



Election Cycles and the Economic Voter

SEAN CAREY, UNIVERSITY OF SHEFFIELD

MATTHEW J. LEBOWITZ, STONY BROOK UNIVERSITY

Many studies have sought to clarify how voters' opinions of the economy predict evaluations of leaders and parties. Following Kramer's (1983) work on the problems of studying individual-level data, many authors have employed aggregate data in dynamic analyses to estimate rival models and choose favored variables. A restriction with such analyses is that they are unable to look closely at different periods within the overall study and thus may miss the importance of contextual factors. Our study complements existing aggregate-level inferences by analyzing repeated cross-sections of opinion polls in Britain over several years. We estimate the effects of subjective economic variables on vote intention in monthly public opinion surveys and examine how the parameters vary across individuals and over time. We suggest that the choices of whether voters are forward-looking, backward-looking, egocentric or sociotropic are overly restrictive. We find that the sociotropic dimension dominates the egocentric dimension in evaluations of the government and that the relative importance of prospective and retrospective evaluations vary in predictable patterns over the election cycle.

It is an almost indisputable empirical reality that economic factors influence the popularity of a government and its electoral fortunes. Which aspects of the economy and how they are best measured tends to vary across time and space. In the UK, subjective evaluations of the economy have been found to be important for explaining support for governing parties (Sanders 1993; Clarke and Stewart 1995), although there is no consensus which subjective measure is the most appropriate.

Distinct from previous research we do not argue that one measure best explains the movement of support for the government. We expect that different types of economic evaluation will be effective at different times in the electoral cycle. For example, a model that relies upon prospective or retrospective evaluations over time will be unable completely to account for economic evaluations of the government both before and after a change in governing party at an election.

Political scientists seeking evidence of the ties between evaluations of the economy and support for the government have long argued the relative merits of using aggregate-level or individual-level data. Kramer (1983) claims that the errors of inference created by aggregation—commonly referred to as errors of ecological inference—are frequently outweighed by errors of measurement, response biases and other problems inherent in individual-level data. Following this advice, many studies of the effects of perceptions of the economy on government popularity and vote choice are set up in the form of time-serial popularity functions. In such studies, the opinions of many individuals from a single survey are aggregated into data points on a monthly or quarterly basis to develop time series variables of party approval, vote intention, leadership approval, economic evaluations and so forth. Time series analysis techniques are then used to compare the value of several aggregate economic variables as predictors of support for the govern-

ment. Through this process a great deal has been learned of the effects that subjective economic evaluations have on the electorate's opinions of parties and leaders and on the central question of vote choice.

Nevertheless, we find limitations with this line of research and address them in this article. Principally, inferences that rely on time series regressions do not account for the possibility that the effects of an independent variable may vary over the course of the series. Existing time series models tell us how economic perceptions affect governing party approval over time but do not demonstrate how that effect may be different in the months leading up to and directly following an election. Voters' knowledge about the timing of elections and their opinions about the likely outcomes of elections are additional factors that play a role in the calculus of vote intentions and approval. Contextual factors are rarely evaluated adequately in a time series setting and this justifies stepping back from aggregation of the data.

This article deals with the belief that variation across individuals and time cannot be fully evaluated using traditional time series techniques, thus we employ individual-level data across multiple time points to serve as a useful complement to existing aggregate analyses.¹ Specifically, this study attempts to bring together individual- and aggregate-level inferences by analyzing monthly opinion polls in Britain over several years. We estimate the effects of several economic variables on vote intentions and investigate how the parameters vary from one survey to the next.

Studying numerous cross-sectional surveys over time, we investigate patterns of when each economic dimension might rise to prominence and we find predictable patterns in the electoral cycle. We find strong support for variation in effects across time; prospections dominate voters' evaluations of new governments and retrospections become

¹ This method is often referred to as a 'rolling' or 'repeated' cross-sectional design (see: Johnston and Brady 2002; Sanders and Carey 2002; Gidengil and Dobrzynska 2003).

increasingly important during a government's term of office. In the following sections we briefly outline relevant economic voting literature and then discuss the debate on the relative utility of using individual- and aggregate-level data. We then present hypotheses of how the roles of the various economic evaluations change over the course of an election cycle and vary across individuals. Our analysis comprises both aggregate- and individual-level results from monthly polls in Britain.

RETROSPECTIVE, PROSPECTIVE, EGOCENTRIC, AND SOCIOTROPIC VOTING

As MacKuen, Erikson, and Stimson (1992: 597) assert: "economics moves political behavior," but how this occurs has long been a focus of empirical research. The effect of voters' opinions about the economy on their voting choices has been a source of argument among political scientists at least since Key (1968) made the argument that voters are rational actors whose voting choices are based on evaluations of past government performance. Those most strictly following Key demonstrate the importance of retrospective evaluations of pocketbooks in affecting vote choice (Tuft 1978; Fiorina 1981; Kinder, and Kiewiet 1981). This line of research has been extended to evaluations of the governing party and leaders between elections (Mueller 1970; Norpoth 1985; Clarke and Stewart 1994). Voters may also look beyond their own pocketbooks and judge the past performance of the national economy (Norpoth 1996a), look forward and choose the government that will give them the best financial future (Sanders 1991), or behave like "bankers" whose evaluations and choices are based on their perceptions of the future of the national economy (MacKuen, Enkson, Stimson 1992). Thus there are four economic dimensions—the sociotropic prospective, sociotropic retrospective, egocentric prospective, and egocentric retrospective—each with important theoretical implications and a good deal of empirical support.

The sociotropic prospective viewpoint asserts that a rational voter will reward or punish the government based on what it is doing to help the future of the national economy, with empirical support in numerous studies (Kiewiet 1981; Chappell and Keech 1985, 1991; Lewis-Beck 1988). MacKuen, Erikson, and Stimson (1992) introduce the metaphors of prospective "bankers" and retrospective "peasants" and conclude that "the electorate acts as if it develops sophisticated expectations based on economic forecasts rather than current economic conditions".

This view challenges the "established wisdom of the retrospective theory", where the electorate choose to reward or punish a government based on its record in office (Norpoth 1996a: 776). Despite the fact that voting is a prospective act where parties, leaders, or governments benefit in the future from the decisions of voters in the present, vote choice is often depicted in retrospective terms. The retrospective voting model assumes that although voters have a relatively limited capacity for understanding the economic environ-

ment they are able to use a range of economic measures to judge the incumbent government. They reward them for favorable outcomes and punish them for unfavorable ones. The objective economic situation, however, does not always match the voters' subjective assessments of it, and retrospective models often rely upon subjective retrospective measures of the economy. Norpoth (1996a), testing the relative influence of current and future economic performance on presidential approval ratings in the United States, finds overwhelming evidence for the retrospective model and little for the prospective one. Other research has found that the electorate's retrospective and prospective evaluations of the economy are both important in explaining the behavior of voters (Clarke and Stewart 1994).

