

## Strategic Economic Voting

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Prepared for presentation at the 2006 Annual Meeting of EPOP, 8-10 September 2006, Nottingham England. We acknowledge the generous support of the National Science Foundation that funded this project with grant SBR-0215633.

## Introduction

The strength or size of the retrospective economic vote for a political party can be thought of as the weight or importance that voter's perceptions of economic performance play in the ultimate electoral support of the party (Duch and Stevenson 2007). For example, in the case of the typical Dutch voter, how important are economic evaluations, relative to other factors, in the decision to vote, or not vote, for the Dutch Christian Democratic Appeal (CDA)? There is strong evidence to suggest that in general these kinds of vote decisions are shaped by voters' evaluations of economic outcomes (Lewis-Beck and Stegmaier 2006; Hibbs 2006; Duch and Stevenson 2007). At the same time though, the comparative evidence clearly indicates considerable contextual instability in the magnitude of this economic vote (Duch and Stevenson 2007; Hibbs 2006). The conventional wisdom is that this contextual variation in the economic vote results largely from variations in the extent to which incumbents are held responsible by voters for shaping economic outcomes (Powell and Whitten 1993). Thus, the importance of the economy in shaping electoral support for the Dutch CDA party should be contingent upon the party's responsibility for economic outcomes. In one of the few efforts focusing specifically on the economic vote of political parties, Anderson (1995) provided evidence supporting this contention. And more recently, Duch and Stevenson (2007) demonstrate how administrative responsibility enters into the rational economic voting decision and provide convincing empirical evidence that a party's administrative responsibility conditions its economic vote.

In this essay we will argue that, while certainly not incorrect, this focus on how the distribution of responsibility among parties conditions the economic vote ignores other important contextual variables that should also condition the rational voting decision and that arise because of the rational voters incentives to cast strategic votes. Specifically, in this paper we draw attention to the conditioning impact of *the distribution of contention* on the economic vote. The distribution of contention is simply the extent to which electoral outcomes actually matter in shaping each party's share of administrative responsibility (and ultimately economic policy making responsibility). Returning to our example of the Dutch CDA, at least for the entire post-World War II period up until the 1994 election, the party (or its pre-1977 predecessors) was certain to participate in (and normally lead) whatever government formed. Thus, the party was assured a large share of any distribution of administrative

responsibility that might obtain after an election, given any plausible electoral result. Our theory suggests that the share of the economic vote of parties that are members of both the incumbent coalition and most viable alternatives (the pre-1994 case for the Dutch CDA) should be smaller than the economic vote of parties whose memberships in the incumbent and competitive alternative cabinets are more distinct. The intuition here is simply that a rational voter will recognize that his vote for (or against) this particular party will have no impact on the post-election distribution of policy making authority within the governing coalition (because the party will get into government regardless of any plausible electoral result) and hence economic evaluations should play a minor role in voting for this party.

What do we gain from explicitly incorporating this strategic calculation into our model of a party's economic vote? There will be cases in which the predictions of an economic voting model that only consider responsibility as a conditioning factor will be similar to one that incorporates both responsibility and strategic considerations. This will be the case when the perennial government parties are relatively small because small parties have limited responsibility for government decisions and hence a small economic vote. And of course strategic considerations would also predict a small economic vote (a vote for these parties will not affect their participation in the governing coalition). But in the case where these perennial coalition parties, such as the Dutch CDA, are also large parties, and hence have significant administrative responsibility in the governing coalition, the two models have different predictions. A model that relied simply on the notion that administrative responsibility drives the magnitude of the economic vote would predict a large economic vote for such parties. And the responsibility component of our general theory predicts that larger incumbent coalition partners will receive a larger economic vote. But for the subset of these large incumbent parties that are also perennial government parties, i.e., are likely members of any governing coalition that forms, the strategic voting caveat in our theory predicts that they will in fact have a small economic vote. The empirical data should provide quite decisive evidence regarding these two theories: If this subset of large perennial incumbent parties typically receives a small economic vote this would support the contention part of our theory. If they receive a relatively large economic vote this would support the notion that the distribution of administrative responsibility across parties determines much of the party variation in the economic vote.

It is important to note that in our theory the discounting of the economic vote for perennial government parties results from an assumption that voters recognize the extent to which political parties are likely to participate in the range of possible coalition governments – or distributions of responsibility in our parlance – formed after an election. This calculus is not restricted to voting decisions regarding incumbent parties. Rational voters should engage in a similar calculus for opposition parties. In the case of opposition parties our theory predicts that their share of the economic vote will tend to increase in the number of competitive alternatives of which it is a member as well as in the extent to which these coalitions are likely to tie with the incumbent for selection.

In general, we are arguing that an important element of the strategic behaviour of voters is to assess each party's likelihood of participating in alternative coalition formations and their relative distribution of responsibility within that coalition. And evidence of this strategic behavior should be found in the economic vote for both incumbent and opposition parties. Economic voting models that ignore strategic voting and contention amongst competing parties will fail to properly account for the contextual instability in economic vote magnitudes that have been widely documented in the literature.

These insights regarding contention, strategic voting and the economic vote are developed in much more detail elsewhere in a general theory of context and the economic vote (Duch and Stevenson 2007). In this essay we begin with a synopsis of the argument focusing on the strategic voting component and how it shapes the economic vote. The data collection efforts and estimation strategies associated with the empirical test we conduct in this essay are also described in some detail in Duch and Stevenson (2007) and at [www.raymond Duch.com/economicvoting](http://www.raymond Duch.com/economicvoting). We only provide a relatively brief description of the data and estimation issues in this essay. These efforts are followed by the central concern of this essay which is empirical tests of the predictions derived from our arguments regarding contention and the economic vote. These hypotheses are tested with individual-level survey data from 163 voter preference surveys from 19 countries conducted during the period 1979-2001.

### **Brief Overview of the Theory**

The nature of contention amongst competing candidates and strategic voting incentives are an important feature of the political context but one that is rarely invoked

to explain contextual variation in economic voting. Assuming that voters are instrumentally rational – an assumption consistent with much of the work on economic voting – then voters should respond strategically to electoral institutions, and to the nature of contention amongst competing parties (Gibbard 1973; Satterthwaite 1975; McKelvey and Ordeshook 1972). So for example, one would hardly expect economic evaluations to have shaped vote choice in the second round of the 2002 French Presidential elections when there was no question that the incumbent President Chirac would prevail. Rational models of economic voting should clearly reflect the strategic incentives introduced by features of the electoral system and the nature of contention amongst the competing candidates. Voters should have rational expectations about the relative electoral strength of competing candidates (Cox 1997) and the impact that their vote can have on the post-election distribution of policymaking power.

A key insight in this literature is that rational voters will take into account whether their vote makes a difference in who wins or who loses elections and who gets into government. The usual understanding is that rational voters should not “waste” their vote on candidates that are sure to lose, but the same logic also applies to parties or candidates that are sure to win. Hence what matters in contexts with multiple parties and coalition cabinets is that the “distribution of contention” for policymaking authority will shape the incentives for strategic voting and condition the importance of economic evaluations in that decision. There will be frequent situations in which an individual’s vote will have little impact on the post-election distribution of policy making authority (because the same parties will get into government for all plausible electoral results) and hence economic evaluations should play a minor role in voting in such elections.<sup>1</sup>

This suggests incorporating a strategic voting calculus in models of the economic vote. Building on the logic of McKelvey and Ordeshook (1972), Duch and Stevenson (2007) represent the vote as a decision problem in which the voter must choose between multiple parties and cares only about the winner of the plurality election. In that work they show that the expected utility from voting for some party  $j$  versus that of abstaining is can be written as:

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<sup>1</sup> A number of scholars have pointed out that contextual variation in strategic voting incentives can affect the voter’s utility function such that some factors or issues matter in vote choice in one context versus another. Myerson (1993; 1999), for example, demonstrates that under Duverger’s law for plurality voting, where parties compete on ideology, strategic voting considerations can lead voters to vote for corrupt candidates in spite of their preferences to minimize rent seeking and in spite of the fact that there are candidates with compatible ideological positions who lack the rent seeking baggage.

$$\begin{aligned}
(0.1) \quad E[u | v_j] - E[u | v_0] &= \gamma_j + Z \sum_{\mathbf{g}' \in \mathbf{A}} P_{\mathbf{g}\mathbf{g}'} \left( P(w_{\mathbf{g}} g_j - w_{\mathbf{g}'} g'_j > 0) - P(w_{\mathbf{g}} g_j - w_{\mathbf{g}'} g'_j < 0) \right) \\
&= \gamma_j + Z \sum_{\mathbf{g}' \in \mathbf{A}} P_{\mathbf{g}\mathbf{g}'} \left( 2P(w_{\mathbf{g}} g_j - w_{\mathbf{g}'} g'_j > 0) - 1 \right)
\end{aligned}$$

The elements of this utility calculation that do **not** vary over parties are represented by  $Z$ . Importantly,  $Z$  includes the voter's perceptions of the previous economy, which clearly does not vary over parties. In other work (Duch and Stevenson 2007), we derive the specific form of  $Z$  from a model of rational retrospective voting, but those details are not important for the analysis of the impact of strategic voting on the strength of economic voting, as long as one simply understands that  $Z$  includes the voters assessment of the retrospective economy. The term  $\gamma_j$  varies across parties and summarizes the utility that the voter obtains simply from voting for party  $j$  – again, for this discussion we ignore the contribution of this to the expected utilities.

