

Evaluation Bias and Issue Ownership: How Voters Evaluate Opposition and Governing Parties' Competencies.

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Abstract

The main assumption of the issue ownership theory of party competition is that parties gain votes due to relative competence advantages across salient issues. In this study we reverse this causal assumption. We test the expectation that parties' policy strengths are a function of prior vote choice. We also expect that the causal relationship between competence judgements and party choice will be different for parties in opposition compared with those in government. Using aggregate British Gallup time series data between 1971 and 1997 and estimation using error-correction models, we examine the Granger causation between public evaluations of the 'best party to handle the most important problem' against vote intention. We find that incumbents are punished or rewarded according to performance judgments, supporting existing assumptions. However, issue ratings are also endogenous to evaluations of opposition parties, supporting our first and second hypotheses. We extend our analyses to model the causal relationships between governing party evaluations and opposition issue ratings, and we estimate the long-term impact of events on the ownership of issues. The implications of our study suggest that the endogenous relationship between issue ownership and party choice should be given greater attention and that party theories should differentiate between parties in government and those in opposition.

Introduction

Although many theories of party competition relate to spatial position¹, a growing number of studies point to the importance of candidate issue competence or ‘valence’.² The issue ownership theory of Petrocik (1996; Petrocik et al. 2003), the saliency theory of Budge and Farlie (1983; Budge et al. 1987; 2001) and the dominance/dispersion theory of Riker (1993) each argue that parties gain votes by shifting voters’ attention onto relative policy performance strengths. The concept of ‘issue ownership’ refers to a performance-based reputation for handling issues about which voters are concerned (Petrocik 1996). Candidates benefit when their ‘owned’ issues are salient to voters in campaigns, and hence have incentives to focus campaigns onto their relative strengths. The salience and dominance/dispersion theories similarly predict that parties should increase the salience of issues on which they have a relative advantage, and they should downplay issues on which an opponent’s reputation is stronger.

Despite a growing interest in issue-based performance voting, very little scholarly attention has been paid to the relationship between voting and policy competence across the policy domain, to the formation of party and candidate reputations for competent issue handling, or to the causal relationship between vote choice and issue ownership. The main assumption has been that issue ownership is exogenous to party choice, so that competence ratings lead to vote choices, rather than vice versa. According to Petrocik (1996), ‘ownership’ arises from policy handling in government and also the commitment to issues in the long-term. However, there is some precedent in the economic voting literature to suppose that policy performance ratings may be caused by (are endogenous to) candidate choice, rather than the opposite causal direction (see Wilcox and Wlezien 1996; Wlezien et al. 1997; MacDonald and Heath 1997; Anderson et al. 2004; Evans and Anderson 2006). The implications of this literature have not been translated into the wider issue domain, nor have their implications been considered for party theories. We therefore reverse the causal assumption of the issue ownership or issue salience theories to consider the possibility that ‘issue ownership’ or issue competence is endogenous to vote choice.

We also propose a party-specific theory of causality between policy evaluations and vote choice that is determined by status in government or opposition. When parties generate reputations for competence on issues, they do so when they perform in office. Hence the issue ownership theory builds on the reward-punishment model of Fiorina (1977). Incumbent record is a decisive factor in the voting calculus of the electorate. Yet Butt (2006) revealed that evaluations of the economy are

¹ The main examples are the proximity theory of Downs (1957), the directional theory of Rabinowitz and MacDonald (1987) and the unified models of Adams et al. (2001; 2005).

² Stokes (1963) first used the term ‘valence’ to describe issues on which parties share positions but differ in their perceived capabilities in delivering upon those agreed goals. ‘Valence issues’ are those on which parties are therefore evaluated on competence because they cannot be clearly differentiated on position (see Green 2007).

more strongly associated with voting for the incumbent than the opposition, whereas partisan predispositions are used to generate evaluations of the opposition parties' economic competence. Broadening these implications to the issue ownership model and thus to other salient policy issues, we therefore suppose that voters form their perceptions of incumbent party issue handling from record in office, and so the reward-punishment model will explain the causation of issue competence evaluations upon changes in vote choice. However, for parties in opposition, we predict that voters will be more likely to formulate their opinions of relative competence evaluations, or 'issue ownership', from the heuristic of prior preference: issue competence ratings will be endogenous to party preference for parties in opposition.

Our research design uses time series analysis of monthly aggregate Gallup data in the United Kingdom between March 1971 and April 1997. We estimate error correction models for vote choice and competence ratings and we test for Granger causation between vote intention and responses to the 'best party to handle the most important problem' question over six election cycles and for three parties – the Labour, Conservative and Liberal Democrat parties.³ These data offer the first explicit test of causality between these two series⁴ and therefore the first analysis of the relationship between the 'best party to handle' series and vote intention. The data are also the most comprehensive time series we have identified, covering more than three hundred continuous months. The time series affords the comparison of five election cycles in which a clear incumbent is in situ, one case of shared government (when the Liberals and Labour were in a power-sharing arrangement), and eleven corresponding cases where a party is in clear opposition.

Our findings demonstrate significant policy-voting or reward-punishment dynamics for incumbent parties. The issue competence series 'Granger causes' the vote intention series in our incumbent party cases, and the pattern is not found in the opposite direction. Furthermore, in the period of minority third party government, when responsibility for policy was shared, we find significant issue competence or ownership driven evaluations of voting. However, in many cases of opposition party evaluations we find that vote intention Granger causes the issue handling series, suggesting that there can be an endogenous direction between the causation from issue competence judgments and vote choice for parties in clear opposition. We do not find a similar endogenous relationship for any of our incumbent party cases. Closer analysis of our unexplained opposition

³ Between 1971 and 1981 the third party was known as the Liberal Party. Between 1981 and 1988 the Liberal and Social Democratic Party was collectively termed the 'Alliance', and from 1988 the party was known as the Liberal Democrats.

⁴ Clarke et al. (1998) use the Gallup vote intention data between 1979 and 1996. Clarke et al. (2000) use these data between 1992 and 1997, and Sanders (1999) similarly models the relationships between the Gallup data vote intention series and various economic evaluations between 1979 and 1997. Sanders and Gavin (2004) do so for data between 1997 and 2001. These authors do not explicitly model the causal relationships between their series, nor do they use the 'best party' series, but Clarke et al. (2000) and Sanders (1999) note that tests for granger causation would be a desirable step forward in modelling causation using these vote intention data.

cases confirms that where best party evaluations are neither causal upon nor caused by the opposition vote intention measures, the competence evaluations of opposition parties are Granger caused by the competence evaluations of the incumbent party. These findings suggest that when vote choice is not a useful heuristic because a party has been in opposition for a long period, voters then rely on their opinions of the incumbent to form their judgments of opposition issue competence. The final section of our paper evaluates the degree to which ‘clarity of responsibility’ against incumbents, in the form of important political events, enables opposition parties to gain a net and long-lasting issue competence advantage, enabling them to gain an issue ownership advantage that they cannot otherwise achieve in periods of ‘normal’ political contestation. The paper thus provides new insights into the predictors of party performance ratings on salient issues, on the relationship of these dynamics to vote choices over time, and on the significance of events in changing the relative ownership of one candidate to another.

The implications of our study are twofold. We conclude that theories of party competition considering the electoral impact of performance or competence evaluations would usefully consider the ability of different parties – in and out of office – to use their relative owned issues or relative handling advantages to win votes. While incumbent parties should be expected to focus their electoral campaigns on issues on which they have gained a performance advantage in office, opposition parties may be expected to focus on issues as a function of their popularity, rather than a cause. The implications of our study also reach to reward-punishment models of voting more generally (see Fiorina 1971; 1981) and to the literature on ‘clarity of responsibility’ and economic voting (Powell and Whitten 1993; Whitten and Palmer 1999; Andersen 2000; Chappell and Veiga 2000; Lewis-Beck and Paldam 2000; Nadeau et al. 2002; Anderson 2006). Our findings suggest that the relationship between policy performance and vote choice would be better understood if vote models encompassed the full range of salient policy issues, and if they also considered the different causal nature of competence evaluations for parties in power compared with those in opposition.

