculated *F*-statistics testing the null hypothesis that the coefficients of the equation in question are constant across the sample-breaking event in question. The numbers in parentheses are the “significance” levels of the test.

APPENDIX B

TABLE B1

SUMMARY STATISTICS, 1916-94

Variable	Mean	SD	Min.	Max.
Incumbent return %*	82.15	6.25	64.2	92.7
Inflation†	3.51	5.10	-10.38	16.52
UNEMPLOYMENT‡	7.04	5.09	1.20	23.60
Growth in personal income§	2.14	5.94	-17.29	15.79
MISERY	10.55	5.45	.36	24.73
President's party incumbent return %	79.37	10.51	42.93	90.95
Out-party incumbent return %	85.63	7.93	63.68	96.43
Vote %: presidential party#	49.37	5.09	37.96	58.48
Vote %: presidential party incumbent**	63.02	5.32	48.74	75.45

*Incumbent return rate is $\text{no. returned}_{t+1}/\text{seats}_t - \text{dienum}_t - \text{resnum}_{t-1}$, where seats_t are the number of nonvacant seats in Congress t found in the congressional directory. dienum_t is the number of representatives who died in the current Congress. resnum_t are the number of congressmen who resigned to run for another elected office or to take a cabinet position, judgeship, or another government job. No. returned is the number of incumbents reelected found in the Congressional Quarterly Guide to Elections (through 1984) and Congressional Quarterly Almanac (1986-94). This variable is also calculated separately for the president's party and out-party incumbents.

†Inflation is $\log(\text{CPI}_t/\text{CPI}(t-1)) * 100$, where CPI_t is the consumer price index in the year of the election and $\text{CPI}(t-1)$ is the consumer price index in the year before the election.

‡Unemployment is the adult civilian unemployment rate in the year of the election.

§Growth in personal income is $\log(\text{INC}_t/\text{INC}(t-1))$, where INC_t is the personal per capita income in the year of the election and $\text{INC}(t-1)$ is the personal per capita income in the year before the election.

||Misery is the sum of inflation and unemployment.

#Vote %: presidential party is the % of the two-party vote received by candidates from the president's party. Taken from Historical Statistics, Colonial Times to 1970, and various editions of the Statistical Abstract of the United States.

**Vote %: presidential party incumbents is the % of the two-party vote received by incumbents from the president's party when running against nonincumbent challengers from the opposition party. Any incumbent who switched parties between elections was excluded from the following election. Incumbents from districts not reporting vote totals were excluded. Taken from Congressional Quarterly's Guide to Election (1916-84) and the Congressional Quarterly Almanac (1986-94).

APPENDIX C

TABLE C1
STATIONARITY TESTS

Variable	Regressors Included	ADF <i>T</i> -statistic
Incumbent return %	C, Trend	4.71***
Incumbent return %	C, Trend, 1 lagged diff	4.21***
Incumbent return %	C, Trend, 2 lagged diff	4.20**
Incumbent return %	C, Trend, 3 lagged diff	4.62***
INCOME	C	6.05***
INCOME	C, 1 lagged diff	7.15***
INCOME	C, 2 lagged diff	3.48**
INCOME	C, 3 lagged diff	3.29**
MISERY	C	3.42**
MISERY	C, 1 lagged diff	3.20**
MISERY	C, 2 lagged diff	3.22**
MISERY	C, 3 lagged diff	3.23**

NOTE.—The ADT *T*-statistic tests the null hypothesis that the variable in question contains a unit root.

**Indicates rejection at the .05 level.

***Indicates rejection of the null at the .01 level.

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