For some authors, evidence of voter rationality hinges not only on their being forward looking, but also on their focus on the national economy rather than on personal finances (MacKuen, Erikson, and Stimson 1992; Norpoth 1996a). Personal finances may be influenced by idiosyncratic factors for which voters do not ascribe responsibility or blame to the government and a rational voter will not see it as the responsibility of the government to enhance their personal well-being. Alternatively, Gomez and Wilson (2001) posit that only the most sophisticated voters, capable of making the link between their personal financial status and governmental policy, exercise pocketbook voting.

The relationship between economics and incumbent support can even be expected to be stronger in the UK, since the British political system almost always leads to the leadership of a single party controlling the executive and all major economic portfolios. As in the case with American studies, research on the UK focused initially on objective measures of the economy (Goodhart and Bhansali 1970; Miller and Mackie 1973) and then on aggregated subjective evaluations of the economy (Clarke, Stewart, and Zuk 1986; Sanders, Ward, and Marsh with Fletcher 1987) to explain support for the government. Analyses of British data have found that, of the four commonly used measures of the subjective economy, it is egocentric prospective measures that correlate most strongly with patterns of party support (Clarke, Stewart, and Whiteley 1997; Sanders 1991, 1993, 2000). However, a frequent finding is that "to a considerable degree they all measure the same underlying 'feelgood' phenomenon" (Sanders and Carey 2002).

AGGREGATE-LEVEL AND INDIVIDUAL-LEVEL ANALYSIS

In addition to the debate over how the economy moves political opinions, researchers have also debated which level of data analysis is best suited to answering these questions. Kiewiet's (1983) work demonstrates the importance of sociotropic retrospections using individual-level data. At first glance, this level of analysis seems preferable given that so many theories of public opinion relate to the motivation of individual voters. One could see movement away from studying individual-level data as inevitably hampering our ability to answer some essential questions. Concerns about

errors of ecological inference—that is, making conclusions about individuals based on analyses of aggregate-level data—may reinforce our tendency to prefer individual-level data. Nevertheless, several arguments suggest that aggregate data are preferable.

Kramer (1983: 93) states that: “. . . of the two kinds of analyses, it is the *aggregate* time-series evidence—rather than that based on individual-level survey data—which is most likely to yield valid inferences about the underlying individual-level behavioral effects we are trying to measure.” Kramer’s argument is that when a group of survey respondents are asked to evaluate the economy, the economy itself is fixed. Thus, any observed individual-level variance in economic evaluations must be error. Kramer points out that aggregation is not necessarily bad and that any errors of aggregation are the lesser of two evils (94). A counter-argument here would be that Kramer’s idea of a fixed “economy” simplifies the fact that there are many indicators that voters may use to assess the health of the economy. The inflation rate, unemployment rate, growth rate, and interest rate are seldom all moving in the same direction and there should be some diversity in which indicators matter to voters, and this may explain some portion of what Kramer labels error.

As Kramer (1983) acknowledges, and Markus (1988) emphasizes, aggregate studies of economic voting cannot distinguish between pocketbook and sociotropic voting. As we intend to demonstrate, understanding variation in the links between the four main conceptualizations of the subjective economy is integral for modeling the link between the economy and support for incumbent parties when accounting for the electoral cycle. Duch and Palmer (2002) assert that the argument for aggregation presumes that individual errors are random, but their research finds there to be systematic variation as a result of heterogeneity in economic evaluations at the individual level. They conclude that “aggregate-level models of the economic-voting relationship cannot rely on aggregation as a means of escaping misleading statistical inferences due to measurement error” (161).

Where does this error come from? Kramer describes it as being primarily measurement error and response bias, but recent research suggests that the primary culprit is calculated error based on partisanship (Evans and Andersen 2006; Ladner and Wlezien 2004). That is, those favoring the governing party will report that the economy is doing well while partisans preferring a party out of government will see only doom and gloom regardless of the true state of the economy (Erikson 2004).² Thus, at least at the individual-level, subjective evaluations of the economy may be little more than partisanship, thinly veiled. In sum, these critiques lead to a preference for aggregation under the assumption that while the variance of economic evaluations is mostly error, the mean evaluation is a good summary of

the true state of the economy. MacKuen, Erikson, and Stimson (1992) claim that aggregation is a benefit because “ignorance cancels out leaving genuine information to drive the systematic time-series relationship” (795). Nevertheless, it must also be true that some information is lost when an n of 1000 per month is reduced to 1 per month.

Emerging from these arguments has been a preference to study the effects of the economy using aggregated data in a time series framework. Indeed, time series analysis is a field that to a large extent has developed in political science hand in hand with popularity functions (Mueller 1970; Clarke and Stewart 1995; Clarke and Lebo 2003). This is in part due to the fact that objective measures of the economy, such as inflation and unemployment rates, predated the use of subjective economic measures and naturally involved aggregate level research (Norpoth, Lewis-Beck, and Lafay 1991; Lewis-Beck 1988; MacKuen, Erikson, and Stimson 1992; Clarke and Stewart 1994, 1995; Norpoth 1996a).

We find that there is a drawback to this approach, in that it estimates the effect of an entire series of data and does not allow us to study the possibility of complexity over shorter periods—or even from one time point to the next. *It is an interesting contradiction that in this sense most time series analysis does not study variation over time.* For popularity functions, aggregate studies are unable to allow for the possibility that different subjective evaluations may be dominant, but at different times in the electoral cycle or for different groups of voters. Given the variability in election cycles both between and within democracies, an added layer of complexity exists. Knowledge about the timing and likely outcome of elections are also important aspects in the interpretation of the popularity functions. The remainder of this article seeks to identify patterns in the relative influence of these subjective measures and uses an intermediate data type—repeated cross-sections—to augment the body of knowledge gained from both individual- and aggregate-level studies.

ECONOMIC VOTING AND ELECTORAL CYCLES

Contrary to an implicit assumption of aggregate popularity models, the relationship between each of the economic variables and approval measures varies substantially over time. If we forgo the exercise of testing rival aggregate models we can derive testable hypotheses about *when* voters should be forward-looking or backward-looking. Of particular interest to us is how these relationships will change depending on the point in the electoral cycle.