The Relationship of Issue Competence to Vote Choice

The saliency theory of Budge and Farlie (1983; Budge et al, 1987; 2001), the dominance/dispersion principle of Riker (1993) and the issue ownership theory of Petrocik (1996; Petrocik et al. 2003) each emphasize the electoral benefits a party or candidate accrues when issues on which they are evaluated positively are most important in the minds – and therefore in the choices – of voters. Budge and Farlie (1983) argue that political parties engage in selective emphasis of issues on which they have a competence advantage, increasing the salience of issues on

which they are rated well and aiming to neutralise issues on which opponents are rated positively.⁵ Riker (1993) likewise states that the purpose of campaign messages is to increase the salience of issues over which the party is perceived to be credible. Petrocik (1996) argues that candidates compete by emphasizing issues where they have a reputation for greater competence: parties “own” certain issues, and benefit when those issues are important to voters. Petrocik (1996: 826) summarises, “the theory of issue ownership finds a campaign effect when a candidate successfully frames the vote choice as a decision to be made in terms of problems facing the country that he is better able to handle”. This strategy is similar to ‘priming’ (Iyengar and Kinder 1987) whereby candidates prime voters to cast their ballot on the basis of issues favorable to the candidate and less favorable to an opponent. The common expectation of these theories is that parties promote issues on which they hold a reputation for policy competence.

The concepts of issue ownership and the handling competencies defined in Budge and Farlie’s saliency theory are very similar. Petrocik (1996: 826) defines issue ownership as ‘handling’, “the ability to resolve a problem of concern to voters ... a reputation for policy and program interests, produced by a history of attention, initiative, and innovation towards these problems”. Budge and Farlie (1983) similarly argue that parties have ‘owned’ issues, on which they have a relative advantage due to reputations for performance and their long-term commitment ‘association’ with a particular issue. “Party strategists assume ... that electors make a clear connection between a certain party and good government performance on a particular issue” (Budge and Farlie 1983: 25). These authors each recognise that issue ownership tends to be stable, but that there can also be variation due to popularity and performance in government. We therefore combine the assumptions and consider issue ownership or an issue-based advantage in the saliency theory, to represent a generalised competence or ‘valence’ (Stokes 1963)⁶ component in the voter calculus.

Consistent with Enelow and Hinich (1984; and Enelow et al. 1993), the likelihood a party will deliver, its handling ability or its ownership, can be denoted by the competence term, C . This complements the classic spatial utility model where the utility to a voter, i , towards party p , on dimension j , will be derived from the perceived distance, $(P_{jp} - P_{ji})$ between a voter and party.

$$U_{ijp} = -(P_{jp} - P_{ji})^2 + C_{jp}$$

⁵ See also Klingemann et al. 1994; Budge et al. 1987; 2001; Van der Brug 2004; Clarke et al. 2005.

⁶ Stokes (1963) differentiated between ‘valence issues’ on which the electorate and the candidates share the same goals and on which performance is the main evaluation criterion, and ‘position issues’ on which the candidates take different positions, and on which Downs’ (1957) theory of party competition more realistically applies.

A party has an incentive to increase the weighting, or salience, of dimension j (or $k \dots n$) on which it has a relative spatial and/or ownership or competence advantage.⁷ On issues on which parties or candidates take very similar positions, the competence term should be expected to be given greater weight in the voter's utility calculation (Stokes 1963; Green 2007). Valence theories have also been developed to estimate the effect of competence on party ideological position taking,⁸ but here we use the term to summarize the ownership, handling, competence or performance evaluations thought to be important to party strategies and vote choices.

Despite there being agreement on the importance to parties of relative competence or issue ownership advantages, the only policy domain in which policy performance voting has been theorised extensively is the economic voting literature.

Economic voting studies build on the reward-punishment model of Fiorina (1977; 1981). In Fiorina's model, voters reward the incumbent if economic performance has been good and punish the incumbent if the economy has performed badly. Scholars have sought to emphasize the link between the performance of the objective economy and also of perceived economic performance upon the vote shares of incumbents, claiming an important and often decisive effect (see Lewis-Beck and Stegmaier 2000, Kiewiet 2000, Alvarez et al. 2000, Nadeau and Lewis-Beck 2000, Norpoth 2001). These studies estimate the effects of retrospective evaluations of the economy, that is, of past policy performance. Similarly, Petrocik (1996) recognizes the electoral consequences of perceived failures on the economy, and on other conditions such as wars and failed international or domestic policies, upon the ownership of issues. The consequence, he states, is that "the challenger acquires an advantage, a performance-based ownership of the issue, from this irrefutable demonstration that the incumbent cannot handle the job" (Petrocik 1996: 827). This suggests that the issue ownership model should exert an effect on the vote choice that is consistent with the reward-punishment model. Perceived policy failures (or successes) will exert a negative (positive) effect on the issue ownership advantage of a candidate, leading to a commensurate loss (or gain) of electoral support. Expectation 1 correspondingly reflects the existing assumptions of the issue ownership or saliency theories.

Expectation 1: Changes in issue ownership ratings will result in changes in the vote shares of incumbent parties

However, for Petrocik (1996; Petrocik et al. 2003), a party also gains ownership of an issue in an additional way – via the representation of issues and constituencies of parties. Parties have

⁷ Green and Hobolt (2008) provide an explication and empirical test of this argument in the British case.

⁸ See Groseclose (2001) and Schofield (2003).

commitments to different issues and societal cleavages, generating long-term reputational advantages. “The parties reflect and promote [these] conflicts because they are the politically organized face of the religious, economic, ethnic, linguistic, and regional conflicts endemic to all societies” (Petrocik 1996: 827). Consistent with the reward-punishment model, therefore, the issue ownership theory recognises the importance of incumbent performance on the prediction of issue handling or ownership ratings, but it also recognises the sustained commitment to issues through the representation of electoral constituencies. In this way, the issue ownership ratings of parties in power and out of power can be accounted for. Opposition parties can be evaluated according to their long-term representation of issues where they cannot be evaluated, at least in the recent past, on their policy performance in government.

In addition to this explanation, we propose an additional causal explanation to account for variation in the issue ownership, or policy competence ratings, of parties out of power. We propose that parties out of power will also receive variations in their issue ownership ratings due to variations in their overall electoral support. That is, issue ownership will also be endogenous to vote choice for parties whose voters do not have government performance cues on which to rely.

The Relationship of Vote Choice to Issue Competence

Fiorina (1977) introduced a model to his reward-punishment theory whereby voters compare actual past performance of incumbents to hypothetical performances of challengers. “In making his voting decisions the citizen looks at the incumbent’s performance, the alternative platforms of the incumbent and challenger and (perhaps) imagines a hypothetical past performance term for the previous challenger” (Fiorina 1977: 608). Fiorina’s model can be compared with Powell and Whitten’s (1993) influential argument in the economic voting literature – of ‘clarity of responsibility’. Powell and Whitten (n.d.) argue that where clarity of responsibility is high, the effects of economic voting will be greater. Where voters have more ambiguous cues regarding which party is responsible, between, for example, parties in coalition, the effects of the economy will be weaker. In both theories, the electorate can only hold the incumbent responsible when there is clear information about performance, whereas opposition parties introduce uncertainty into the decision-calculus of voters. Powell and Whitten’s findings have been replicated and extended elsewhere (Whitten and Palmer 1999; Andersen 2000; Chappell and Veiga 2000; Lewis-Beck and Paldam 2000; Royed et al. 2000;⁹ Nadeau et al. 2002; Anderson 2006). These studies may imply that we should find stronger policy or competence voting (or issue ownership effects) for incumbents, but weaker or no competence voting (issue ownership effects) for oppositions.

⁹ These authors support Powell and Whitten’s (1993) findings by extending the data series and by operationalizing the dependent variable differently but also find mixed and contradictory when using more parsimonious measures of ‘clarity’.