Hence, our primary concern in this essay is how strategic considerations related to the nature of electoral contention amongst parties conditions the importance of economic evaluations ( $Z$ ) in their vote choice.  $P_{\mathbf{g}\mathbf{g}'}$  is a “pivot probability” and is defined as the probability that cabinet  $\mathbf{g}$  and  $\mathbf{g}'$  are tied for selection where  $\mathbf{g}$  is the incumbent cabinet and  $\mathbf{g}'$  is an alternative cabinet.<sup>2</sup> The association of a vote for party  $j$  with this pivot probability is captured by the term  $w_{\mathbf{g}} g_j$ :  $w_{\mathbf{g}}$  is the derivative of the selection function for cabinet  $\mathbf{g}$  with respect to the electoral support for cabinet  $\mathbf{g}$  (how the likelihood of cabinet  $\mathbf{g}$  forming is affected by a change in the electoral support for cabinet  $\mathbf{g}$ ) and  $g_j$  is equal to one if party  $j$  is a member of cabinet  $\mathbf{g}$  and zero otherwise. We can think of  $P(w_{\mathbf{g}} g_j - w_{\mathbf{g}'} g'_j > 0)$  as the probability that a vote for party  $j$  breaks a tie for selection between  $\mathbf{g}$  and  $\mathbf{g}'$  in favor of cabinet  $\mathbf{g}$  or as the probability that the derivative of the selection function for  $\mathbf{g}$ , with respect to the vote total of party  $j$ , is bigger than the corresponding derivative for  $\mathbf{g}'$ . And  $P(w_{\mathbf{g}} g_j - w_{\mathbf{g}'} g'_j < 0)$  is the probability that a vote for party  $j$  breaks a tie for selection between  $\mathbf{g}$  and  $\mathbf{g}'$  in favor of cabinet  $\mathbf{g}'$ . We assume that voters know which parties are in the incumbent cabinet and

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<sup>2</sup> There is no assumption that the parties are tied in the election, but only that they are tied for selection in the sense that whatever the selection function, a vote one way or the other would break the tie for selection.

which parties are in any alternative cabinet they are considering (i.e., they know  $g_j$  and  $g'_j$ ).

The simplification of this derivatives of the two selection functions results from the fact that  $P(X > 0) = 1 - P(X \leq 0)$ . Given this, the first thing to notice about equation (0.1) is that the direction in which the distribution of cabinet contention impacts utility is determined by  $P(w_g g_j - w_{g'} g'_j > 0)$ . If this probability is less than 0.5 (which occurs when the probability that a vote for party  $j$  breaks a tie for selection between  $\mathbf{g}$  and  $\mathbf{g}'$  in favor of cabinet  $\mathbf{g}$  is less than the probability that a vote for party  $j$  breaks a tie for selection between  $\mathbf{g}$  and  $\mathbf{g}'$  in favor of cabinet  $\mathbf{g}'$ ), the whole equation will be negative, if it is equal to 0.5 (a vote for  $j$  will neither break a tie in favor of  $\mathbf{g}$  or  $\mathbf{g}'$ ) it will be zero, and if it is greater than 0.5 (a probability of a tie breaking vote in favor of  $\mathbf{g}$ ) it will be positive.

An example illustrates the implications of this result. Suppose that there are four parties ( $a$ ,  $b$ ,  $c$ , and  $d$ ) and the incumbent cabinet,  $\mathbf{g}$ , includes  $a$  and  $b$ . There are two viable alternative governments: One alternative is between  $c$  and  $d$  (call this  $\mathbf{g}'$ ). And a second single party cabinet,  $\mathbf{g}''$ , consisting only of  $c$  is also an alternative. The relevant utility differences are just:

$$\begin{aligned}
 E[u | v_a] - E[u | v_0] &= \gamma_a + (P_{\mathbf{g}\mathbf{g}'} + P_{\mathbf{g}\mathbf{g}''})Z \\
 E[u | v_b] - E[u | v_0] &= \gamma_b + (P_{\mathbf{g}\mathbf{g}'} + P_{\mathbf{g}\mathbf{g}''})Z \\
 E[u | v_c] - E[u | v_0] &= \gamma_c - (P_{\mathbf{g}'\mathbf{g}} + P_{\mathbf{g}''\mathbf{g}})Z \\
 E[u | v_d] - E[u | v_0] &= \gamma_d - P_{\mathbf{g}'\mathbf{g}}Z
 \end{aligned}
 \tag{0.2}$$

Since we have assumed that  $\mathbf{g}$  and  $\mathbf{g}'$  are in competition to form the government,  $P_{\mathbf{g}\mathbf{g}'} > 0$  in each of the above expressions, so they differ only in their signs. Thus, this example produces economic voting of a familiar kind – when the economic performance has been sufficiently strong ( $Z$  is positive) voters will vote for one of the parties in the incumbent cabinet. When it has been weak ( $Z$  negative), they will vote for an opposition party. Because  $c$  is a plausible member of two different opposition coalitions her expected utility of voting for party  $c$  will be greater than voting for party  $d$ , so (ignoring the  $\gamma$ 's) she will vote for party  $c$ . The reason for this is simply that the voter wants to cast the vote that contributes most to replacing the incumbent. She does not care which of the alternative cabinets comes to power (since in this particular result she judges them all equally competent) and so party  $c$ 's membership in more alternatives gives it an advantage.

More generally, if the membership of the competitive alternative cabinets is distinct from the incumbent cabinet, the utility of any opposition party is  $-Z \sum_{g' \in A} P_{g'g}$  with all noncompetitive alternatives adding nothing to this sum. Thus, if the economy has performed sufficiently poorly then the voter will vote for the opposition party that is most competitive overall to be part of an alternative cabinet.

When we turn to the case of a party that is a member of both the incumbent cabinet and a contending alternative cabinet, the voter's utility of casting a vote for the party is more complicated. Consider an example in which there are three parties labeled  $a$ ,  $b$  and  $c$  and the incumbent cabinet consists of parties  $a$  and  $b$ . The only contending alternative cabinet is composed of  $b$  and  $c$ . In this case the utility difference for voting for each party versus abstaining is:

$$(0.3) \quad \begin{aligned} E[u | v_a] - E[u | v_0] &= \gamma_a + P_{gg'} Z \\ E[u | v_b] - E[u | v_0] &= \gamma_b + P_{gg'} (2P(w_g g_j - w_{g'} g'_j > 0) - 1) Z \\ E[u | v_c] - E[u | v_0] &= \gamma_c - P_{gg'} Z \end{aligned}$$

Notice that  $0 \leq (2P(w_g g_j - w_{g'} g'_j > 0) - 1) \leq 1$  so that the voter's utility for the party,  $b$ , that is in both the incumbent coalition and the competitive alternative is always between  $P_{gg'}$  and  $-P_{gg'}$ . This means that however the economy performs, there will always be a party that the voter prefers at least as much as party  $b$  (party  $a$  when the economy is good and party  $c$  when it is not). This result is intuitive, since the voter who wants to either keep or remove the incumbent cabinet can do so more efficiently when the whole contribution of her vote is felt in the electoral support of either the incumbent or the alternative but not both.

More generally, the implication of this model is that the economy will be less important to the vote of parties who are members of both the incumbent cabinet and competitive alternative cabinets than it will be for parties whose membership in the incumbent cabinet is distinct from competitive alternatives. This conclusion suggests, for example, that we should expect economic voting to be relatively muted for a party like the Danish Radical Liberals, who have a history of joining coalitions with the Social Democrats on the left as well as participating in rightwing bourgeoisie coalitions.

## The Data and Estimation Approach

In order to test our arguments we have assembled and analyzed 163 voter individual-level preference surveys from developed democracies for the period 1979-2001.<sup>4</sup> Two important estimation issues arise as a result of our modeling the economic vote in 163 public opinion surveys. First, how do we measure the “economic vote” in such diverse settings? The economy is one of many factors that potentially affect a voter’s utility for each of the candidates competing for political office. For any individual, the magnitude of the economic vote is the extent to which changes in perceptions of economic outcomes, with appropriate controls for other theoretically relevant factors, affect the voter’s utility for each of the candidates competing for office. Hence all parties competing for election have an “economic vote” since the voter’s preference for any party can be positively or negatively affected by changes in economic perceptions. So, for example, a change in economic perceptions might have no impact on a voter’s utility for the junior member of the governing coalition but might have a big impact on his preferences for the major party in the governing coalition. A political party’s economic vote is the average of the changes in its vote probabilities for each citizen in the electorate (or in a random probability sample).<sup>5</sup>

Duch and Stevenson (2005) propose a strategy for estimating the economic vote for political parties in a large number of diverse public opinions surveys and then modeling the impact of context on this economic vote (what they refer to as a “two-stage strategy”). Their strategy can be illustrated with the decision to vote for or against the party of the Chief Executive which can be written using a logit link function as follows:

$$(0.4) \quad \begin{aligned} v_{ik} &\sim Bin(\pi_{ik}) \\ \text{logit}(\pi_{ik}) &= \beta_{0k} + \beta_{1k} X_{ik} + \sum_{j=1}^{J_k} \phi_{jk} Z_{jik} \end{aligned}$$

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<sup>4</sup> Here we provide a brief sketch of the data analysis methods and strategies employed as part of this project. A much more extensive discussion is provided in Duch and Stevenson (2007) and more in-depth description of the individual survey results is available on [www.raymondduch.com/economicvoting](http://www.raymondduch.com/economicvoting).