To begin, we should not expect voters’ retrospective judgments about the economy to affect evaluations of a party new to government. Voters’ judgments on whether the national economy or their personal finances are better now than they were 12 months ago should have little to no direct influence on their opinions of a new government who cannot yet be blamed or rewarded for the state of personal or national finances. We expect that there is a *negative* relationship between retrospections and support for the party in government when there is a new government because the evaluations

² Similarly, Ladner and Wlezien (2004) find that voters who think their preferred party will win in a forthcoming election are more optimistic about the economic future than those who think their preferred party will lose.

of the past primarily refer to the influence of economic policies of an administration recently removed from office. Thus, voters' evaluations of how national and personal finances will change over the next 12 months—the period during which the new government will establish its economic policies—should be the dominant subjective economic evaluation influencing support for the governing party.

This process should continue until a governing party has been in power long enough to substantially affect the economy. At that point voters will have the capability to judge their record on the economy and use those judgments to evaluate the new government's tenure. Projections should continue to be important as predictors of voters' satisfaction with the direction of the government but retrospections should become more important, especially as opposition criticism mounts over the government's record.

We expect that the impact of retrospective evaluations will increase prior to an election and immediately after re-elections. In the run-up to an election much of the opposition and media focus will be on the governing party's record. The future government may be uncertain and so the questions asking about the financial situation in 12 months will cue different voters to envision different governments depending on their opinions of who will win the election. In cases where a change in government is thought to be almost guaranteed, we should expect a complete reversal in the relationship between projections and government evaluations—positive projections should indicate hope of improvements once the present government is thrown out. Thus, expectations about upcoming elections should play a role as well. Following a government's re-election, retrospections should play an important role as evaluations of the present government may be interpreted as a referendum on their previous term. Looking at cross-sectional data at different points in time will allow us to see if these effects are occurring.

POLITICAL CHANGE IN BRITAIN

The period of British politics we investigate is a period of relative economic stability, but one characterized by great political change. The period of 1995-2001 covers the last two years of John Major's 7-year premiership and the first administration of Tony Blair's Labour government. Major's second term, which was achieved after surprisingly winning the 1992 General Election,³ was dogged by one political scandal after another. However, the most damaging event to impact Major's government was "Black Wednesday," the crisis that led to Britain being ejected from the European Monetary System in September 1992 leading to the destruction of the image of the Conservatives as the party of economic competence (Sanders 1999). This occurred despite the fact that over the duration of John Major's second term the two most influential economic indicators continued to

improve: unemployment decreased from 9.4 percent on September 1992 to 5.5 on the eve of the 1997 General Election; inflation hovered between 2-3 percent throughout the term. But the result of the 1997 election was never in doubt. On top of the Conservative implosion, the Labour Party had been invigorated under the leadership of first John Smith, but most importantly by Tony Blair after 1994.

The factors we believe are important about this timeframe are not always present in British politics. Firstly, the date of the election in 1997 was known, at least in the sense that it could not have occurred any later than it did. Secondly, for voters in the UK the result of both the 1997 and 2001 elections were not in any doubt. These two elections provide excellent contrasts with which to test our hypotheses; in 1997 a change of government was assumed and in 2001 the re-election of Labour was near certain.⁴ In May of 1996, one year before the latest possible date for the election, Gallup reported that Conservative vote intentions stood at only 21 percent and that Prime Ministerial approval was a mere 23 percent. The April 1997 wave of the 1997 British General Election Study asked respondents "Which party will get the most MPs in the next parliament?" Of those who gave an answer, only 16.6 percent predicted a Conservative victory.⁵ The extent of the Labour landslide was astonishing to some, but the removal of the Conservative government should not have surprised anyone. Thus, with the election date known and the election result predictable we are able to see how British voters change their perceptions of the economy in line with accrued additional information.

Specifically, we expect that at least one year before the election, voters will evaluate the prospective economy with a view to a Labour government being in power after spring 1997. Thus after the summer of 1996 many voters will have a different interpretation of questions about future expectations. As the end of the Conservative government loomed, we hypothesize that the personal and national prospective questions are interpreted as meaning roughly: "How will your personal (or the national) finances change once the Labour party takes over?" A positive response indicates support for Labour—thus, these variables should be negatively related to Conservative vote intention, or at least neutralize the normally positive relationship. During this period retrospections should dominate as correlates for vote intention.

³ Surprising for pollsters, journalists, and politicians, not for political scientists: see Sanders (1991).

⁴ Unfortunately we do not have any questions in our data set that ask voters who they think will win the next election. However, the British Election Study Panel Study did ask this question in October 1996. A majority of respondents did indeed expect that the Labour party would win the next General election, 67.7%. Of those who predicted the Conservative party would form the government, 20.4 percent, these were mostly Conservative party identifiers answering, we suspect, more optimistically than expected. Evidence of an expected Labour victory is even more striking in 2001. The campaign component of the 2001 British Election Study also asked respondents which party they thought most likely to win the election, with 87.3 percent stating that they believed Labour would win the election.

⁵ British General Election Study Campaign Panel, Wave C.

In the period following the May 1997 election we hypothesize that a substantial flip should occur as projections dominate evaluations of the new government. This should occur for two reasons. Firstly, given that the Tories held power for some portion of the previous 12 months, the retrospective questions ask respondents to evaluate the previous government's economic performance.⁶ A negative correlation with both approval and Labour vote intention should be observed. Thus, beliefs about the timing and outcomes of future elections play a major role in the interpretation voters give to the economic questions and this should have an impact on the observed relationships between the subjective economic measures and vote intentions. Thus we hypothesize that projections will dominate in the post election period.

Although we expect these changes in the cyclical mechanism to be more marked in this period of British politics, we expect that variations in the effectiveness of subjective economic evaluations during an election cycle is a continuing phenomenon and one that is frequently ignored by previous studies.⁷

DYNAMICS OF ECONOMIC VOTING IN BRITAIN

To analyze electoral cycle variations in the effectiveness of subjective economic voting, we require individual-level data. One of the major drawbacks of this research design is that it requires a lot of expensive-to-collect survey data from (preferably) many consecutive periods of time.⁸ We have 70 consecutive months of public opinion data for Britain beginning in August 1995 going through until June 2001, with the exception of one month, May 1997, the month of the General Election.

There are a number of potential dependent variables to analyze in a popularity function, depending on whether we are interested in looking at vote intention, government popularity, or satisfaction with the Prime Minister. In practical terms, there is little to choose between these alternative

measures of government support.⁹ In the aggregate, for example, these variables all follow each other quite closely and correlate highly.¹⁰ We present results of the vote intention question, but have found similar results using government approval and Prime Ministerial satisfaction.