A party may also be judged on what they may do in the future. Sanders (1996; 1999) showed the importance of judgments of whether a party or candidate is more likely to manage the economy best, *prospectively*. However, as argued by Butt (2006), voters cannot be expected to form as well-informed judgments of what an opposition party may do in future compared with their predictions about an incumbent's future performance based on their recent performance of the government. Voters have fewer reliable cues on which to form their competence evaluations of opposition candidates compared with their evaluations of incumbents.

Evans and Andersen (2006) argue that where the public's grasp of economic performance is generally weak, it will be influenced by other aspects of political belief systems. They point to the conditioning effects of partisanship upon evaluations of the objective economy, particularly under conditions of low information, and argue that once prior party preferences are taken into account, the effects of economic voting are significantly reduced.¹⁰ In the US, Rudolph (2003) finds that Democrats credit their own party for perceived economic successes while blaming the opposition party for perceived failures,¹¹ and other studies, though small in number, have also argued that perceptions of the economy are strongly conditioned by candidate or party preference, and vote choice (see Wilcox and Wlezien 1996; Wlezien et al. 1997; MacDonald and Heath 1997; Anderson et al. 2004). Individuals who prefer a party will be more likely to rate the economy positively, rather than form their economic evaluations independent of their political preference. A long-standing literature on bias, conditioning, assimilation and endogeneity explains these effects due to strong affiliations with parties that generate biases in evaluations of party or candidate performance.¹²

Butt (2006: 744) explicates the bases for differences in the effects for incumbent and opposition parties, arguing that informational asymmetries will "affect the ability of voters to form evaluations about the governing capabilities of these different parties". The author demonstrates that partisan predispositions are used to generate the competence evaluations of opposition parties, whereas economic evaluations are more strongly associated with vote choices for incumbents.

Despite the relevance of these studies for the effects of policy evaluations beyond those for the economy alone, their conclusions have only been examined in the context of evaluations of economic competence. Their implications for the broader concept of issue ownership can be summarized as follows:

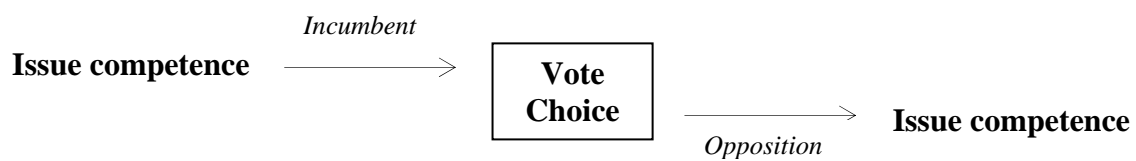
¹⁰ Lewis-Beck (2006) challenges Evans and Anderson's (2006) findings due to their operationalization of partisanship, arguing that party identification is instead endogenous to economic evaluations, and Lewis-Beck et al. (2008) later further defend the relevance of exogenous economic voting effects. We neither concur nor disagree with either approach but simply allow our findings to support either hypothesis.

¹¹ Interesting, he also finds that Republicans exhibit a different form of attribution bias, giving more credit to the president rather than congress, irrespective of party, with more positive perceptions of the economy.

¹² For classic studies, see Campbell et al. 1960; Converse 1964; Miller 1991; Miller and Shanks 1996.

Expectation 2: Changes in vote share will result in changes in the issue ownership ratings of opposition parties

Where voters have up-to-date information on a party's performance, handling, or competence in government, its issue ownership ratings will have a direct causal impact on the vote, as annotated in the first causal arrow depicted below. However, we surmise that where voters have out-of-date information on the performance of opposition parties, and also when the lagged electoral support for opposition parties contains the effects of previous performance judgments,¹³ issue ownership is more likely to be driven by prior vote choices.



Petrocik (1996) also argues that ownership changes from incumbent to challenger when the incumbent suffers a reputational crisis due to significant policy events. The final aim of our study is therefore to gather evidence regarding the formation of best party ratings and to extend the notion of 'clarity of responsibility' to the importance of events. We posit that important events allow incumbents to be judged on performance, that is, they enhance the 'clarity of responsibility' and therefore the link between policy performance and voting for the incumbent party. We therefore extend the concept of 'clarity of responsibility' from an institutional outcome, as defined by Powell and Whitten (1993), to the general informational effect of clear lines of performance-related evaluations. These effects, made possible by important and high profile political events, should therefore translate into electoral and ownership 'punishments' for incumbents, and policy advantages, or 'issue ownership', to parties or candidates in opposition. We therefore estimate the significance of important political exogenous shocks upon the issue ownership ratings and vote choices for our political parties. By so doing, we add new empirical evidence to our understanding of the causes and consequences of important issue ownership judgements.

Data and Cases

The economic voting literature is divided by scholars placing economic evaluations on the right-hand-side of vote choice equations and those placing the economy on the left. Our research

¹³ We do not deny that vote choice contains past policy performance elements, as well as the bias associated with partisan loyalty. However, in keeping with our research design and the availability of data, we use 'vote choice' as a summary measure of these composite elements to the vote.

design makes no prior assumptions about the causal relationship between issue evaluations and vote choice. We allow our measures of competence and vote to act as an independent or a dependent effect and we allow our data to determine the stronger causal relationship between each series.

Our research questions are examined in the context of the United Kingdom between 1971 and 1997. We use time series analysis to model the interrelationship of issue handling ratings and vote intentions for the time period for which data is available, 1971-1997. We then break down the analysis to individual electoral cycles for the governing parties and for the two main opposition parties, the Conservatives or Labour and the Liberal Democrats. We use tests for Granger causation between the variables in order to determine whether past values of issue competence are predictive of vote intention and vice versa. We next use error-correction models to represent the short-run and long-run relationship between party support and issue competence, for governing and opposition parties for individual electoral cycles. The electoral cycles approximate four years and range between 35 - 63 monthly observations. The monthly observations constitute the units of analysis. The methodological choice and construction of Granger tests and error-correction models are detailed in full in the methods and results section.

We operationalise issue competence, handling, or ownership in the same way as Petrocik (1996). He defines issue ownership as a reputation for greater competence on handling the issues about which the voter is concerned. Correspondingly, we replicate the measures used by Petrocik, using two available questions, the ‘most important problem facing the country’ and ‘which party is best to handle’ the stated problem.

Data

We use Gallup data about vote intention and the “best party to handle the most important problem” (plus fieldwork dates) compiled from the original *Gallup Political and Economic Index* (1959-2001). This covers more than three hundred continuous months from March 1971 to April 1997, with values generated for fifteen missing values by linear interpolation and the average value for five months where there were multiple polls.¹⁴ The sample size for the data on vote intention and the most important problem tends to be in the region of between 1,000 and 1,200. Similar data have been used by Sanders (1999), Clarke et al. (1997; 2000) to study the effects of objective changes in the economy against Conservative vote intention.

Issue ownership: The Gallup Organization’s poll question about the “most important problem” (“MIP”) is the most continuous time series measure of public attention to issues in the

¹⁴ Note that if there was a single Gallup poll that asked about the most important problem but multiple polls that asked about vote intention, the corresponding observation is used instead of an average value. Also, if the “best party” value was generated for missing values through linear interpolation, this was also generated for vote intention (even if this is available), in order that these remain consistent.

United Kingdom (1959). Between December 1959 and December 1964, Gallup UK asked the question "... Which of these is the most important problem facing the country today?", identical to its counterpart in the United States. From March 1965 Gallup began to ask the question "Which would you say is the most urgent problem facing the country at the present time?". Gallup discontinued its research into the political attitudes of the British public in May 2001. As a follow-up to this question about the "most important problem", in May 1968 Gallup started to ask "... Which party do you think can best handle that problem?". From March 1971 this question was included as part of the monthly *Gallup Political and Economic Index*. The question was discontinued in April 1997.

Our measure of issue handling (ownership) is the percentage ranking of the 'best party to handle the most important problem'. We have three measures in each case for the percentage rankings for each of the three main parties. The measure is not sensitive to the most important problem, and it reflects a summary measure irrespective of the salience of issues.¹⁵

Vote intention: Gallup UK first asked a poll question about the voting intention of the British public in October 1937. Between June 1943 and March 1999 it asked "... If there were a general election tomorrow, which party would you support?" (after March 1999 the wording of the question was sometimes changed to "... If there were a general election tomorrow, which party would you vote for?"). The reported results also included responses for the follow-up question "... Which party are you most inclined to vote for?" where the initial response had been "don't know", capturing both strong and weak vote preferences.