<sup>5</sup> Take a hypothetical electoral of three people, for example, in which it is determined that a typical improvement in the economy results in the following changes in the voters’ vote probabilities for the incumbent PM Socialist party: +2.5%; +3%; and +1.5%. The Socialist party’s economic vote would be 2.3% (the average of these three changes).

In this notation,  $v_{ik}$  indicates a vote for the Chief Executive party by voter  $i$  in each of  $k$  election surveys where  $i = 1 \dots n_k$ . Likewise,  $X_{ik}$  are retrospective economic evaluations measured at the individual level and  $Z_{jik}$  are other characteristics of individuals that shape self-reported vote choice where  $J_k$  indicates the number of these control variables associated with each  $k$  election study. The two coefficients that describe economic voting in any particular survey are  $\beta_{0k}$  and  $\beta_{1k}$  and these are allowed to vary from survey to survey. The strategy presumes a core set of variables similarly measured exists in each survey being analyzed – so in the case of economic voting, a vote choice question (typically, “if an election were held today which party would you vote for?”) and a retrospective evaluation of the overall national economy (in our case the standard question as to whether respondents thought the economy had got better or worse over the past 12 months). In addition, the estimation strategy requires that a vote choice equation be specified with all of the appropriate control variables in order to ensure consistent estimates of the impact of economic evaluations on vote choice. Now the control variables, unlike the two core variables, will vary by different survey – so, for example, income might be measure differently in the French survey from that of the Dutch survey. But what is important here is simply that a properly specified vote choice model is estimated for each survey – this will ensure consistent estimates of the impact of economic evaluations on vote choice.

The predicted probability that a voter  $i$ , in survey  $k$ , will vote for the party of the Chief Executive is the following:

$$(0.5) \quad \hat{\pi}_{ik} = \frac{e^{\hat{\beta}_{1k}(X_{ik}) + \sum_{j=1}^{J_k} \hat{\phi}_{jk} Z_{jik}}}{1 + e^{\hat{\beta}_{1k}(X_{ik}) + \sum_{j=1}^{J_k} \hat{\phi}_{jk} Z_{jik}}}$$

The coefficients from these models can be used to generate estimates, for each individual in the sample, of the impact of economic evaluations on their probability of voting for the Chief Executive party. The measure of the magnitude of the economic vote for this individual is simply the change in  $\hat{\pi}_{ik}$  produced by a given change in her economic perceptions (say from  $X_{ik}$  to  $X'_{ik}$ ):

$$(0.6) \quad EV_{ik} = \frac{e^{\hat{\beta}_{1k}(X_{ik}) + \sum_{j=1}^{J_k} \hat{\phi}_{jk} Z_{jik}}}{1 + e^{\hat{\beta}_{1k}(X_{ik}) + \sum_{j=1}^{J_k} \hat{\phi}_{jk} Z_{jik}}} - \frac{e^{\hat{\beta}_{1k}(X'_{ik}) + \sum_{j=1}^{J_k} \hat{\phi}_{jk} Z_{jik}}}{1 + e^{\hat{\beta}_{1k}(X'_{ik}) + \sum_{j=1}^{J_k} \hat{\phi}_{jk} Z_{jik}}}$$

In the Duch and Stevenson (2005) case the economic evaluation of each individual in the sample was shifted one unit in a negative direction from their actual value (the typical economic evaluation scale ranges from 1 through 3).

To obtain an estimate of the average magnitude of the economic vote for the Chief Executive party in the sample, we calculated Equation (0.6) for all individuals in the sample (i.e. using the measured values of  $Z_{jik}$  and  $X_{ik}$ ) setting  $X'_{ik}$  to be one category worse than  $X_{ik}$ . If the voter's economic perceptions were already at the worst category, we did not change them.<sup>6</sup> The economic vote for each individual was then averaged to produce an estimate of the average economic vote in the sample,  $EV_k$ . Standard errors of the predicted changes were simulated using the procedures outlined in King, Tomz, and Jason Wittenberg (2000).

Following exactly the same logic we employed multi-nomial logit to estimate the vote probabilities for each of the competing parties in the voter preference surveys we analyzed (an average of four parties per survey). Rather than an average economic vote in the sample,  $EV_k$  (based on the Chief Executive party vote) we obtained  $EV_{kp}$  where  $p$  indexed the specific parties in each  $k$  survey. Adopting this strategy, we obtain 678 estimates of economic vote magnitudes (one for each party in the 163 surveys analyzed).

### **Patterns of Contention amongst Opposition Parties**

The first hypothesis that we will examine concerns how the pattern of contention impacts the distribution of economic voting among opposition parties. Specifically, for multiparty systems, our generalized theory of rational economic voting suggested that economic voting will be more important to the support of opposition parties that are members of more, and more competitive, alternative governments than

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<sup>6</sup> We also calculated the opposite change in which each voter's perceptions get one category better except those that are already the best. Comparing the results from the two measures reveals no asymmetry in economic voting – the size of the economic vote for chief executives is the same in both cases (though with opposite signs). This is in itself an important finding that corroborates previous failures to find asymmetry in individual voting models (Lewis-Beck 1988).

it will be for other opposition parties that are not.<sup>7</sup> In order to examine this hypothesis we propose two different approaches to measuring voter beliefs about the governmental contention of opposition parties (i.e., their likely participation in alternative governments): one based strictly on historical information of incumbency and a second approach that attempts to mimic the rational voter's likely "model" of government formation.

*Historical approach.* We begin with the historical approach to measuring voter beliefs about opposition party contention and here examine three different measure approaches: the opposition party's historical record of office holding, its historical record of holding the prime ministership; and a discounted measure of office holding (giving more weight to more recent experience).

Figure 1 graphs, for multiparty systems (and surveys for which there are more than two opposition parties) the economic vote for each opposition party against its previous record of office holding.<sup>8</sup> We expect that voters will believe that opposition parties with short histories of cabinet participation will not be members of competitive alternatives and so will have relatively muted economic votes.<sup>9</sup> This expectation is confirmed in Figure 1 (a large positive value here indicates that the opposition party is rewarded by perceptions of poor economic performance). Indeed, considering that the impact on economic voting of any one context interacts with other contexts in a multiple conjunctural relationship, we should expect to see, if our hypothesis is true, exactly the kind of wedge shape to the data that is apparent in Figure 1. That is, when parties have little experience as incumbents, the impact of the economy on their support will be low, but when they have a lot of experience the impact of the economy on their electoral support *may* be high, but may not depending on other factors.

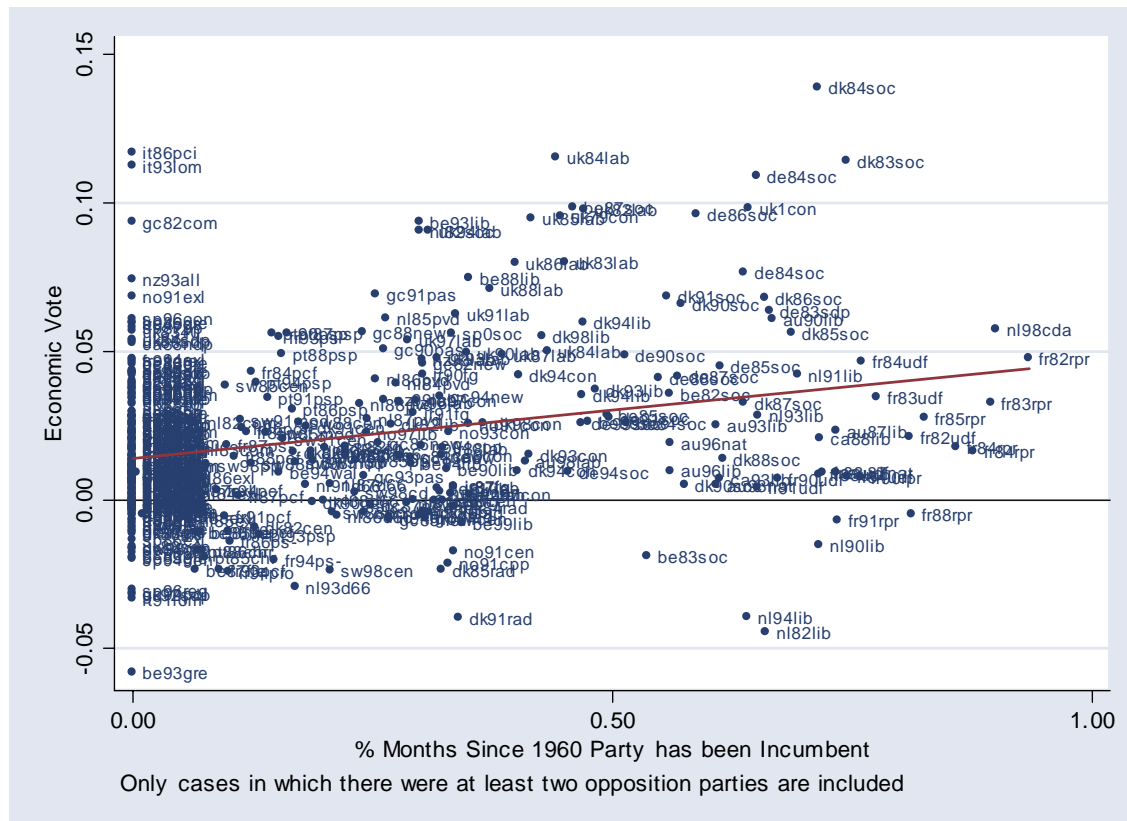
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<sup>7</sup> We will use the term "government" generically to mean a single-party executive, a coalition cabinet, or a distribution of responsibility. When a hypothesis does not refer to all these types of governments we will use the more specific designations. We will also call the extent to which a party is a member of more, and more competitive, alternative governments its level of governmental contention, or cabinet contention as appropriate, or sometimes (when there is no confusion) just its level of contention.