There is an ongoing debate as to which subjective economic questions should be used to best predict American presidential approval (Norpoth 1996a, b; MacKuen, Erikson, and Stimson 1996). However, in the British case there is relative agreement that the following questions tap into, respectively, the egocentric prospective, sociotropic retrospective, sociotropic prospective and egocentric retrospective dimensions:

1. How do you think the financial situation of your household will change over the next 12 months?
2. How do you think the general economic situation in this country has changed over the last 12 months?
3. How do you think the general economic situation in this country will develop over the next 12 months?
4. How does the financial situation of your household now compare with what it was 12 months ago?¹¹

For contrast with our repeated cross-sections results below, we begin with aggregate-level models that follow the steps common to aggregate-level analyses. First, we use our individual-level surveys to create a monthly measure of the percentage of respondents (including leaners) who said they intended to vote for the incumbent government for the August 1995-June 2001 period.¹² Second, we chose two important political events, the petrol crisis of September 2000 and the General Election of May 1997 to explain short-term fluctuations in vote intention. Third, using recent advances in time-series techniques we ran an Autoregressive Fractionally Integrated Moving Average (ARFIMA) model of vote intentions that included as independent variables, the two political interventions and a monthly measure of egocentric retrospections.¹³ Next, we repeat this

⁶ This effect is obviously observed most strongly immediately following the election but we expect it to continue to have an effect until Labour has been in office for 1 year and thereby the government in office '12 months ago' is the same as that in power today.

⁷ Variations in the efficacy of subjective economic measures should also vary depending upon the tenure of leaders. Changes in leadership between elections—such as John Major's replacement of Margaret Thatcher in 1990—can affect the interpretation of questions about the future and past economic situation. A new leader may not be held responsible for the past performance of his/her party and the anticipation of a new leader can lead to a disjoint between expectations for the economic future and current government performance (see Clarke and Stewart 1995). Thus, several factors—the timing of, and expectations about, upcoming elections and leadership changes—should play a role in understanding how we interpret voters' relative emphasis on future and past economic conditions in their evaluations of governments. However, there are no incumbent leadership changes during the timeframe of our data to test this hypothesis.

⁸ We are very grateful to Harold Clarke, David Sanders, Marianne Stewart and Paul Whiteley for sharing their data with us.

⁹ Questions used are as follows: Government Popularity: "Do you approve or disapprove of the Government's record to date?"; Prime Ministerial Approval: "Are you satisfied or dissatisfied with the way Mr Major/Blair is doing his job as Prime Minister?"; Vote intention: "If there were a General Election tomorrow, which party would you vote for?" If the respondent replies 'don't know' or 'none' to the vote intention question a follow-up question is asked: "Which party would you be most inclined to vote for?"

¹⁰ In the aggregate .93, .96 and .97 and at the individual level .61, .61 and .63.

¹¹ Possible responses to each question are: Get/got a lot better, get/got a little better, stay(ed) the same, get/got a little worse or get/got a lot worse. We use positive, neutral and negative responses to these questions as predictors of vote intention in Britain.

¹² For May, 1997 we impute the values of June, 1997.

¹³ Each of the dependent and independent variables are tested for their precise level of integration and differenced by that value prior to modelling. Following Clarke and Lebo (2003), we also estimated this model whilst including PM approval and a fractional error correction mechanism (FECM) to account for the long-run equilibrium between PM

≡ TABLE 1
ARFIMA ERROR CORRECTION MODELS OF PARTY SUPPORT IN BRITAIN, 1995–2001

	Egocentric Retrospections	Egocentric Prospections	Sociotropic Retrospections	Sociotropic Prospections	All “Horseshoe”
<i>Independent Variables</i>					
Constant	-0.437† (0.517)	0.435 (0.476)	0.413 (0.413)	0.531 (0.423)	-0.018 (0.491)
<i>Subjective Economic Variables</i>					
Δ^d Egocentric Retrospections	0.695** (0.184) t = 3.77	X	X	X	0.380* (0.218) t = 1.75
Δ^d Egocentric Prospections	X	0.449* (0.195) t = 2.30	X	X	-0.173 (0.208) t = -0.83
Δ^d Sociotropic Retrospections	X	X	0.564** (0.108) t = 5.23	X	0.247 (0.180) t = 1.38
Δ^d Sociotropic Prospections	X	X	X	0.474** (0.100) t = 4.76	0.283* (0.148) t = 1.91
<i>Political Events</i>					
Petrol Crisis	-6.365** (2.621)	-5.605* (2.909)	-6.994** (2.407)	-6.313** (2.486)	-6.634** (2.50)
Election 1997	12.997** (2.597)	12.021** (2.798)	10.614** (2.450)	10.530** (2.526)	10.833** (2.44)
<i>Diagnostics</i>					
R ²	0.439	0.367	0.519	0.493	0.559
Standard Error of Estimate	3.672	3.902	3.399	3.490	3.333
Sum of Squared Residuals	862.942	974.288	739.263	779.445	677.593
Durbin Watson Statistic	1.35	1.52	1.49	1.53	1.31

Notes: N = 70

†Coefficient. Standard errors are in parentheses.

*Significant at $p \leq .05$ level (one-tail test).

**Significant at $p \leq .01$ level (one-tail test).

model another 3 times, substituting in turn each of the 3 remaining subjective measures.

The first four columns of Table 1 present the results of these four models. In each model the respective subjective evaluation has a statistically significant effect on vote intention as do the petrol crisis and the election of 1997. But which subjective economic variable works best? Relying on the relative sizes of the coefficients, egocentric retrospections is the winner here with a coefficient 23 percent larger than its nearest competitor: 0.7 compared to 0.56, 0.47, and 0.45. This means that a 1 percent increase in the percentage

of British voters who say their personal finances are better now than they were 12 months ago is associated with a 0.7 percent increase in governing party vote intention. Thus our verdict here is to conclude that the British electorate is just as Key would have expected—concerned with the past and with their pocketbooks.

As an additional test, all four of the subjective measures are used in a single model of governing party vote intention. The final column of Table 1 presents a “horseshoe” of the four variables. When all are used simultaneously, egocentric retrospections again win with the largest coefficient, 0.38. Sociotropic prospections are still significant, but with a coefficient of 0.28 place a distant second. Sociotropic retrospections and egocentric prospections cease to be significant and the sign of the latter’s coefficient actually becomes negative. From this we might conclude that whatever predictive value these two variables have in columns two and three is

approval and vote intention. The models shown match most closely the specifications to follow but the results we are interested in—the relative importance of the four subjective evaluations—are the same in either set of models. See Lebo *et al* (2000) for a discussion of ARFIMA techniques and fractional differencing.

merely the result of their commonality with the two front-runners. Thus, our aggregate-level results are doubly decisive—in both comparisons, egocentric retrospections are the most important predictors of vote intention.