Our measure is a summary percentage measure of vote intention for each of the three main parties respectively.

Cases

The United Kingdom has a first-past-the-post electoral system where the winning party forms the executive, producing clear incumbent and opposition parties. Between 1971 and 1997 there were six cases of governing party status, the Conservatives 1971-1974, Labour 1974-1979, the Conservative 1979-1983, 1983-1987, 1987-1992, and 1992-1997. This corresponded to the other two parties being in opposition. There are twelve examples of parties in opposition where either the Conservatives (1974 – 1979) or Labour (else) are in opposition, we well as the third party, the Liberal Democrats. Between 1976 and 1978, as annotated in Figure 1, the Liberal party under David Steel collaborated with Labour ministers across a range of policy areas, an arrangement known as

¹⁵ Our data do not permit analysis of issue ownership by individual issue. However, there is sufficient variation in the salience of each issue between 1971 and 1997 to suggest that our results do not vary systematically by changing ratings in the 'most important problem facing the country today'. Furthermore, a range of interaction analyses between the 'best party to handle the most important problem' and the 'most important problem' questions did not reveal any statistically relevant effects.

the ‘Lib-Lab Pact’. We can demonstrate the vote intention data and the party in government for the three main British parties throughout our period, 1971 – 1997, and also the key political events throughout the series.

- Figure 1 about here -

We can see that the Lib-Lab pact was brought to an end in 1978. However, it boosted the reputation of the Liberal Party, but then negatively associated the Liberal Democrats with the more damaging period for the Labour government between 1978 and 1979, during the ‘winter of discontent’.¹⁶ In total we therefore have five cases of clear incumbent status, one example of shared government between 1976 and 1978, and eleven cases of clear opposition status.

Unfortunately, we are unable to divide the electoral cycle between 1974 and 1979 into two separate periods, which would provide us with a further case and a more clear delineation of the period of shared government. The period between the general elections of February and October 1974 is too short for reliable inference from time series analysis, as is also the case for the Lib/Lab pact between March 1977 and July 1978. However, the period of potential Liberal involvement in government prior to 1978 may suggest that ‘clarity of responsibility’ was mixed throughout that period, but we draw cautious conclusions in this case.

Methods and Results

The vote support and best party series for the Conservatives are plotted in Figure 2.¹⁷ From visual inspection, it is apparent that these series track together over time and share a significant degree of common variance.

Figure 2 about here

Whilst vote support and competence evaluations might be expected to coexist in some kind of moving equilibrium, just as vote support and prime ministerial approval are found to exist in an error-correction relationship for the Thatcher and Major Governments (e.g. see Clarke and Stewart 1995; Clarke et al. 1997; 2000; Clarke and Lebo 2003), this does not reveal the nature of interaction

¹⁶ The ‘winter of discontent’ was a period whereby strikes and poor weather conditions precipitated extreme headlines and difficult living conditions for many people in Britain, for which the Labour government was negatively associated.

¹⁷ The series track each other similarly for the Labour and Liberal series. Causal relationships cannot be detected in any vote intention and best party series in either case, and usually in any similarly presented time series data. Therefore, for the purpose of space, only the Conservative series are presented here.

between vote choice and issue competence. This can be achieved by estimating the statistical relationships between the two series using tests for Granger causation.

Granger causation

The measurement of Granger causation between time series (Granger 1969) considers whether the past values of a variable x improve prediction of another variable y relative to prediction of y from past values of itself alone.¹⁸ As such, it is said x ‘Granger causes’ y if changes in x tend to precede changes in y . This does not refer to causation in the strictest sense but to the predictive content of one variable in relation to another. This approach is particularly useful because it provides a means for investigating the interdependencies between vote choice and competence evaluations. It specifically allows us to determine whether past values of the vote intention series affect subsequent values of the best party series, or vice versa.

a) The UK Political Parties 1971-1997

The results of tests for Granger causation, each at a lag of one month,¹⁹ between vote support and competence evaluations are reported in Table 1. The estimated χ^2 statistics consider the null hypotheses H_1 : that vote support does not Granger-cause best party and H_2 : that best party does not Granger-cause vote intention. Where this is significant the null hypothesis is rejected, meaning that there is Granger causation between the variables. This requires that the variables are stationary and this is confirmed with Dickey-Fuller (1979) tests for the vote intention and best party series for the entire period between 1971 and 1997.²⁰

Table 1 about here

It is possible to infer from Table 1 that vote support Granger-causes competence evaluations for the Liberals ($\chi^2=19.19^{***}$), but not for the Conservatives or for Labour. At the same time, competence evaluations appear to Granger-cause vote support for the Conservatives ($\chi^2=17.09^{***}$), but not Labour or the Liberals. Therefore, when the entire period between 1971 and 1997 is taken into account, it appears that the Conservatives’ evaluations of best party, or its issue ownership, have a predictive causal relationship upon that party’s vote intention. Since the Conservatives were in government for five out of six electoral cycles in the period this provides some support for our

¹⁸ See Freeman 1983 for an introduction to the application of Granger causation in political science.

¹⁹ We have also run our tests using longer lagged periods and the results are broadly equivalent.

²⁰ For a time series to be stationary, its statistical properties (i.e. mean, variance and autocorrelation structure) must be constant over time. Granger tests of first differences of the vote intention and best party series generate similar, though not identical, inferences of Granger causation. The results of these tests can be found in Appendix I.

first expectation; changes in issue ownership ratings result in changes in the vote shares of incumbent parties. Conversely, the evaluations of the issue handling ratings, or issue ownership, of the Liberal party appear to follow the vote intention series indicative of an endogenous relationship from vote intention to issue ownership. Since the Liberals were in opposition for almost the entire period, and this party, apart from the period of the Lib-Lab pact, is almost always a clear opposition party, these results again provide some support for our second expectation; changes in vote share result in changes in the issue ownership ratings of opposition parties.

However, the results reported in Table 1 should not be given too much weight in our conclusions for two reasons. Breusch-Godfrey tests for residual autocorrelation are significant at the 95% confidence level for a number of the estimations.²¹ This suggests the underlying regression model may be mis-specified due to a first order autoregressive component. Also, as highlighted, our hypotheses cannot be directly tested without disaggregating our period into cases of opposition and governing party status. To facilitate this, and to correct for the possible autocorrelation of the residuals, we proceed to consider the relationship between vote support and competence evaluations for specific electoral cycles.

b) Government & Opposition

Granger causation tests are estimated for all election cycles for the vote intention and best party measures for the three parties in each case, Labour, the Conservatives and the Liberals. As shown in Figure 1 above, these periods represent two changes of the party in government. The Heath Government was a Conservative government (between March 1971 and February 1974), the second were the Labour Wilson and Callaghan Governments (between February 1974 and May 1979), and the third the Conservative Thatcher and Major Governments (between May 1979 and January 1997). We can therefore compare the Granger causation for a Conservative period in opposition and a Labour period in government. We can also evaluate the Granger causation for the Liberals between 1974 and 1979, when they were in coalition government for part of that time. Table 2a presents the results for Granger causation from issue ownership ratings upon vote choice.

Table 2(a) about here

Focusing on the first six columns of Table 2a first, we can see that the χ^2 statistics indicate that for three out of the six election cycles where a party is in government, competence evaluations Granger-cause governing party support. The exceptions are the Conservative governments between 1971 and 1974, 1979 and 1983 and 1987 and 1992. The significant results include the Labour

²¹ This not consistent with the Ljung-Box Q test, indicating that the residuals have been reduced to white noise.

Government between 1974 and 1979 ($\chi^2=6.23^{**}$), and this is in contrast to the findings shown in Table 1. We find this exogenous direction from issue ownership ratings upon vote choices for both the Labour and Conservative parties when in government, suggesting that this relationship may be due to incumbency status, rather than an artifact of party choice. However, there is mixed support for our first hypothesis, since in half the cases where an incumbent party is in situ, we find no Granger causation between issue ownership ratings upon vote choice.