<sup>8</sup> All our measures of the history of office holding are calculated from monthly data between January 1960 and the date of the survey corresponding to the data point. Thus, the average voter's "memory" in our surveys extends from 20 to 40 years into the past and always includes most of her adult political life (the average voter is about 40 years old at the time the surveys).

<sup>9</sup> We use the term "members of alternative governments" to generically include alternatives with only one party.

**Figure 1. History of Incumbency and the Economic Vote of Opposition Parties (Multi-party Systems)**

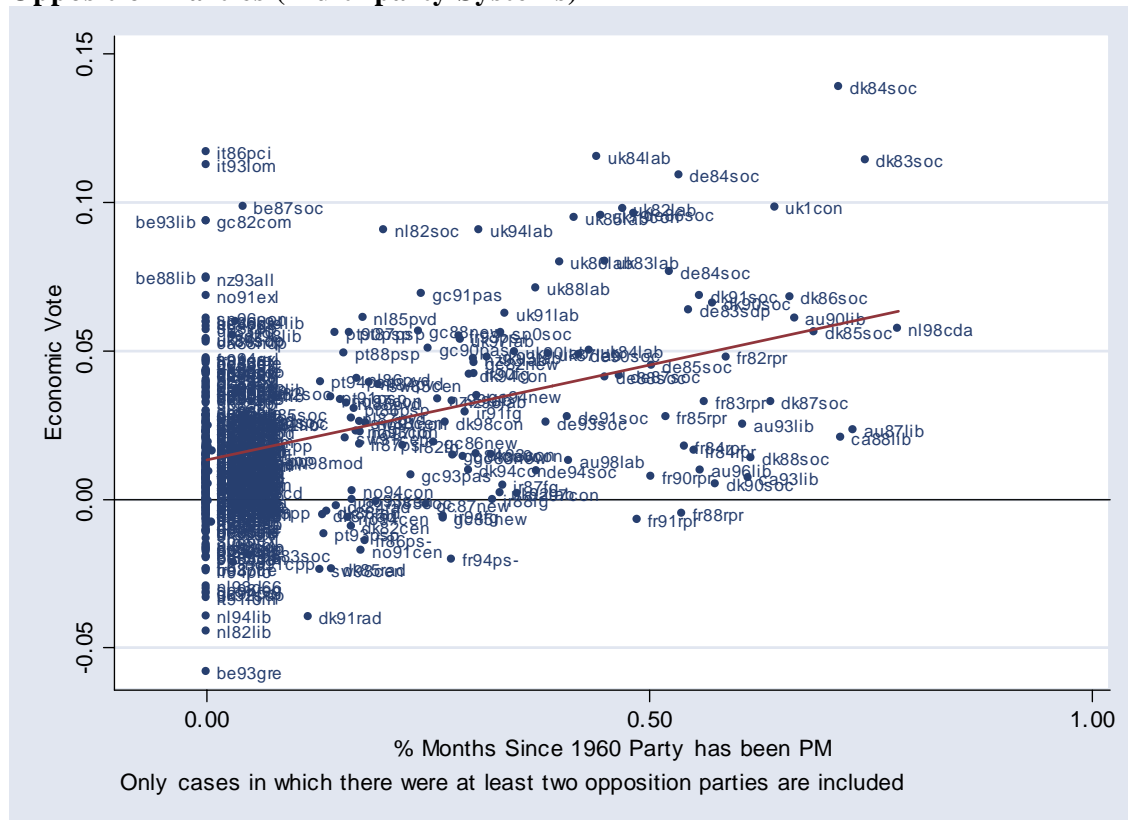


Despite three particularly large exceptions in the upper left hand quadrant (the Italian Lombard League in 1993, the Italian PCI in 1986, and the Greek Communists in 1982), the evidence in Figure 1 supports our argument that the pattern of governmental contention helps explain the distribution of the economic vote across opposition parties.

It may be the case that voters pay more attention to, and have better developed beliefs about, the pattern of contention for the prime ministry rather than for cabinet membership in general. This is likely to be the case in countries where voters have come to expect a single party to control the cabinet or those in which voters understand that the primary competition, determining membership of a coalition cabinet, is the race for the prime ministry rather than for cabinet partners (i.e., *formateur* systems). Indeed, no matter what kinds of cabinets usually form, the question of which party will provide the prime minister is a focus of speculation and media attention in every parliamentary system. Thus, we might expect the relationship between the governmental contention of opposition parties and economic voting to be even stronger

when we measure beliefs about governmental contention using each party's history of holding the prime ministry rather than its history of incumbency in general. Figure 2 provides this graph and confirms our expectation that an opposition party's history of service as the prime minister is strongly related to its economic vote.

**Figure 2. History of Holding the Prime Ministry and the Economic Vote of Opposition Parties (Multi-party Systems)**



Finally, we may first want to alter our measures of cabinet participation to account for the fact that most scholars who invoke adaptive belief formation usually assume that people who form their beliefs in this way discount older information relative to more recent information. We accommodate this in our models by substituting the history of government service in the graphs above with a measure that discounts the history of service so that service in the past is weighted less in voter beliefs than more recent service.<sup>10</sup>

<sup>10</sup> To do this, we use an exponential weighting function,  $\delta^m$ , where  $m$  is the number of months between the current month (for which a score is being calculated) and the month in the past that is under consideration (ultimately, we sum over all months since 1960). We choose  $\delta=.99$ , which means that service five years in

Rather than focusing on absolute levels of the economic vote for these parties we can focus on shares of the economic vote for opposition parties. This removes any influence of the magnitude of the economic vote from the measure and simply asks which opposition parties get the largest share.<sup>11</sup> This distributional focus is useful given that our argument is partly about which opposition parties will be preferred by economic voters.<sup>12</sup>

Table 1 provides regression model estimates for these additional tests in addition to estimates for the relationships graphed in Figures 1 and 2. All the models follow the procedures for modeling contextual effect outlined in the earlier section. We should remember, however, that these estimates are only approximate since they assume a linear relationship between the independent and dependent variables, when we know that the appropriate functional relationship should account for multiple conjectural causation. In our graphs this was apparent in the triangular patterns in the data. Indeed, these graphs suggest that the linear approximation will tend to understate the support in the data for multiple conjectural hypotheses because the linear model incorrectly counts many of the cases that occur at the wide end of the triangular data pattern as evidence against the hypothesis. However, in the simple bivariate models we use here, the graphs and estimates from the linear models make it perfectly plain what is going on in the data, so no added complexity is really needed.

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the past is discounted by about one half and ten years in the past by about a third. The specific details of this calculation are available from the authors.

<sup>11</sup> To calculate shares of the opposition economic vote we have to first set opposition economic votes that are in the “wrong direction” to zero. We then simply sum over opposition parties and divide each (modified) share by that sum.

<sup>12</sup> The theory really says that if the pattern of contention changes, both the distribution and the overall size of the opposition economic vote will change. Thus, it is appropriate to look at measures capturing both these dimensions of change.

**Table 1**  
**History of Governmental Contention and the Economic Vote of Opposition Parties**

	<i>Econ Vote</i>	<i>Econ Vote Share</i>	<i>Econ Vote Share *</i>	<i>Econ Vote</i>	<i>Econ Vote</i>	<i>Econ Vote Share</i>	<i>Econ Vote Share *</i>	<i>Econ Vote</i>
% months party has been incumbent	.0324 (2.53)	.395 (2.89)	1.69 (2.90)	-- --	-- --	-- --	-- --	-- --
% months party has been incumbent, discounted	-- --	-- --	-- --	.0362 (2.95)	-- --	-- --	-- --	-- --
% months party has been PM	-- --	-- --	-- --	-- --	.064 (4.201)	.673 (4.19)	2.88 (3.92)	-- --
% months party has been PM, discounted	-- --	-- --	-- --	-- --	-- --	-- --	-- --	.036 (2.95)
Constant	.014 (6.65)	.277 (9.78)	-.95 (- 6.93)	.0138 (5.97)	.013 (7.33)	.28 (11.67)	-.94 (- 8.02)	.014 (5.97)
N	401	398	398	401	401	398	398	401
R <sup>2</sup>	0.075	0.09	--	0.0736	0.167	0.15	--	0.07

Numbers in cells are coefficients and t-ratios. All models except those indicated by the \* were estimated using OLS regression with standard errors robust to heteroscedasticity and non-independence between observations of the same party in different surveys. Those marked with an \* use GLM to account for the fact that the share of the economic vote is a proportion (as recommended in Papke and Wooldridge, 1996)

The estimates in Table 1 are all statistically significant, in the expected direction, and tell the same substantive story about the relationship between the pattern of governmental contention of opposition parties and the distribution of the economic vote among them. Indeed, the various estimates reveal the relationships in the data even more strongly than the graphical presentation could. Thus, we can safely conclude that when voters' beliefs about the pattern of governmental contention are shaped only by the parties' record of office holding, the importance of the economy will be weakest for the parties least likely to contend for office.