These convincing results are, however, incomplete. We would be premature to make the blanket statement that the British electorate relies on the egocentric retrospective dimension and, worse still, would commit an ecological fallacy by making the faulty inference that the British voter is a pocketbook voter. Estimating parameters using individual-level data one month at a time gives us more interpretative leverage than we can get from aggregate time series estimates that are unable to account for contextual differences. Allowing for contextual factors reveals much more complexity—but the complexity is predictable.

In the individual-level analyses, all four economic variables are included in each model. It has been argued that in many cases these survey responses are little more than veiled partisanship (Erikson 2004). Since our models estimate the effects of the economic variables on vote intention, this means that the problem of endogeneity is present. For our purposes, however, the statistical consequences of endogeneity are mitigated by the fact that we are interested in the relative values of our estimated parameters rather than their actual values.¹⁴ Concerns of possible collinearity in our models can be countered by the fact that correlations between these variables are low,¹⁵ suggesting that they do in fact tap into different aspects of economic perceptions. We also include a number of standard control variables used in other individual-level vote functions using British data, including gender, education and home-ownership.¹⁶

To investigate the relative importance of the subjective evaluations over the course of the electoral cycle we run a logistic regression of incumbent vote intention in each of our 70 months of individual-level data.¹⁷ We do not have the space to show all 70 regressions, but a selection of results

from 7 of the 70 months is shown in Table 2.¹⁸ These results demonstrate there are major differences in the effectiveness of variables in the economic voting model between months. A closer investigation illustrates that these differences are understandable, systematic and broadly as expected.

The first column shows results from October 1995, still in the middle of the electoral cycle. Both sociotropic variables are statistically significant, as is the personal retrospective variable. Comparing the size of the coefficients the sociotropic prospective variable clearly has more substantive impact on vote intention than the other economic variables.¹⁹ A change from negative sociotropic prospections to positive ones will, with all else constant, increase a voter's probability of supporting the incumbent Conservative party by 0.35. The same change in the sociotropic retrospective variable will have an increase in the likelihood of supporting the government of 0.2.

By the summer of 1996 political media talk is firmly beginning to focus on an impending election over the next 12 months and there is a strong likelihood that in 12 months time Labour will be in power. Thus, the relationship between sociotropic prospections and vote intention in June 1996 is moving towards the negative as a positive outlook for “12 months from now” begins to be potentially interpreted as “once Labour is in government.” At this point both sociotropic variables are statistically significant, but now the impact of each variable is very similar, with a predicted probability of increasing support for the party of government by 0.18 and 0.22 given a one unit change in economic evaluations. Neither egocentric variable is significant.

By December 1996 it is clear for the electorate that there will be an election within the next six months, and, based on a wealth of polling data and media concentration, a change in the government. There is a marked change in the effectiveness of the economic evaluations variables. The National prospections variable—which had the best explanatory power a year beforehand—is no longer statistically significant. By December 1996 neither prospective variable is an effective predictor of vote intention, but both retrospective variables are significant, with the sociotropic version demonstrating the greatest substantive impact. In March 1997, the month the date of the impending election was officially announced, this trend is repeated with the sociotropic prospections coefficient becoming negative, although non-significant.

To demonstrate more directly the effects of expectations about the likely outcome of the 1997 election, Table 3 compares voters who expected a Conservative victory to those who expected a change of government. While our monthly surveys do not ask respondents their expectations for the

¹⁴ As an additional check, we supplement our main findings with analyses incorporating variables for Labour/Conservative identifiers thereby controlling for partisanship and reducing any endogeneity bias. Whilst the trends of the subjective economic variables found with these models are generally closely related to those reported here (although with smaller magnitudes), there are some months of data where there is too little variation between the identification and vote intention questions to reliably estimate the latter. This reinforces research that suggests that traditional measures of party identification in Britain are essentially measuring voting intention (Sanders *et al.* 2003, Bartle 1999, 2001).

¹⁵ The highest correlation between these four variables is 0.45 (national retrospections and national prospections).

¹⁶ See, for example Sanders (2003). We also tested our models including a battery of other control variables for which we have data for some of the months, although not all. These include variables accounting for age, income, social class and union membership. None of these controls substantively alter the findings of our variables of interest, the subjective economic evaluations.

¹⁷ Each month includes an average of 900 cases, with the exception of November and December 2001, where only half the sample were asked the subjective economic evaluation questions.

¹⁸ Note that in none of these models does the variance inflation factor (VIF) rise above two for any variable, thus alleviating concerns about multicollinearity.

¹⁹ Note that we are comparing like with like here. All economic variables are variables composed of questions with the same outcome categories and the distributions of each of the variables are very similar.

TABLE 2
 EXPLAINING PARTY SUPPORT IN BRITAIN USING SUBJECTIVE ECONOMIC EVALUATIONS

	October 1995	June 1996	December 1996	March 1997	July 1997	October 1998	February 2001	
National Retrospections	.67** (.138)	.69** (.134)	.97** (.145)	1.00** (.120)	-.31** (.107)	.39** (.094)	.74** (.105)	
National Prospections	1.24** (.232)	.62** (.151)	.23 (.149)	-.11 (.130)	1.12** (.105)	.54** (.091)	.32** (.113)	
Personal Retrospections	.30* (.151)	.18 (.142)	.42** (.151)	.66** (.126)	-.06 (.121)	.35** (.106)	.48** (.105)	
Personal Prospections	-.08 (.162)	.18 (.152)	.12 (.156)	.15 (.132)	.57** (.119)	.29** (.109)	.05 (.122)	
Education	-.02 (.199)	-.03 (.188)	-.20 (.202)	-.30 (.180)	-.28 (.163)	-.10 (.144)	-.14 (.154)	
Gender (male)	-.25 (.196)	-.48* (.189)	-.06 (.198)	-.35 (.180)	-.02 (.162)	.007 (.146)	-.11 (.152)	
Owner-occupier	.77** (.227)	.47* (.204)	.96** (.237)	.84** (.222)	-.30 (.180)	-.11 (.160)	-.21 (.182)	
Constant	-1.71** (.228)	-1.42** (.204)	-1.85** (.246)	-1.61** (.226)	.50** (.179)	.37** (.152)	-.19 (.179)	
Chi ² (d.f.)	218.7 (7)	142.4 (7)	135.9 (7)	170.8 (7)	256.6 (7)	161.8 (7)	159.8 (7)	
Log Likelihood	-348.5	-386.4	-328.5	-394.54	-476.9	-585.2	-517.1	
% Correctly predicted	83.2	78.4	80.0	78.0	73.1	67.2	69.0	
N	875	879	740	851	882	961	874	

Notes: ** $p \leq .01$, * $p \leq .05$;

Figures are Logit coefficients with standard errors in parentheses.