There is also evidence of competence-driven support for opposition parties in two cases. One of these cases is the Liberals between 1974 and 1979 ($\chi^2=15.76^{***}$), a period during which the Lib-Lab pact meant that their responsibility status was shared. The other exception is the Liberals between 1987 and 1992. The role of competence in that period might be attributed to the creation of the Liberal Democrats in 1988 through merger of the Liberal Party and Social Democratic Party. This may suggest that when parties form new alliances, or perhaps gain greater media attention for their policies, leaders, and (in)competencies, the electorate can judge an opposition with more reliable evaluation mechanisms relative to when opposition parties cannot demonstrate their ability to handle important problems.

In our other cases of clear opposition status, in the second block of columns, we expect 'clarity of responsibility' to be low, and thus the reward-punishment model to have less explanatory power. These expectations receive support. With the exception of the two periods in which we find an effect for the Liberals, there is no evidence of Granger-causation from issue ownership ratings to vote choice for opposition parties. Even including the Liberal cases, no effect is found in ten out of twelve of our cases. If our findings for incumbent party issue ownership effects were due to party rather than incumbency, we would expect to find a significant causal association between the best party and vote choice series for the Conservatives in opposition between 1974 and 1979, but we do not. We consequently find support for our predictions in expectation 1. It appears that issue ownership ratings are in a causal dynamic with vote choices in several (but not all) cases where a party has responsibility over policy in government. For opposition parties, there is no evidence of such a causal relationship between the two series.

We now turn to an evaluation of the opposite causal direction. Table 2(b) provides the results of the tests for Granger causation from vote intention to issue ownership, testing the null hypotheses H_1 : that vote support does not Granger-cause best party. A significant χ^2 finding signifies a statistical finding in refutation, that is, vote intention Granger causes best party.

Table 2(b) about here

In support of our second expectation, our data show a statistical causal relationship from the vote intention series to the best party (issue ownership) series in cases where parties are in opposition. Perhaps most striking is the lack of any evidence of Granger causation in this direction in our six cases of incumbent parties. This runs contrary to economic voting studies arguing that evaluations of the incumbent's performance on the economy are endogenous to political preference (Wilcox and Wlezien 1996; Wlezien et al. 1997; MacDonald and Heath 1997; Anderson et al. 2004; Evans and Andersen 2006). This is not to say that such a relationship could not exist, for example, given alternative model specifications. We simply find no Granger causation from vote intention to issue handling on the most important problem throughout the period 1971 – 1997. Our results therefore support the first expectation, that issue ownership ratings will have a causal, exogenous impact on vote intention, in support of the reward-punishment model applied to incumbents.

The results for opposition parties provide further support for our second expectation; changes in vote share result in changes in the issue ownership ratings of opposition parties. In seven cases out of twelve, we find support for our prediction that Granger causation is in the direction from vote intention to issue handling, indicative of an endogenous relationship between vote intention to issue ownership for opposition parties. However, although these results occur in seven cases, and although there is no Granger causation in the same direction for parties in government, the findings are striking insofar as they do not appear to apply to the period of Labour party opposition between 1983 and 1997, a period of twelve years.²²

In order to clarify these relationships further, we conduct Granger causation tests between the issue ownership ratings of the governing party upon the issue ownership ratings of the opposition. Our intuition is that Labour's ratings in opposition between 1983 and 1997 were influenced by a strong and dominant Conservative government. The period in which the party (Labour) was in opposition was so long that prior vote intention may not have provided a reliable heuristic for voters to evaluate the main opposition party (whereas vote intention appeared to have a causal effect directly after Labour was rejected from power). Recall also that we found no statistical causation between the two series for the whole period, illustrated in Table 1, and so there is the strong possibility that our model is mis-specified insofar as we are trying to understand the causal dynamics underlying Labour's reputation for (in)competence in an important period of opposition.

Table 3 about here

²² Furthermore, diagnostic tests for residual autocorrelation, heteroscedasticity and normality generate acceptable (i.e. insignificant at the 95% confidence level) values, with two exceptions, the Conservatives in opposition between 1974 and 1979 and Labour in opposition between 1979 and 1983. Therefore, we are cautious with the conclusions we draw from the results in Table 2(b) insofar as they apply to these periods.

We can see in Table 3 that the period of Conservative government and Labour opposition between 1983 and 1997 was anomalous in comparison with the effects presented in Tables 2(a) and 2(b). We find evidence of granger causation from governing party best party ratings to opposition party issue handling. These results are in contradiction to our expectations, but they reinforce our belief that issue ownership ratings would not be exogenous to vote choice for oppositions. We find instead that in some periods, opposition issue ownership ratings are dependent on the issue performance of the government, and in this case vote intention is displaced as a causal predictor of issue ownership by the governing reputation of the incumbent.

Following these findings we next evaluate the *extent* to which governing party support is a function of competence evaluations and opposition competence evaluations are a function of party support. The construction of error-correction models enables estimation of the short-run and long-run relationship that exists between the two series, allowing us to approximate a comparison of contemporaneous changes in competence ratings or vote support against more long-term alternations that are perhaps more indicative of the concept of issue ownership.

Error-correction

Whilst error-correction is isomorphic with the concept of cointegration (Engle and Granger 1987), the approach is appropriate for modeling the short-run and long-run behavior of stationary, as well as non-stationary, time series data (see Bannerjee et al. 1993; Beck 1992; 1993; Davidson and MacKinnon 1993; Keele 2007; De Boef and Keele 2008).²³ The error-correction framework presumes that there is a moving, long-run equilibrium, where shocks that increase or decrease the normal distance between the variables tend to be corrected over time.

We apply the Engle-Granger (1987) two-step procedure²⁴ to model the extent to which there is a dynamic equilibrium between vote choice and competence evaluations in the direction of statistical causation, indicated by the tests for Granger causation. The procedure estimates the error-correction mechanism from the residuals of a standard linear regression of two variables of the same integrated order. and requires that those residuals are stationary. As such, the contemporaneous relationship between governing or opposition party support and best party ratings

²³ This avoids the ongoing debate over the presence of ‘unit root’ in political time series in general (e.g. Beck 1992; De Boef 2000; De Boef and Granato 1997; 1999; Durr 1993; Wlezien 2000) and governing party support in particular (e.g. Clarke and Lebo 2003).

²⁴ Note, to confirm results from the Engle-Granger two-step procedure, bivariate single equation error-correction models were also estimated, represented in the form $\Delta Y_t = \alpha_0 + \beta_1 \Delta X_t - \beta_2 (Y_{t-1} - \beta_3 X_{t-1}) + \varepsilon_t$, where short-run changes in the dependent variable (ΔY_t) are estimated as a function of short-run changes in the independent variable (ΔX_t), where divergences from the long-run equilibrium are corrected through an error-correction mechanism in lagged levels of the dependent and independent variables ($Y_{t-1} - \beta_3 X_{t-1}$) and where β_2 indicates the rate of correction. These models are not reported but produce similar, if not identical, results on the equilibrating relationship between the Gallup vote intention and best party series.

is first considered either in the form $BEST\ PARTY_t = \delta_0 + \delta_1 VOTE_t + \varepsilon_{BEST\ PARTY_t}$ for governing parties or in the form $VOTE_t = \beta_0 + \beta_1 BEST\ PARTY_t + \varepsilon_{VOTE_t}$ for opposition parties. The results of these regressions and residual-based estimation of the error-correction mechanisms are presented in Appendix II. The Dickey-Fuller (1979) test confirms that the residuals are stationary.