*A statistical model predicting government formation.* The history of previous service in government is only one kind of information that voters can use to form their

beliefs about which opposition parties are, or are not, in governmental contention. We assume that voters have rational expectations regarding the likelihood of different government formations. This implies first that voters are knowledgeable about the process of government formation and what affects a party's likelihood of participating in the governing coalition (for example, they recognize the strategic importance of voting for one of the two strongest contenders in a single member plurality electoral system). Second, this implies that voters are knowledgeable about the current characteristics of parties that are salient to that process of government formation (for example, the parties standing in pre-election public opinion polls). Armed with this information voters make rational assessments as to which opposition parties are in governmental contention.

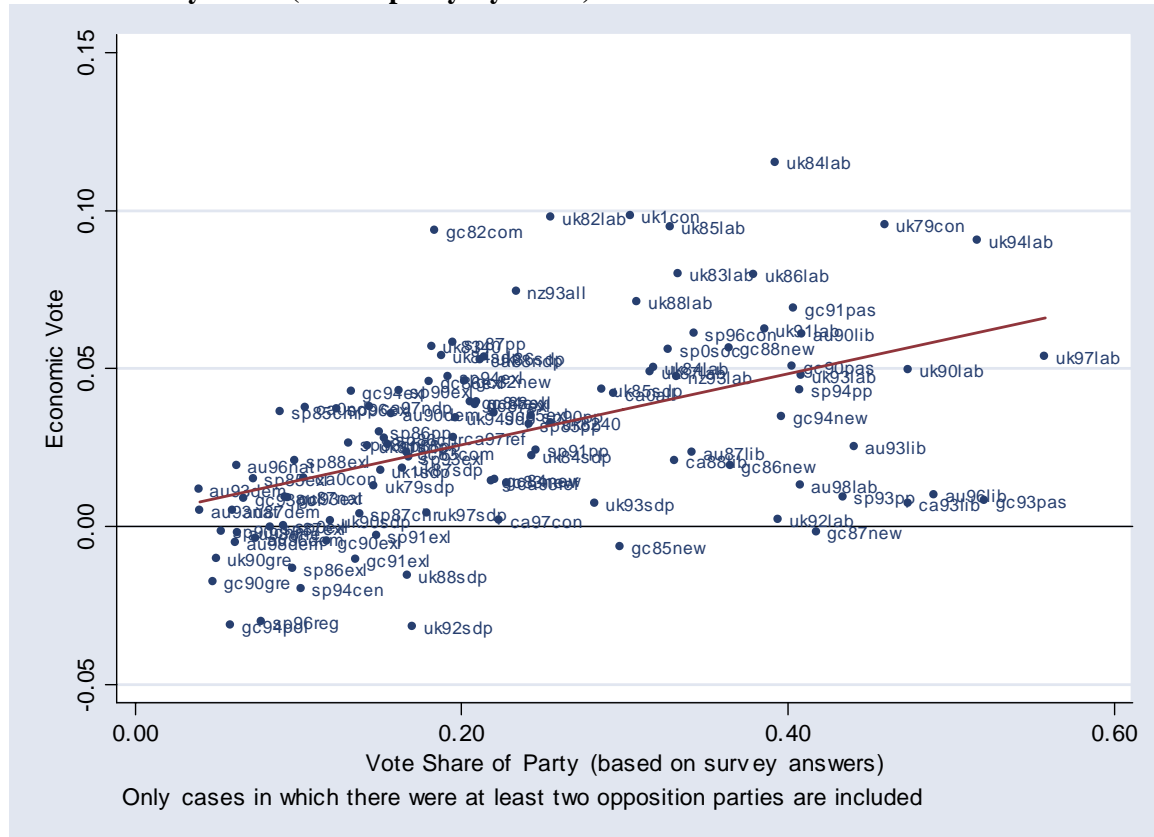
Our strategy for capturing these kinds of beliefs is to try to mimic the rational voter's likely "model" of government formation. We do this by building and estimating a statistical model that predicts which governments will form as a function of the characteristics of parties that are generally recognized as affecting government formation. We do this differently depending on whether the system under consideration is one in which coalition cabinets usually form (coalitional) or one in which single party cabinets are the norm (non-coalitional). The non-coalitional countries in our sample are the United Kingdom, Spain, Greece, Canada, Australia, and New Zealand before 1995. In these countries, the "model" that rational voters likely use to forecast the outcome of the government formation process (and the role of her vote in that process) is a simple one: the plurality party will form the government and rule alone. Assuming that voter's beliefs about which parties contend for a plurality are an increasing function of the parties' shares of electoral support, we should expect each opposition party's electoral support at the time of the survey to be positively related to its economic vote.

The best measure of electoral support available to us is simply the survey marginals for the vote choice questions that were used in the surveys from which we estimated the economic vote.<sup>13</sup> And, in Figure 3, we graph this measure against the economic vote for opposition parties in non-coalitional systems in which there were multiple opposition parties (and at least two of these were included in our individual analysis of the case).

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<sup>13</sup> For cases in which a survey asked about reported vote instead of vote intention, the survey marginals are likely to be biased in favor of the incumbent. However, in this case we get the same result if we substitute actual electoral support instead.

**Figure 3. Party Vote Share and the Economic Vote of Opposition Parties in Non-Coalitional Systems (Multi-party Systems)**



This graph (and the corresponding statistical models in Table 2 below) clearly supports the expectation that in multiparty non-coalitional systems, the economic vote of opposition parties will be higher the more likely the party is to compete with the incumbent for a plurality.<sup>14</sup>

When we turn from non-coalitional systems to those in which coalition governments often form, the rational voter cannot use the simple plurality winner model to forecast the outcome of cabinet formation. Instead she must consider what characteristics of parties and coalitions other than their size might impact cabinet formation. We try to measure the voters' rational beliefs about which coalitions will form in coalitional systems by building an empirical model of coalition formation that is based on much of the observable information that voters might use to form their beliefs. We then use this model to predict which coalitions will form in our cases and construct measures of voters' beliefs from these predictions. We use the models and

<sup>14</sup> This graph also corrects the two main exceptions from non-coalitional systems that appeared in Figure 1 – the Greek Communists in 1982 and the New Zealand Alliance in 1993.

data from Martin and Stevenson (2001) to estimate a slightly simplified version of their empirical model of coalition formation in coalitional systems.<sup>15</sup>

After obtaining the coefficients from this model, we used them along with appropriate data from each of our 163 cases to produce “out of sample” forecasts of the probability that each possible coalition that could have formed (had a cabinet formation taken place at the time of the survey) would have in fact formed.<sup>16,17</sup> These predicted probabilities correspond fairly closely to Martin and Stevenson’s forecasts and are, in our opinion, close to what students of coalition politics would expect to them to be.<sup>18</sup> In this section, we use these estimates of the probability that each potential coalition might form to construct a measure of the voter’s belief that each opposition party will

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<sup>15</sup> Our version of their model forecasts the probability that any potential coalition forms as a function of the minimal winning status of the potential coalition, its majority status, the number of parties in the potential coalition, whether it contained the largest party, the extent of ideological division in the potential coalition, the extent of ideological division in the potential majority opposition (for minority potential coalitions only), the extent of anti-system presence in the potential coalition, whether it contained the median party on a left-right dimension, whether the system had an investiture vote (interacted with majority status of the potential coalition), whether the potential coalition contained the incumbent prime minister, and whether the potential coalition was the incumbent coalition.

<sup>16</sup> All the variables except one were constructed as described in Martin and Stevenson 2001. We had to estimate the seat shares that parties would likely obtain if an election were held at the time of the survey. We did this by forecasting seats from the survey marginals for vote choice in the survey. To produce this forecast, we first estimated the functional relationship between votes and seats in each country using Mackie and Rose’s electoral data and applied the best fitting function to our survey marginals to generate our predictions. For cases in which a break in the party system occurred (e.g., Italy and New Zealand), we used the actual seat shares from the most proximate election to the survey. Since we are only concerned with coalitional systems, which tend to be highly proportional, the forecast was usually close to linear. For ideology we used the same manifestos scores as in Martin and Stevenson but again used those from the most proximate election. One difference with their model is that in our simplification we dichotomized their continuous anti-system variable and so in creating our predictions also created a dichotomous variable for whether a party was an anti-system party (and whether a coalition contained such a party).

<sup>17</sup> An important issue in using the survey marginals to measure the support of parties at the time of the survey (and then to calculate seat shares) is raised by the difference between surveys that ask the voter for their vote intention and those that ask the voter to report their vote in an election that has just happened (although often up to three months previously). It is well known that the survey marginals for such reported vote are generally biased in favor of the parties that “won” the election and (quite likely) for the parties that formed the government. Thus, if we use survey marginals to help produce the predicted probability that different cabinet forms we are likely to get results that over predict the coalition that did form (as well as other coalitions involving the incumbents). Thus, the results in this chapter that rely on predicted probabilities of cabinet formation exclude the few surveys that asked vote recall question. This exclusion is inconsequential in the reported results for arguments evaluated in the first two sections, but makes some difference to the results in the last section (the argument that economic voting should be muted when the incumbent government is not in contention to be reselected to govern), where the exclusion of these cases strengthens the support for that hypothesis.

<sup>18</sup> The predicted probabilities (in addition to the program for producing them) are available from the book website [www.raymondduch.com/economicvoting](http://www.raymondduch.com/economicvoting).