≡ TABLE 3
EFFECTS OF BELIEFS ABOUT THE OUTCOME OF THE 1997 ELECTION

	Conservatives Will Win		Conservatives Won't Win	
	Logit Coef. (s.e.)	z	Logit Coef. (s.e.)	z
Personal Retrospections	.268 (.184)	1.45	.604 (.108)	5.61**
Personal Prospections	.164 (.208)	0.79	-.204 (.112)	-1.83*
Education	.427 (.265)	1.61	.170 (.148)	1.15
Male	.294 (.275)	1.07	-.011 (.145)	-0.08
Owner-occupier	.740 (.282)	2.62**	.374 (.183)	2.05*
Constant	-.856 (-.270)	-3.16**	-1.815 (.182)	-9.95**
Chi ² (d.f.)	17.13(5)		44.88(5)	
Log likelihood	-176.4		-608.0	
% Correctly predicted	62.9		81.1	
N	267		1299	

Notes:** $p \leq .01$, * $p \leq .05$ (one-tailed test);

Dependent Variable: Conservative Party vote intention = 1, other party = 0;

Data from wave 3 of the 1997 British General Election Panel Study, April 1997.

1997 election, the question is asked in the 1997 British Election Campaign Study, conducted in April 1997. For those expecting a Conservative victory the effect of personal prospctions is positive, though not significant.²⁰ In contrast, there is a significant negative relationship between personal prospctions and Conservative vote intention for respondents expecting a change in government. That is, those believing the Conservatives are on their way out of office translate beliefs of a better future with Labour into dissatisfaction with the current government.

Returning to Table 2, we see that from July 1997, after the election, there is a clear flip in the economic evaluations results. As we would expect, the new government of Tony Blair can hardly be held to account for the economy of the previous 12 months, and this is clearly demonstrated by the results for the retrospective variables. Both retrospective variables are negatively related to support for the new Labour government as expected. The measure of sociotropic retrospections is even statistically significant, demonstrating that a negative view of the previous 12 months of the national economy increases support for the newly-elected government. There has been a complete turnaround in the explana-

tory power of the prospective variables, with both statistically significant, the egocentric version for the first time in our series. Clearly, in the immediate aftermath of Labour's landslide election victory a positive expectation of both an individual's economic well-being and the country's economic future helps to explain support for the governing party.

The next column of Table 2 shows the results after Tony Blair's Labour government has been in office for over a year. Unlike the previous months shown, each of the economic variables is statistically significant and positive in October 1998. The substantive effects of the sociotropic variables are similar and slightly larger than the egocentric variables. Thus, after a year and a half in office voters are using retrospective economic evaluations as well as prospctions to inform their voting intentions. The final column in Table 2 shows the results from February 2001, a few months before the eventual election in June.²¹ As we saw before the 1997 election, retrospective evaluations dominate as election pre-campaigning focuses on the government's economic record. One key difference from results prior to the 1997 election is that sociotropic prospctions remain a significant predictor of incumbent vote intentions. This is to be expected because the result of the impending election was, once again, not in doubt. The only difference four years later being that the

²⁰ The national prospctions question is not asked in this survey. Given the weaker effects of the personal measures in the Gallup data, we would expect stronger results had we been able to use the national measures.

²¹ The election was popularly expected earlier than this date, but was delayed two months due to the foot and mouth crisis.

incumbent government was clearly going to win the election and remain in office.²² Thus the link between prospective evaluations of the national economy and vote intention for the government remains.

DISCUSSION

Previous aggregate studies of British popularity functions have concluded that of the possible links between the subjective economy and voting intention in Britain it is the personal prospective dimension that dominates (Sanders 1993; Clarke, Stewart, and Whiteley 1997). Other research has found that, although this variable might not be the only important dimension for explaining popularity functions in aggregate studies, it is at least as important as other subjective economic indicators (Clarke and Stewart 1995; Clarke, Ho, and Stewart 2000). Our results at the individual-level are at odds with these aggregate findings. In the final months of John Major's government, the variable measuring egocentric prospections is statistically significant just twice in 21 months, and both times with a negative coefficient. Certainly in the final years of this government, voters are not using positive expectations for their pocketbook to reward the party in government.

The flipside of this finding is the results for the national retrospections variable. In each of the pre-election months that we investigate, we find the variable is statistically significant and positive, as we would expect. Clearly, positive retrospective economic evaluations are strongly aligned to positive voting intentions for the Major government. However, and not surprisingly, retrospective voting plays no part in explaining support for the governing party in the first six months of Tony Blair's administration. Indeed, we would have found it surprising if it had; after all when asked "over the last 12 months. . ." the voter would be evaluating the previous administration.

Looking more closely at the individual time periods studied there are some identifiable themes. In the mid-term periods of 1995-1996 and late 1998-2000 sociotropic retrospections and prospections are equally as important in explaining vote intentions. Even in the middle of a term neither of the evaluations is clearly dominant and further study is required to see if other factors, once controlled for, could decide between the subjective measures.

In early 1997 the impending Labour government means that the question "Do you expect conditions to be better in 12 months?" is interpreted to mean "Will the economy be better once Labour is in power?" Thus, we expect a positive response to the question from a voter with a positive outlook of Labour's potential management of the economy and the correlation between economic prospections and governing party approval should be negative. Given this and the

fact that in early 1997 British voters could look back on almost 18 years of Conservative economic policies and their results, it is no surprise that retrospective evaluations dominate in the run-up to the election. Post-Election prospections dominate as links between governing party approval and retrospections are irrelevant. Voters will approve or disapprove based on where they perceive the Labour Party is taking them—voters know that where they are has little to do with Tony Blair and the Labour government. These trends can be seen in Figure 1.