Governing party support

For governing parties, an error-correction model of the dynamic relationship between party support and competence evaluations is represented in the form;

$$\Delta VOTE_t = \alpha_0 + \beta_1 \Delta BEST_t - \beta_2 ECM_{t-1} + \varepsilon_t$$

Short-run changes in support ($\Delta VOTE_t$) are a function of short-run changes in its best party ratings ($\Delta BEST_t$) and the error-correction mechanism (ECM_{t-1}) measures the rate of equilibration (β_2) in response to short-run deviations from the vote/competence long-run equilibrium. The value of the error-correction parameter should, by construction, be negative and between 0 and -1. The closer this value is to -1, the stronger the rate of correction. If this is less than -1, party support and competence evaluations might diverge rather than remain within the long-run equilibrium. As such, the error-correction parameter captures the direction and strength of corrective (negative) feedback between issue ownership and vote intention. That is, the degree to which there is a sustained and long-run relationship between best party ratings and vote intention. The results of the error-correction models of governing party support by electoral cycle are reported in Table 4.

Table 4 about here

The results indicate that there is a significant relationship between vote intention and competence evaluations in both the short-run and the long-run, for each period of government between 1971 and 1997. There are some notable differences in the relative strength of short-run and long-run effects for certain periods.

In terms of long-run effects, the rate of error-correction for the period between 1983 and 1987 ($ECM_{t-1} = -0.994^{***}$) is stronger than that for the period between 1987 and 1992 ($ECM_{t-1} = -0.252^{***}$). As such, a shock to the long-run equilibrium of the latter period is corrected at a rate of 25%, so that a one unit deviation in the previous month results in a 0.25 unit decrease in governing party support in the current month. Thus, 75% of the dis-equilibrating shock remains after one month, 56% after two months, 42% after three months, and so on. In contrast, the rate of correction is almost instantaneous for the period between 1983 and 1987. The relatively low value of the error-correction parameters for both the 1979 to 1983 and 1987 to 1992 electoral cycles

might explain why there are no significant findings of Granger causation for effects of competence evaluations on party support.

There are also some differences in the value of short-run parameters of the model, where changes in party support are more sensitive to changes in competence evaluations for the 1983 to 1987 ($\beta_1 = 0.758^{***}$) and 1992 to 1997 ($\beta_1 = 0.832^{***}$) electoral cycles. An increase of 1% in the best party rating is correlated with a 0.8% increase in governing party support. These positive short-run effects are weaker, although still significant and > 0.5 , for each of the other electoral cycles.²⁵

The findings clearly denote the need to accommodate the presence of more long-run versus short-term competence effects upon the vote choice, rather than assuming all relationships are equal in the error-correcting relationship.

Opposition parties, by electoral cycle

For opposition parties, the error-correction model is constructed to estimate the degree to which competence evaluations are a function of party support, in the reverse direction to governing parties. In addition, the best party ratings of the governing party are incorporated into the model to determine if these are driving competence evaluations of opposition parties, as suggested by some of the Granger causation tests reported in Table 3. We are concerned with whether competence evaluations of the governing party tend to have a knock-on effect for competence evaluations of opposition parties. The model is represented in the form;

$$\Delta\text{BEST}_t = \alpha_0 + \beta_1\Delta\text{VOTE}_t - \beta_2\text{ECM}_{t-1} + \Delta\text{BEST}(\text{GOV})_t + \varepsilon_t$$

Short-run changes in best party ratings of the opposition party (ΔBEST_t) are a function of short-run changes in its support (ΔVOTE_t) and best party ratings of the governing party ($\Delta\text{BEST}(\text{GOV})_t$), in addition to the error-correction mechanism (ECM_{t-1}) that captures the rate of re-equilibration in response to shocks. The results of the error-correction models of opposition party's competence evaluations by electoral cycle are reported in Table 5.

Table 5 about here

²⁵ The insignificant Ljung-Box Q-statistics for each of the models, with the exception of the 1971 to 1974 electoral cycle, indicate that the residuals have been reduced to white noise, whilst the Breusch-Godfrey test statistics suggest the presence of residual autocorrelation for the 1992 to 1997 electoral cycle, though only at the 90% confidence level. In addition, tests for heteroscedasticity and a joint test for non-normality (Jarque-Bera 1987) and skewness/kurtosis (based on D'Agostino et al. 1990 and Royston 1991) generate acceptable (i.e. insignificant at the 95% confidence level) values, again with a couple of exceptions. As such, there do not appear to be significant threats to inference according to the results of these diagnostic tests.

We find a significant relationship between competence evaluations and party support in both the short-run and the long-run, for each period of government between 1971 and 1997. The results also show that the competence evaluations of the government have a negative and significant short-run effect on competence evaluations of the opposition for a number of electoral cycles. These are the Liberals for the 1974 to 1979 electoral cycle during which the Lib/Lab pact was operative, and for Labour for the 1979 to 1983 and 1987 to 1992 electoral cycles. This might explain why there is no evidence of Granger causation, as noted earlier, of best party ratings by vote intention for Labour in the period after 1983.

Again, there are some notable differences regarding the relative strength of short-run and long-run effects for specific periods of opposition, and in general between Labour and the Liberals. In each electoral cycle between 1979 and 1997 the rate of error-correction is greater for the Liberals than for Labour. This tends to suggest that competence evaluations of the Liberals are quicker to adjust to shocks in vote choice. This makes intuitive sense, because the party has very few, or no issues on which it has a competence advantage, or issue ownership (see Green and Hobolt, forthcoming), and therefore its competence ratings are more sensitive to changes in vote intention. The Liberals' issue competence between 1979 and 1997 appears to be in a short-run equilibrating relationship to variations in the party's vote. At the same time, the short-run effects of party support on best party ratings are greater for Labour in each electoral cycle. In view of the results from earlier tests for Granger causation, this indicates that the connection between party support and competence evaluations tends to be contemporaneous for Labour, which might explain why there are no findings of Granger causation in either direction for it for the post-1983 period.

Once again, the series of diagnostic tests for residual autocorrelation, heteroscedasticity and normality generate acceptable (i.e. insignificant at the 95% confidence level) values in most instances so do not appear to represent a significant threat to inference.

The impact of events on competence evaluations of governing and opposition parties

Finally, our analysis proceeds to estimate the degree to which governing party policy failures translate to issue ownership advantages for oppositions. If opposition parties' competence ratings cannot influence their vote shares, but the relationship is sometimes endogenous, we return to Petrocik's (1996) argument that ownership changes due to government policy failures. We argued earlier that these shocks should increase the 'clarity of responsibility' and therefore the degree to which performance failures result in electoral – and issue ownership – penalties.

We estimate the effect of exogenous shocks for an underlying vector autoregressive (VAR) model for each of the major political parties over the period between 1971 and 1997. The VAR model provides a technique that is designed for estimation of interdependencies that exist between

multiple time series, generalizing the univariate autoregressive (AR) model.²⁶ This is fitted using ordinary least squares estimation and it treats most or all of the variables as endogenous. Each of the variables in the system is regressed on n of its own lags as well as n lags of other variables in the VAR. Its estimates are robust even if non-significant variables are included in the model. The lag structure tends to be estimated through analysis of the empirical data such as with a modified likelihood ratio test. This is useful in combination with an intervention-based (Box and Tiao 1975) approach, since it controls for interrelationships between party support and competence evaluations, as identified earlier, before estimating effects of specific exogenous events. The VAR-intervention models constructed here and presented in Table 6 shows tests for ‘permanent-step’ inputs.²⁷ These are discrete events with an instantaneous and enduring effect on party support or competence evaluations.²⁸ The VAR framework requires that the variables are integrated of the same order and that non-stationary time series are differenced.

Table 6 about here

The general implications of the parameters of the VAR-intervention models are consistent with the findings from tests for Granger causation (see Table 1). However, the impact of specific events on the party support and best party series is of primary interest here. The effects we reveal for events are net of vote and best party parameters at one and two lags. Significant results therefore represent events which exert an impact beyond their short-term effect on the vote and on issue competence. We would expect the resignation of Harold Wilson, the ‘winter of discontent’ and the split of the SDP from Labour to all exert negative shocks upon the Labour party’s competence ratings and vote, whereas all other events were politically important to Conservative governments. With the exception of the Falkland’s War, all events could be expected to result in punishment rather than reward of the Conservative incumbent.