Table 2 presents the statistical models corresponding to Figures 3 and 4 and the two versions of those models that use shares as the dependent variables. When we use measures that try to capture rational belief formation about the pattern of governmental contention, the linear models reach statistical significance in all but one case. Thus, we conclude that the pattern of governmental contention is an important contextual influence on the distribution of the economic vote among opposition parties.

**Table 2 Predicted Governmental Contention and the Economic Vote of Opposition Parties**

	<i>Non-coalitional Systems</i>			<i>Coalitional Systems</i>		
	<i>Econ Vote</i>	<i>Share of Econ Vote</i>	<i>Share of Econ Vote*</i>	<i>Econ Vote</i>	<i>Share of Econ Vote</i>	<i>Share of Econ Vote*</i>
Share of Vote	.112 (4.16)	1.32 (5.17)	5.82 (4.38)	-- --	-- --	-- --
Predicted probability of entering government	-- --	-- --	-- --	.033 (2.07)	.573 (2.84)	2.59 (3.00)
Constant	.003 (0.71)	.1199 (1.89)	-1.668 (-4.97)	.009 (3.61)	.202 (6.17)	-1.32 (-7.79)
N	111	111	111	290	287	287
R <sup>2</sup>	0.23	0.30	--	0.04	0.10	--

Numbers in cells are coefficients and t-ratios. All models except those indicated by the \* were estimated using OLS regression with standard errors robust to heteroscedasticity and non-independence between observations of the same party in different surveys. Those marked with an \* use GLM to account for the fact that the share of the economic vote is a proportion (as recommended in Papke and Wooldridge, 1996)

This essay makes the general point that strategic voting considerations condition the economic vote. As our theory points out, one aspect of the strategic voting calculation is determining the distinctiveness of each party's participation in the incumbent and potential opposition coalitions that can form after an election. Our theory presumes that voters in fact undertake these assessments and it predicts that the share of the economic vote obtained by any opposition party will tend to increase in the number of competitive alternatives of which it is a member as well as in the extent to which these coalitions are likely to tie with the incumbent for selection. The empirical results confirm this prediction regarding the economic vote of the opposition parties. Voters do not confine their assessment of the distinctness of participation to opposition parties; they also extend, as our theory argues, the same type of consideration to incumbent parties. We now turn to the empirical evidence regarding patterns of contention amongst incumbent parties.

### **The Pattern of Contention amongst Incumbent Parties**

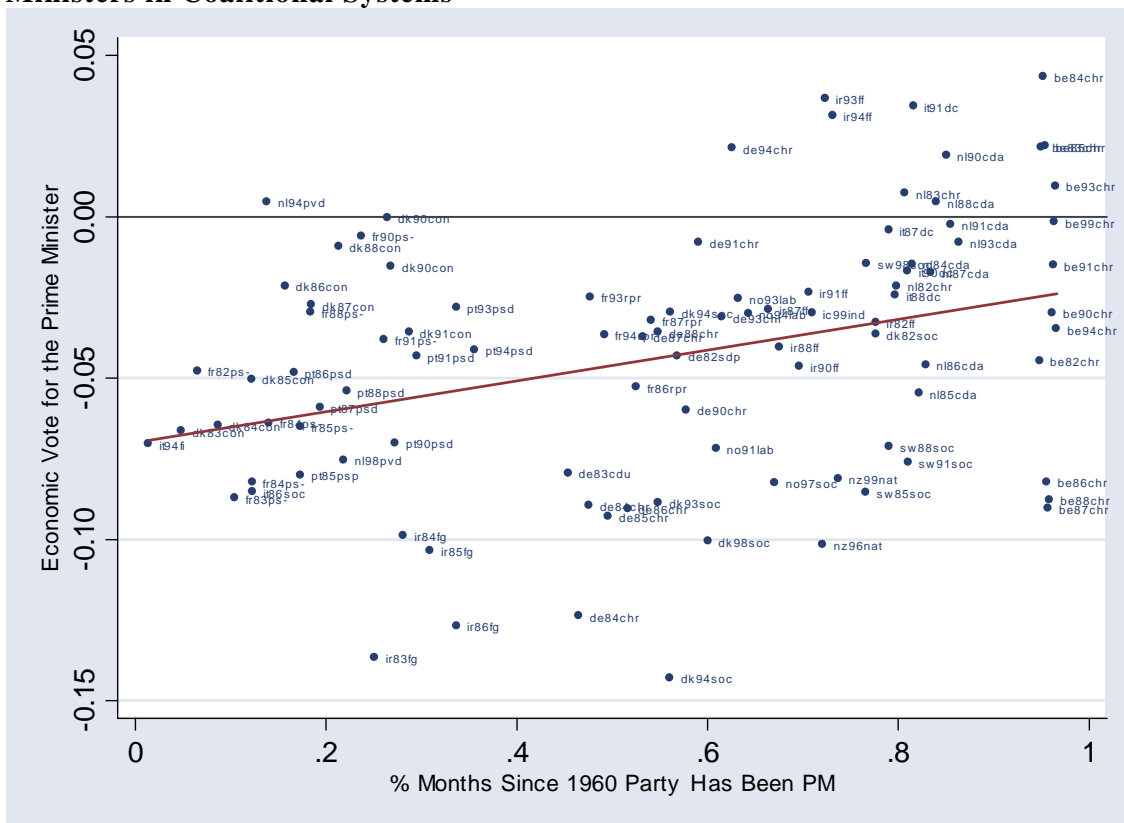
Our second hypothesis concerns the relative importance of economic voting among different incumbent parties in coalition cabinets. Specifically, in coalitional systems, economic voting should be smaller for incumbent parties that are members of competitive alternative cabinets than for incumbents who are not. Further, this implication of the theory, when applied to cases of perennial incumbent parties like the Belgian or Dutch Christian parties or the German FDP also implies that the economic vote of these kind of perennial incumbent parties should be depressed relative to their cabinet partners. The logic behind this observation is that in cases like these, the reason the party is always in the cabinet is not because the same cabinet forms over and over again (in which case economic voting should be equally low for all parties in the cabinet) but because the party is a member of each of the several different cabinets that have any real chance of forming (e.g., the SDP-FDP and the CDU/CSU-FDP coalitions in Germany). Even more importantly, in cases in which the perennial party also takes a large share of cabinets seats or provides the prime minister (e.g., in the Italian, Dutch and Belgian cases, but not the German one), this implication works *against* the notion that parties with a greater share of cabinet responsibility will experience a relatively greater economic vote than their partners. This circumstance should make it possible for us to produce a strong test of the two hypotheses.

We begin our empirical analysis with the assumption that voters use a parties' history of membership in the cabinet to forecast whether the party is certain to be in some cabinet, certain not to be, or whether the party is actively contending for membership. Since we expect this relationship to be more apparent among perennial parties with a greater share of cabinet responsibility, we provide separate results for prime ministers and their partners.

Figure 5 graphs, for the prime ministers of coalition cabinets, the relationship between the party's record of holding the prime ministry and its economic vote. We expect the relationship in the graph to be positive – but once again if we stick strictly to what the model implies, all we can really expect is that when voters believe the incumbent party is very likely to return to office the economic vote for these incumbent prime ministers will be small. When this is not the case, the economic vote may be large or small. In other words, we again expect to see a triangular pattern of data, but this time the small end of the wedge should be at the right side of the graph and it should expand downward from right to left.

This is precisely what we see in Figure 5. Indeed, one thing that is striking about this graph is that the of the twelve cases in which the economic vote of the prime minister is in the “wrong” direction (i.e. above zero) all but two involve more or less perennial prime ministerial parties. Most of the cases are the Dutch and Belgian Christian parties, but also included is one Italian Christian Democratic government and the Irish Fianna Fail governments of the early 1990’s.<sup>19</sup>

**Figure 5. History of Holding Prime Ministry and the Economic Vote of Prime Ministers in Coalitional Systems**



In the last section we described a measure that discounts a party’s past record of office holding, and puts greater weight on its more current record. This measure is used in Figure 6 to produce a plot that parallels Figure 5. This plot improves the fit of the linear model rather dramatically and leaves little doubt that the hypothesized

<sup>19</sup> We have included the New Zealand National Party in 1996 and 1999 in the graph despite the change in the electoral system that very likely undermined the usefulness of previous formation outcomes in predicting current ones. Since this party has a large economic vote despite having often been the prime minister excluding it makes the positive relationship stronger.



The statistical models that correspond to these graphs are in Table 3. Also included are results for the models in which we use the prime ministers share of the whole incumbent economic votes as the dependent variable. Again, we include both the regression model and a GLM model that accounts for the fact that this dependent variable is a proportion.