In Figures 1 and 2 we summarize the results from all 70 regressions from August 1995 to June 2001. Both Figures graph the change in the predicted probabilities of incumbent party vote intention for a change from negative to positive views of the subjective economy in each of our four variables.²³ Figure 1 allows for direct comparison between the effects of the sociotropic and egocentric variables, and Figure 2 for prospective and retrospective. Some general themes can be observed in these lines. *In particular, Figure 2 demonstrates that for British voters the sociotropic dimension dominates the egocentric dimension.* Sociotropic prospections have an overwhelmingly greater substantive effect than egocentric prospections (68 of 70 months) and sociotropic retrospections consistently outperform egocentric retrospections (62 of 70 months). Thus, when determining their vote intention, British voters rely far more on their views of the national economy than on their personal finances.²⁴ Further patterns are evident as well.

The sociotropic prospective variable, which has a major substantive impact during 1995 and early 1996, decreases in explanatory power as the election approaches, but returns to primary focus after the Blair election victory. Almost the opposite effect is seen with the sociotropic retrospective variable, which increases in substantive impact in the run up to the election, but has no explanatory power for almost a year following the election. Prior to May 1997 the egocentric dimensions have a far smaller impact on incumbent voting intentions, although the retrospective element does pick up a few months before each election. Immediately after the 1997 election, however, the personal prospective variable jumps in explanatory power. As voters equate optimism for their economic future with support for the new government.

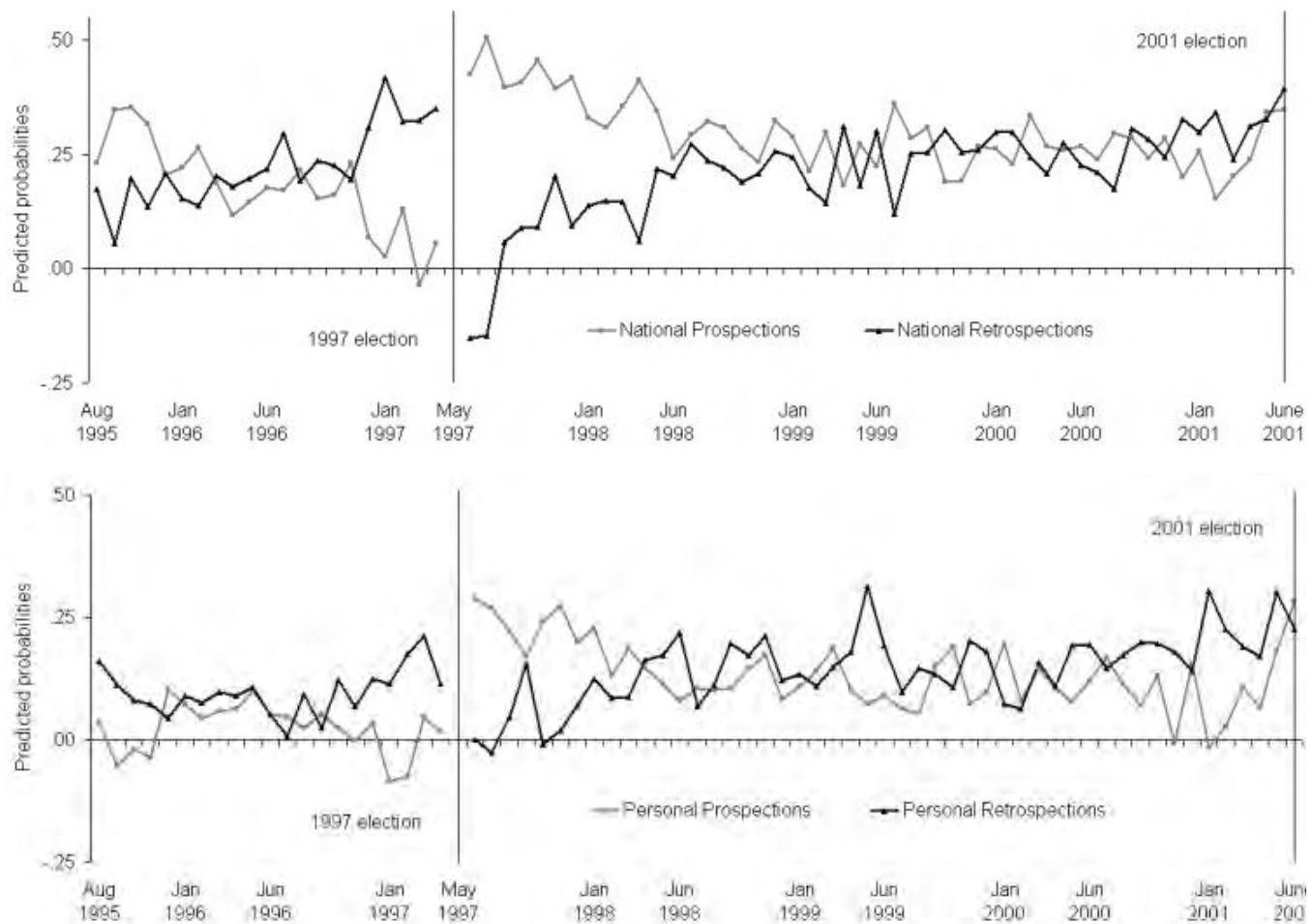
Note also from Figure 1, that of the four measures it is egocentric retrospections—the champion of our aggregate horserace—whose impact on vote intentions consistently hovers closest to zero month after month. Indeed, egocentric retrospections has the largest impact in only two

²² We do not have empirical verification of this in our monthly data, but in the BES 2001 Campaign data 87.3 percent of those asked reported that they expected Labour to win the election.

²³ Note that given the size of our samples, the confidence intervals of these effects frequently overlap. Nevertheless, the consistency of our findings is reassuring. For example, National Prospections have a greater effect than National Retrospections in each of the first 22 months following the 1997 election—an extremely unlikely occurrence if, in fact, the two variables have equal effects in the population.

²⁴ Similar results are found using Governing Party Approval as the dependent variable.

≡ FIGURE 1
 EGOCENTRIC AND SOCIOTROPIC ECONOMIC EVALUATION EFFECTS ON CHANGES IN PREDICTED PROBABILITIES OF
 INCUMBENT VOTE INTENTION, AUG 1995-JUNE 2001



months of our data. Yet, given the ups and downs of the impacts of the other variables, it is the slow and steady egocentric retrospections that prevails in the aggregate model shown in Table 1. Thus, our concentration on the individual-level gives a great deal of insight into the dynamics of the relationships between economic and political opinions.