The split from the Labour party and the resulting formation of the Social Democratic Party resulted in a positive gain (1.9%) in competence ratings for the newly formed party (the SDP-

²⁶ For a technical introduction to application of VAR models in political science, see Freeman et al. (1989). A vector autoregressive model of p -order, written VAR(p), with exogenous variables x_t , can be represented in the form $y_t = v + A_1 y_{t-1} + \dots + A_p y_{t-p} + Bx_t + \varepsilon_t$, where y_t is a $K \times 1$ vector of endogenous variables, $A_1 \dots A_p$ are $K \times K$ matrices of parameters, x_t is a $M \times 1$ vector of exogenous variables, B is a $K \times M$ matrix of coefficients, v is a $K \times 1$ vector of parameters, and ε_t is assumed to be white noise.

²⁷ Note that the impact of certain events has been lagged a month to correspond to the correct fieldwork dates of the Gallup vote intention and best party data.

²⁸ This indicates that an intervention is permanent from time t_j , such that $X_j = \begin{cases} 0 & \text{if } t < t_j \\ 1 & \text{if } t \geq t_j \end{cases}$

Liberal Alliance) and a loss of perceived issue handling competence for the Conservatives (3.00%). The Labour party lost a significant proportion of votes (4.86%) but not issue competence ratings. We argued earlier that although the Liberal Democrats could not demonstrate their policy performance credentials in this period in government and issue handling ratings were causal upon vote choice (see Table 2a). That this gain was at the cost of Conservative's issue handling reputation may reflect the fact that the Conservatives were the party in government.

Whilst acknowledging there is a longstanding methodological debate over estimations of the 'guns versus butter' impact of the Falklands War on governing party support (see Dunleavy and Husbands 1985; Norpoth 1987; Sanders et al. 1987), the VAR-intervention framework finds that the effect of the Falklands War was symmetric for the Conservatives and asymmetric for the Liberals (with no significant effects for Labour). The Conservatives gained vote support and competence status but the Liberals lost voters without losing competence status. This is logical, since the Falklands War was an exogenous event that had no substantive relevance to the competence status of the Liberals (or Labour), but it was highly salient for the Conservatives as the party of government. In this way we find that significant events that reward parties in both their electoral support and in their issue ownership advantage, do not result in a loss of handling reputation for other parties.

The miners' strike of 1984 resulted in an asymmetric increase in the competence status of Labour (2.18***) with no significant long-term effect upon its vote, but in a symmetric decrease of support (-1.71***) and competence ratings (-1.91**) of the Conservatives. Thus, here we find a long-term alteration in the evaluation of the best party to handle the most important problem, suggesting that the Conservatives' handling of the issue permanently punished the party electorally and in terms of its perceived policy competence. That the effect benefited Labour by 2.18% may also reflect the fact that unemployment tends to be an 'owned issue' for the Labour party. Labour may have a greater propensity to be rated positively on this issue when the incumbent is seen to fail. It may also reflect the obvious increasing salience of the issue in that period.

The Exchange Rate Mechanism Crisis (Black Wednesday) in 1992 also enabled Labour to secure a competence advantage (2.59*) that was not replicated in its vote intention, whereas the damage for the Conservatives was very significant for both vote support (-2.74**) and issue competence (-4.28***). The Conservatives' reputation for competence was therefore significantly impacted. Sanders (1999) illustrated how the ERM crisis crystallized growing doubts over the Conservative administration and how it removed the party's reputation for economic competence, allowing Labour to renew itself politically. No studies have explored whether the crisis aided Labour's reputation for competence or whether it simply benefited the party's vote share. We show that Labour directly benefited from a permanent improvement in its competence ratings, but the

results concur with Sanders' argument because Labour's subsequent reputation for competence still had to be rebuilt, following the Conservative's loss of ownership of the economy.

Two results in Table 6 are somewhat surprising at first glance. The first is that the 'winter of discontent' in 1979 produces some counter-intuitive results. This was a period associated with damages to Labour's reputation for competence and a gain in Conservative electability, leading to the Conservative electoral success in 1979. In contrast, our results indicate a gain in 'best party' ratings for Labour and a loss of votes for the Conservatives. These findings can be explained by the inclusion of the best party and vote parameters in the VAR model, and the close proximity of this period to the May 1979 election. Immediately following the 'winter of discontent' the series indicate a loss of Labour's ratings for being the best party to handle the most important problem and a gain in Conservative vote intention. However, following the election, the Conservatives' vote dipped significantly, and the Labour party's perceived competence on the most important issue series bounced in a positive direction. Our model specification picks up the long-term trends rather than the short-term trends that follow our dummy event variable, but in this case, are not logically caused by the event. A similar phenomenon characterizes the effects found for the Poll tax riots upon the Conservatives' best party ratings, which show an upward effect for the Conservatives as well as an upward effect on issue competence for Labour. This indicates that Labour's competence ratings were positively and permanently improved due to the negative handling perception of the Conservatives, but that for the Conservatives, their long-term competence ratings recovered.

Overall, the results in Table 6 reveal that events quite rarely exert a long-term exchange from one party to another of issue competence or ownership ratings. Only on three occasions do we witness this phenomenon. However, we do find important effects of exogenous events on issue competence, particularly for the two main parties – those most likely to form a governing majority. Only in one instance did the third party gain a permanent issue competence advantage, and this was when it formed the SDP-Liberal Alliance in 1983. Thus, the main battle for the ownership of issues occurs between the two main parties, the Conservatives and Labour. The findings point to the importance of reward-punishment models of vote choice for incumbents but also add some caution. In this way, we complement but also extend the effects predicted by Petrocik (1996). He states, "wars, failed international or domestic policies, unemployment and inflation, or official corruption can happen at any time and provide one party with a "lease" – short-term ownership – of a performance issue" (Petrocik, 1996: 827). We find that a long-term issue ownership advantage can be translated from incumbent to opposition when highly significant events damage the competence reputation of the government. This finding, in addition to the results presented in Table 3, suggests that the adage, 'governments lose elections, oppositions don't win them', is true in exceptional circumstances, and can be interpreted through the lens of the issue ownership theory.

Conclusions

“Real world elections generally appear to be highly asymmetric: incumbents are significantly more likely to stay incumbents than are challengers to become incumbents” Fiorina (1977: 620).

In the issue ownership theory of party competition (Petrocik 1996; Petrocik et al. 2003), and also in the issue saliency theory (Budge and Farlie 1983; Budge et al. 1987; 2001), parties are expected to campaign on issues, in order to raise their salience, on which they have a relative handling, competence, or ownership advantage over their opponents. Despite a growing consensus on the importance of these competence-based models, very little research has examined the dynamics of performance ratings across the range of issues salient to voters. The large majority of studies has focused on evaluations of government performance on the economy, and these studies have differed to the extent they argue that incumbents suffer reward-punishment voting due to their economic management (see Lewis-Beck and Stegmaier 2000, Kiewiet 2000, Alvarez et al. 2000, Nadeau and Lewis-Beck 2000, Norpoth 2001), rather than those evaluations of the economy being endogenous to party support and partisanship (see Wilcox and Wlezien 1996; Wlezien et al. 1997; MacDonald and Heath 1997; Anderson et al. 2004; Evans and Anderson 2006). This paper has considered the implications of these debates in the economic voting literature for the issue ownership theory and for the dynamics of issue competence ratings and vote choices for parties in government and in opposition. Whereas the economic literature tends to focus on the performance of the incumbent, the issue ownership literature applies equally to parties in office and those in opposition. Therefore, we have explored how issue competence ratings influence vote choices for parties in government and in opposition. Specifically, we extend the work of Butt (2006) who studied the way voters evaluate opposition and incumbent parties differently on the economy, and we proposed a causal model whereby incumbent parties' votes can be explained according to Fiorina's (1971; 1981) reward-punishment model, whereas opposition parties' votes would be more likely to have an endogenous causal effect upon the issue ownership of those parties.

We examined these hypotheses using time series data in the United Kingdom between 1971 and 1997. Over that period there were five electoral cycles where there was one party that controlled the government and eleven cases of a party (either of the major opposition parties and the third party, the Liberal Democrats) in opposition. One case coincided with a period of coalition government between the Labour party and the Liberals, between 1976 and 1978.