**Table 3. History of Holding Prime Ministry and the Economic Vote of PM Parties**

	<i>Econ Vote</i>	<i>Econ Vote Share</i>	<i>Econ Vote Share</i> *	<i>Econ Vote</i>	<i>Econ Vote Share</i>	<i>Econ Vote Share</i> *
% months party has been PM	.048 2.74	-.279 -1.13	-1.43 -1.00	-- --	-- --	-- --
% months party has been PM, discounted	-- --	-- --	-- --	.071 3.83	-.464 -2.68	-2.40 -2.22
Constant	-.070 -5.55	.869 5.04	1.74 1.63	-.087 -6.29	.999 7.64	2.46 2.69
N	98	86	86	98	86	86
R2	0.08	0.05	--	0.18	0.09	--

Numbers in cells are coefficients and t-ratios. All models except those indicated by the \* were estimated using OLS regression with standard errors robust to heteroscedasticity and non-independence between observations of the same party in different surveys. Those marked with an \* use GLM to account for the fact that the share of the economic vote is a proportion (as recommended in Papke and Wooldridge, 1996)

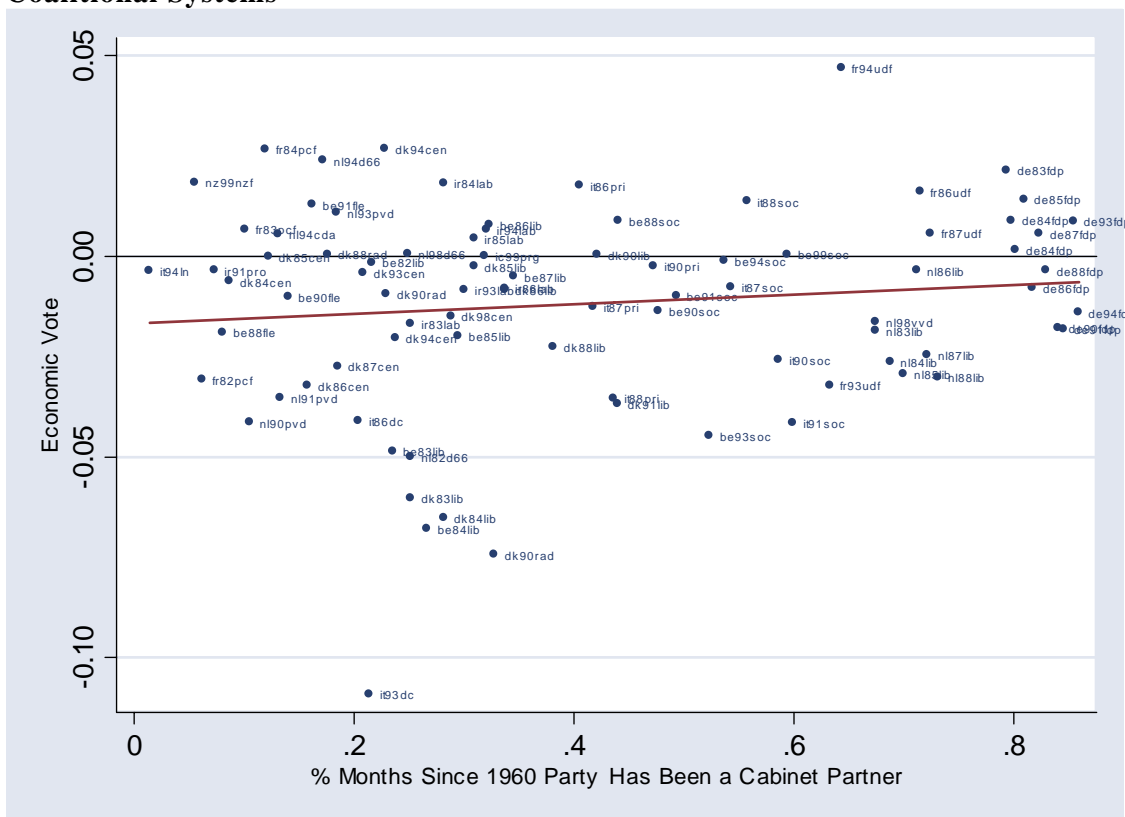
Once again all the estimated coefficients in the table are in the expected direction. The negative coefficients on the shares equations are expected in this case because shares are necessarily positive and we expect the share of the vote to decline when parties are sure to continue as prime minister. Most of the coefficients are also statistically significant. However, for the models in shares this only happens in the discounted models.

The hypothesis that cabinet parties that are members of competitive alternative governments will have relatively muted economic votes applies not just to prime ministers but also to cabinet partners. However, since cabinet partners tend to have less responsibility in the cabinet than prime ministers, this hypothesis pushes the economic vote in the same direction as the responsibility explanation. We expect, then, that it will be harder to see the relationship among our sample of cabinet partners than it was in the sample of prime ministers (in which the hypotheses go in opposite directions).

Figure 7 graphs the parties' economic votes against the time since 1960 each partner party has served in the cabinet as a partner. First, consistent with the

responsibility explanation, all partner parties have relatively small economic votes (notice the scale of the y-axis). Nevertheless, a weak positive relationship exists. This is mostly due to the fact that economic voting for the German FDP tends to be smaller than for cabinet partners in other countries. Indeed, just as the perennial prime ministers in the Belgium and the Netherlands had “wrong signed” economic votes, the FDP, a perennial cabinet partner, provides a disproportionate number of these “wrong signed” economic votes in this graph. The other party that contributes on the right side of the graph to the positive relationship is the French UDF. This party, however, is not one we would consider a perennial office holder and indeed once we use a discounted measure of the history of office holding the party moves much farther left on the graph, weakening the overall positive relationship although not eliminating it entirely.<sup>20</sup>

**Figure 7**  
**History of Cabinet Partnership and the Economic Vote of Cabinet Partners in Coalitional Systems**



For clarity, we have not graphed one far outlying Portuguese case that had a positive economic vote above .1.

<sup>20</sup> The non-discounted score for the UDF results from its service in government prior to the socialist governments in the 1980s and because in coding the history of UDF government participation back to 1960, we took an inclusive line on deciding which precursor parties should be count in this history.

Table 4 provides the statistical results to accompany this graph (it also includes a measure that discounts a party's past record of office holding, and puts greater weight on its more current record). The estimates in the table are in the expected direction, but are weak and in general statistically insignificant. This is not surprising given the generally low levels of economic voting that occur for all partner parties and that we expected given their lower levels of responsibility in government. However, to the extent the FDP is in a unique position in our sample as the only truly perennial cabinet partner, its depressed economic vote (despite, we might add, holding the finance ministry for much of the period) is consistent with our expectation. Indeed, the mean economic vote for the German FDP is -.00017 compared to -.0136 for the other partners in Figure 7 – a difference that is significant at  $p < .005$ .

**Table 4**  
**The Pattern Cabinet Contention and the Economic Vote of Partner Parties**

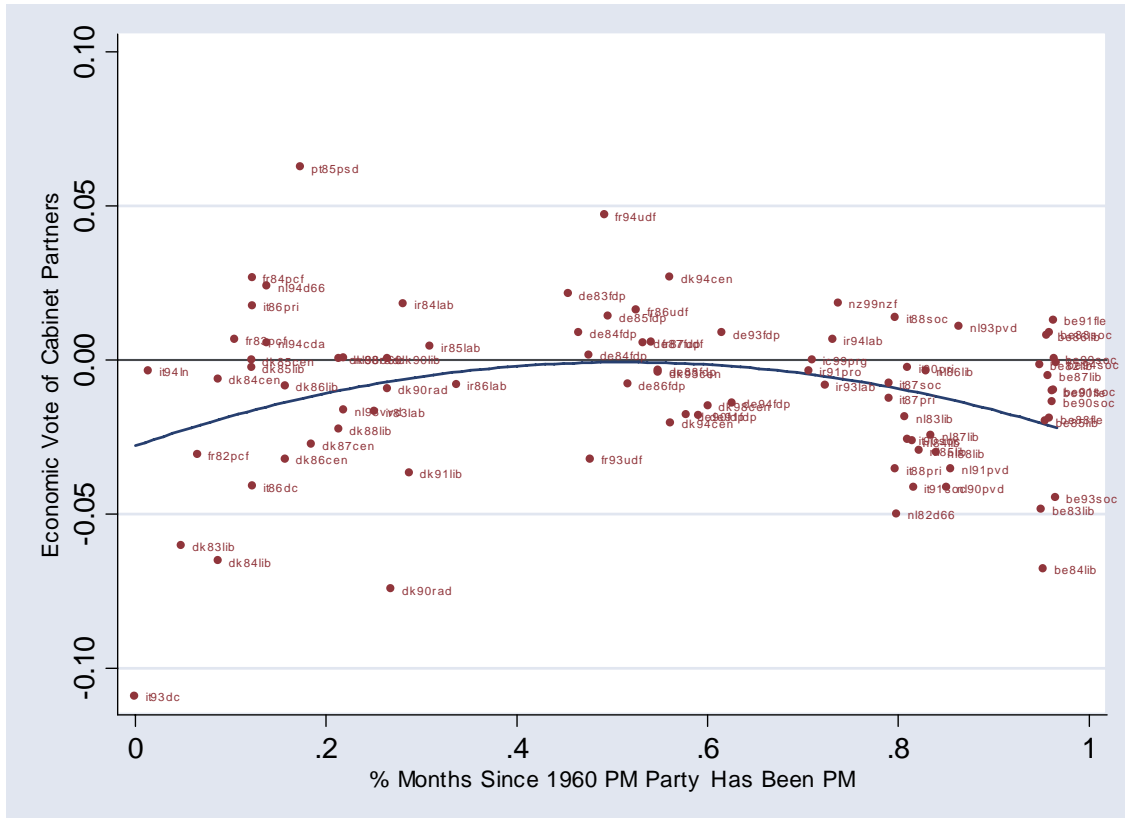
	<i>Econ Vote</i>	<i>Econ Vote Share</i>	<i>Econ Vote Share</i> *	<i>Econ Vote</i>	<i>Econ Vote Share</i>	<i>Econ Vote Share</i> *
% months party has been a Partner	.012 1.01	-.007 -0.04	-.032 -0.04	-- --	-- --	-- --
% months party has been a Partner, discounted	-- --	-- --	-- --	.006 0.55	-.055 -0.30	-.253 -0.30
Constant	-.017 -2.78	.32 3.94	-.746 -2.00	-.015 -2.17	.348 3.32	-.624 -1.31
N	85	82	82	85	82	82
R2	0.02	0.001	--	0.004	0.001	--

All models except those indicated by the \* were estimated using OLS regression with standard errors robust to heteroscedasticity and non-independence between observations of the same party in different surveys. Those marked with an \* use GLM to account for the fact that the share of the economic vote is a proportion (as recommended in Papke and Wooldridge, 1996)

Another way we can examine the implications of this hypothesis is to turn the story around – if the economic vote for perennial prime ministers should be depressed relative to their partners and, in general cabinet partners have small economic vote, then when we find cabinet partners with a large economic vote we would expect them to be from systems with a perennial prime ministers. Figure 8 provides the data for us to examine this expectation.