CONCLUSION

While the arguments of several authors point to the advantages of aggregate-level data, our findings suggest that there is still much that can be learned from the individual-level. Using repeated cross-sectional data, this article has taken a more careful look at the month-to-month changes in the relationships between subjective measures of the economy and vote intention than aggregate studies allow. We find a great deal of variation over time in the relative efficacy of the four subjective measures typically used to represent four possible approaches to economic voting—the personal retrospective, personal prospective, national retrospective and national prospective. We expected to find dis-

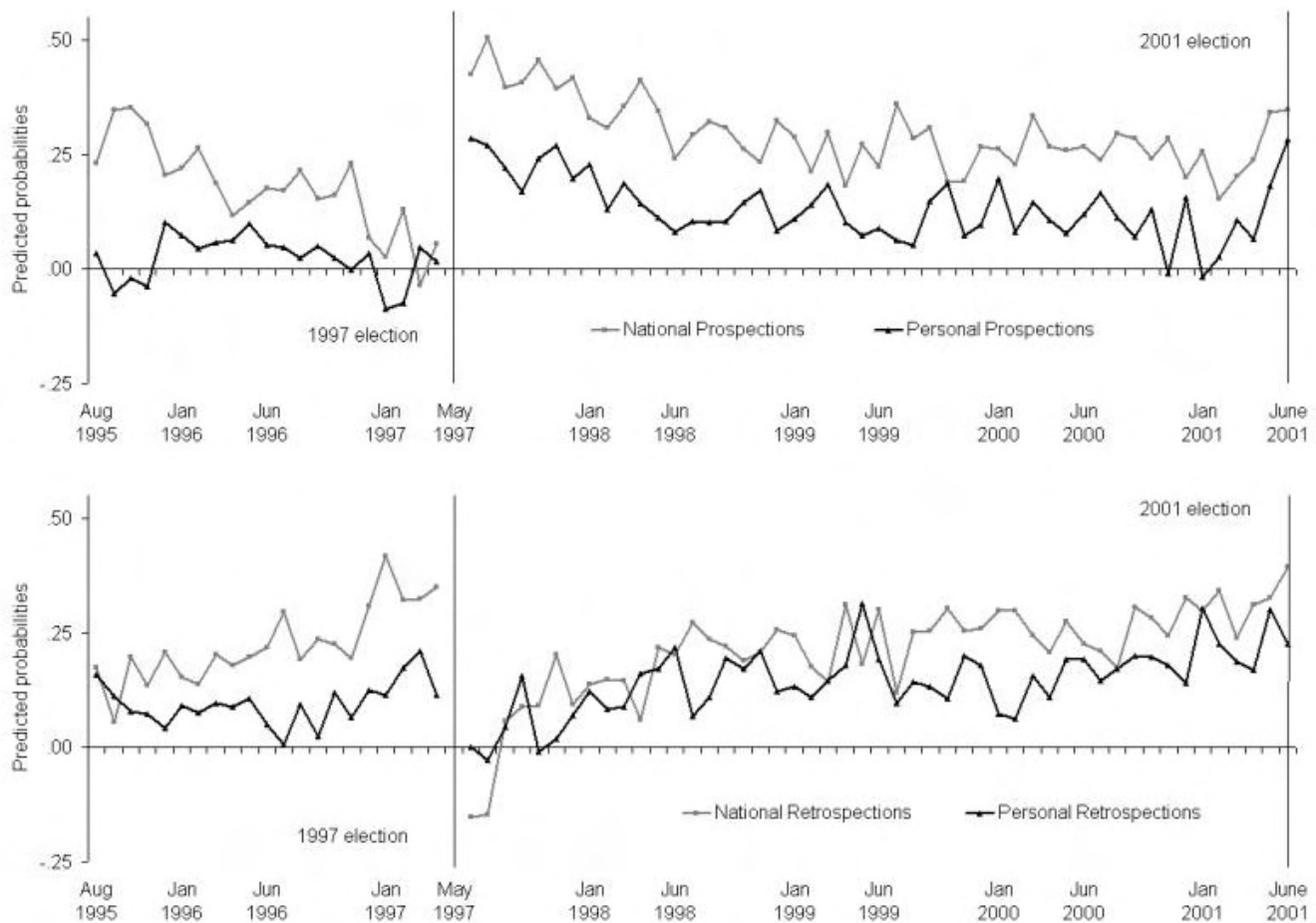
tinctive patterns present in the data and, indeed, the data demonstrated this in each case.

Specifically, we find evidence that, for British voters, evaluations of national economic performance are of greater importance than are personal measures—a finding that contrasts with the findings of several aggregate-level analyses. We find that the relationships between each of the subjective measures and vote intention follow cyclical patterns—with those of the national level variables most evident. National prosppections dominate evaluations of new governments. As length in office extends, national retrospections take on a greater role because voters can evaluate the economic policies of the governing party. In the run-up to an election retrospections dominate, and expectations about the winner of the election also play a role in determining the empirical links between economic judgments and government performance.

Our findings demonstrate the value of allowing for contextual effects that aggregate studies mostly ignore. Popularity functions use as their dependent variable a single series of values in government approval and seek to explain it

≡ FIGURE 2

PROSPECTIVE AND RETROSPECTIVE ECONOMIC EVALUATION EFFECTS ON CHANGES IN PREDICTED PROBABILITIES OF INCUMBENT VOTE INTENTION, AUG 1995-JUNE 2001



using the best fitting independent variables. From our study, we can see that for different segments of the dependent variable we should expect different independent variables to be relevant. Further, for some section of the dependent variable we expect a given independent variable such as national inspections to have a positive relationship but later on we expect the relationship to be negative. If aggregate studies are throwing all of these time points into the analysis, it is probable that the result underestimates the effect of the link between public perceptions of the economy and approval of the government.

One possibility is that the strong effects of a variable during one part of the overall period may be drowned out by its negligible or opposite effects in another period. Thus, another variable that is less important—but consistently signed in one direction—may appear to be the better predictor over the entire period. Our month-to-month analyses of the British data here lead us to make the conjecture that this is why previous studies (for example, Sanders 1991, 1993) find that personal inspections outperform national measures in explaining vote intention and government approval in Britain—the ups and downs of each of the

national measures' impact make them seem less important while personal inspections have a moderate—but consistent—impact. We should also expect aggregate studies to yield varied results depending on the number and nature of elections present in the time frame analyzed.

The process through which voters use judgments about the economy is a complex one that varies significantly over time. Returning to the individual-level data to study the dynamics of coefficients over time is an important part of understanding the complex ways in which voters' thoughts about the economy translate into their thoughts about the government. Certainly, the political context of the period during which surveys are administered needs to be better understood when interpreting the relationships in the data collected.

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s.carey@sheffield.ac.uk

matthew.lebo@sunysb.edu