Figure 8

History of Incumbent Prime Ministers being in Contention to Remain PM and the Economic Vote of their Cabinet Partners



This graph plots the economic vote of partner parties as a function of the *prime minister's* history of office holding. Thus, the cases on the right hand side of the graph come from those systems with perennial prime ministers and they do appear to have larger economic votes than cases in which the prime minister is more competitive (those cases in the middle of the graph). Interestingly, when the prime minister in a cabinet is not very competitive at all, the graph suggests that there is an increase in the economic vote of partners. Two of these cases are unusual - the Italian Christian Democrats in opposition – but the others are, for the most part, different Danish bourgeoisie parties in cabinets led by the Conservatives. There is no point to exploring the sources of this too far, however, since the bend on the left side of the graph is not

robust to models of vote shares, as Table 5 clearly shows. The first column of this table gives the estimates corresponding to Figure 8 and we see in the coefficients the strong symmetric quadratic relationship that appears in the graph. Again, when we make the switch to measuring the dependent variable in shares, the signs will switch because now a bigger positive number indicates larger share of economic voting. There is a general weakening of the whole relationship in the models that use shares, but the relationship on the left side of the graph virtually disappears.

**Table 5**  
**Perennial Prime Ministers and the Economic Vote of Partner Parties**

	<i>Econ Vote of the Partners</i>	<i>Econ Vote Share of Partners</i>	<i>Econ Vote Share of Partners</i> *
% months current PM has been PM in the past	.1058 (1.96)	-.43 (-0.83)	-1.91 (-0.75)
% months current PM has been PM in the past-squared	-.1032 (-2.31)	.63 (1.28)	2.84 (1.21)
Constant	-.0277 (-1.92)	.869 (5.04)	-.8978 (1.21)
N	86	83	83
R <sup>2</sup>	0.086	0.06	--

Numbers in cells are coefficients and t-ratios. All models except those indicated by the \* were estimated using OLS regression with standard errors robust to heteroscedasticity and non-independence between observations of the same party in different surveys. Those marked with an \* use GLM to account for the fact that the share of the economic vote is a proportion (as recommended in Papke and Wooldridge, 1996)

As we did for opposition parties, we can also explore this hypothesis when voters form their beliefs rationally rather than based only on the past. As in that analysis, we build our measure of the voter's rational beliefs by estimating the probability that all potential coalitions form as a function of their current characteristics and use these estimates to calculate the probability that any particular incumbent party will continue in some cabinet. For the current case our concern is identifying whether voters are likely to believe that a particular party is a perennial prime minister or cabinet partner. Table 6 reports the relationship between our estimate of a party's chance of entering government and its economic vote. We examine the relationship for both incumbent prime ministerial parties (the left three columns) and cabinet partners (the right three columns). The relationship for prime ministerial parties is in the expected direction; a greater chance of entering the cabinet leads to a smaller – or smaller share of the – economic vote. But the estimated coefficients are not

statistically significant.<sup>21</sup> However, as with our earlier results based on historical measures of voter beliefs, the result for cabinet partners is weaker (not close to statistical significance and, in one case, in the wrong direction).

**Table 6**  
**Predicted Cabinet Contention and the Economic Vote of Incumbents**

	<i>Prime Ministers</i>			<i>Cabinet Partners</i>		
	<i>Econ Vote</i>	<i>Econ Vote Share</i>	<i>Econ Vote Share *</i>	<i>Econ Vote</i>	<i>Econ Vote Share</i>	<i>Econ Vote Share *</i>
Predicted probability of entering government	.056 1.46	-.329 -1.10	-1.45 -1.05	.0078 0.38	-.036 0.14	.170 0.14
Constant	-.0769 -3.11	.842 3.94	1.48 1.45	-.014 -1.13	.287 1.85	-.9097 -1.25
N	71	69	69	85	82	82
R2	.07	0.03	--	0.002	0.0002	--

Numbers in cells are coefficients and t-ratios. All models except those indicated by the \* were estimated using OLS regression with standard errors robust to heteroscedasticity and non-independence between observations of the same party in different surveys. Those marked with an \* use GLM to account for the fact that the share of the economic vote is a proportion (as recommended in Papke and Wooldridge, 1996).

These analyses provide convincing support for our hypothesis that, in coalitional systems, economic voting should be smaller for incumbent parties that are almost certain to be a member of any new cabinet that forms. A prime ministerial party that is a member of each of the several different cabinets that have any real chance of forming clearly receives a weaker economic vote. Although the support for this hypothesis is weaker for our second measure of beliefs than for our first, both results are in a consistent direction and the stronger result comes from the measure that is least subject to mis-measurement.<sup>22</sup>

With respect to coalition partners, we expected the evidence for the hypotheses to be much harder to detect and indeed, though we do not get results that are opposite our expectations, we find no systematic relationship between an incumbent party's

<sup>21</sup> Since there are no cases of incumbent prime ministerial parties with less than a 30% chance of entering some new government, we would not expect to see a quadratic relationship in these data (recall that the theory predicts that parties with a very low chance of entering some alternative cabinet will have depressed economic votes).

<sup>22</sup> Here we mean only to suggest that we know the exact values of the history variable but not the probabilities of formation. Of course, we have no way of evaluating whether history or formation probabilities are a better measure of beliefs.

economic vote and either its chance of getting into the cabinet or its history of participation.

### **Summary**

We began this discussion with the example of the Dutch CDA party: a large party (in terms of legislative seats and cabinet portfolios) that prior to 1994 always served in the Dutch governing coalition. Most students of economic voting would agree that these characteristics of the party's governing experience should matter for the vote decision. For the most part the literature focuses on the party's distribution of responsibility, predicting that a party like the CDA which is typically the prime ministerial party and controls a large number of ministerial portfolios should receive a large economic vote. And our contextual theory of the economic vote certainly accords considerable importance to the distribution of administrative responsibility (Duch and Stevenson 2007).

But if we are assuming that voters are rational then this particular example poses an interesting puzzle. A vote for or against the Dutch CDA has virtually no chance of affecting the ultimate composition of the governing coalition because, at least prior to 1994, the CDA was always in the governing coalition. Accordingly voting for this party will have no impact on economic policy making. Since the CDA is never "in contention" for governing responsibility – it is always assured of such – the economy should not affect the CDA vote. At least in these types of cases, assuming the voter is rationally strategic results in predictions that are directly at odds with the notion that the distribution of administrative responsibility should shape the magnitude of the economic vote. The evidence in this essay suggests that voters behave strategically paying attention to the nature of contention amongst both incumbent and opposition parties. Hence strategic considerations, specifically contention for administrative responsibility, represent a necessary, although not sufficient, condition for the economic vote.

Our theory of rational economic voting stipulates that voters must believe that parties are "in contention" for significant governing responsibility in order for the economy to affect their vote for that party. This essay makes a strong empirical case for this theoretical claim. Using the predictions of empirical models of cabinet formation as well as the historical record of cabinet participation as measures of contention we were able to test three generally hypotheses from our theory.

First, we showed that economic voting has its largest impact on those opposition parties that voters believe are most likely to replace the incumbents. This was the case when we measured voter beliefs about contention using the predictions of empirical models of cabinet formation and employing the historical record of cabinet participation.

The second hypothesis derived from our theory is that economic voting should be weaker for incumbent parties that are members of most of the viable alternative cabinets (i.e. they are perennial cabinet members). The evidence is quite convincing for prime ministerial parties: Perennial prime ministers have a smaller economic vote than prime ministerial parties who are in competition for the position. This result is especially revealing since while consistent with our theory, it is opposite what one would expect from the more standard “clarity of responsibility” argument found in the literature (since perennial parties should be easy targets for voters seeking to attribute responsibility).

Finally, overall economic voting should be muted when the incumbent cabinet (or alternatives similar to that cabinet) is not in contention to be reselected to govern. While the results were not as compelling as those for the other two hypotheses they certainly were directionally correct suggesting that when the incumbent government as a whole (or a close alternative) is either sure to re-selected or sure not to be, economic voting is depressed

Overall, these results make it clear that an important piece of the explanation for contextual variation in economic voting must be the strategic environment in which parties compete for administrative responsibility. When voters are faced with a situation in which parties are continually returned to government, election after election, economic voting will be depressed. Similarly, even if there is significant competition amongst opposition parties, if incumbent parties are not also competitive then the economic vote will be depressed.

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