Our data provided evidence in support of our hypotheses. Our tests for 'Granger causation' indicated that in no period of clear governing status did vote intention 'Granger cause' evaluations of the best party to handle the most important problem. However, in three out of six cases, there was evidence of competence evaluations exhibiting a significant statistical causal relationship upon

vote intention. Likewise, for those parties in coalition government, there was evidence of the reward-punishment model at work. Examining the causal dynamics of the vote intention and issue ownership series for our cases of opposition parties produced confirmatory results. We found some cases of competence voting, that is, ‘Granger causation’ in the direction of issue competence upon vote intention (although in the period of shared government), but a greater number of cases whereby voters appeared to take their cues of whether opposition parties were the best able to handle the most important problem, from prior vote choices. One important anomalous period emerged. We found no statistically significant effect of vote intentions on competence evaluations or vice versa. This was a period of Labour party opposition between 1983 and 1997 – an important and lengthy period in which Thatcher’s and then Major’s Conservatives were in power and in which Labour’s competence ratings were relatively poor for a long period. Closer analysis of the dynamics between the series indicated that this period was marked by a further dynamic unconsidered in our original theoretical predictions. Between 1983 and 1997, for fourteen years out of eighteen in the period of Conservative government, the Labour party’s issue competence ratings were ‘Granger caused’ by evaluations of the Conservatives as the party best able to handle the most important problem. That is to say, if the Conservatives were rated positively, the Labour party suffered a consequent downturn in their issue ownership advantage, and vice versa. This finding supports our argument that opposition ratings will not be determined by evaluations of competence for parties out of power *per se*, but leads to a different implication in that period. We deduce that in this period it was true that oppositions don’t win elections but governments that lose them, suggesting that voters may take their cues for the competence capabilities of parties in opposition, not only from their prior vote choice which may be derived in the long-term from prior periods in government, but from evaluations of the incumbent.

Our findings have implications for existing scholarship on voting and on party competition. In terms of models of vote choice, we find effects of a reward-punishment model of voting for the incumbent party – when voters have reliable performance cues on which to form their vote choices. We also find some evidence of this causal dynamic for parties in opposition, suggesting that confining the analysis of competence-based voting to incumbents alone may miss out an important part of the voter decision calculus. However, in a greater proportion of cases, the causal relationship from vote intention to issue ownership, for opposition parties, suggests a revision of reward-punishment models that assume that competence judgments, particularly of the economy, are always causal upon the electoral choices of voters. These findings support the arguments of scholars who argue that competence ratings, most specifically on the economy, can be endogenous to party support, and therefore that the effects of the economy on vote choices are overstated (see Evans and Anderson 2006). Our findings result from analyses of issues across the policy set of important

problems, and therefore the tests move beyond the confines of the economic voting literature alone. We conclude that the issue ownership model, where it is applied to the voting logic for parties in office and out of power, should consider the endogenous nature of issue ownership ratings for opposition parties. Our findings also have implications for the logic of party competition that we derive from these dynamics of vote choice. Whereas the issue ownership theory of Petrocik (1996) and the issue saliency theory of Budge and Farlie (1983) argue that party strategies, and also electoral outcomes, can be explained by the proximal influences of the relative ownership of issues, we suggest that, whilst important, these strategies will have a more distal origination. A party's owned issues, and therefore its strategic electoral platform, will be as much a consequence of its electoral support as it is a cause. While Budge and Farlie (1983; Budge et al. 1987; 2001) do not offer a causal mechanism for the issues on which a party is considered favourable, we offer the endogenous explanation in complement to Petrocik's existing account.²⁹

A number of caveats arise, however, resulting from the (un)availability of data and cases. We would of course prefer to extend our study with variation across issue, time, and country. Our theory suggests that the ownership of issues can be exogenous or endogenous, but it is also conceivable that 'owned issues' would show different effects relative to others. Petrocik (1996) argues that issue ownership arises not only from the record of the incumbent but also from the representation of traditional constituencies. If the latter is prominent in the formation of issue competence ratings, then these ratings should be more immutable to performance changes than issues on which parties do not exhibit long-lasting commitments. We do not have measures that allow us to test these effects. It may also be true that this vision of party competition applies less in modern electorates or applies less in some countries compared with others. The variation of performance evaluations and their effects across issues would be a valuable avenue for future research. Additionally, we would prefer to examine cases exhibiting greater variation by party. The fact that most of our cases of incumbency reflect a period of Conservative government raises the questions of whether the reward-punishment model relates to parties with strong governments, or Conservative governments, or whether Conservative voters consistently punish their party on the basis of performance more so than the voters of other parties. We are not able to extrapolate with certainty to the likely direction of issue competence effects for the current Labour and Conservative parties. It may be true that for the Conservatives in opposition, the direction of reward-punishment effects upon vote choice remained constant into opposition, in light of the lengthy period of Conservative government that preceded Labour's victory in 1997. Nevertheless, our prediction of competence-based voting for incumbents does remain supported when Labour was in power and

²⁹ Parties gain ownership over issues due to record in government and a long-term reputation for representing societal interests.

also for the Liberal Democrats' in the Lib-Lab pact of shared responsibility for government policy-making. We propose an explanation that we believe to be intuitively and evidentially plausible.

Notwithstanding these limitations, our study implies that incumbents are often accountable to their ratings of competence on the salient issues of the day. Our findings also suggest that although opposition parties' rankings are endogenous to vote choice, they benefit from incumbent parties that fail in significant ways on major policy areas. These conclusions give some support to the responsible party model (see Jones and McDermott 2004), whereby reward-punishment effects provide an incentive for parties to be competent deliverers of public concerns. Kiewiet (2000) finds that in countries with high clarity of responsibility, economic outcomes are generally more positive, in contrast to low clarity of responsibility institutional arrangements. Similarly, Tavits (2007) finds lower levels of corruption in high clarity of responsibility countries in contrast to low. Therefore, if we are to relate exogenous policy voting to some form of accountability, related to the potential for 'good' policy-making rather than bad, then the results of this study are encouraging. In most cases, it appears that governments are held to account, and although oppositions are often evaluated on the basis of prior support, they can expect to be rewarded or punished as a function of their policy ratings in government. Thus our study has interesting implications for theories of voting and party competition but also to the accountability mechanisms of parties on public performance issues across the salient policy domain.

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Tables

Table 1. Direction of granger-causality between vote intention and best party series (1971-1997)

(a) Vote intention granger-causes best party

	Labour	Conservative	Liberal
χ^2 <i>BEST PARTY</i>	0.09	3.08	19.19***
Durbin-Watson d statistic	2.391	2.171	2.299
Ljung-Box Q statistic	64.864**	38.461	63.346**
ARCH(1)	0.795	14.153***	11.911***
Breusch-Godfrey (12)	35.055***	22.728*	30.830***
Start	March 1971	March 1971	March 1971
End	January 1997	January 1997	January 1997
Lag	1	1	1
N	310	310	310

(b) Best party granger-causes vote intention

	Labour	Conservative	Liberal
χ^2 <i>VOTE</i>	1.40	17.09***	1.29
Durbin-Watson d statistic	2.433	2.329	2.359
Ljung-Box Q statistic	55.191	48.629	49.733
ARCH(1)	0.642	1.472	2.877
Breusch-Godfrey(12)	31.873***	39.287***	20.713
Start	March 1971	March 1971	March 1971
End	January 1997	January 1997	January 1997
Lag	1	1	1
N	310	310	310

* $p < .10$, ** $p < .05$, *** $p < .01$

Table 2. Direction of granger-causality between vote intention and best party (Govt. & Opposition)

(a) Best party granger-causes vote intention

	Government						Opposition											
	Con 1971 1974	Lab 1974 1979	Con 1979 1983	Con 1983 1987	Con 1987 1992	Con 1992 1997	Lab 1971 1974	Lib 1971 1974	Con 1974 1979	Lib 1974 1979	Lab 1979 1983	Lib 1979 1983	Lab 1983 1987	Lib 1983 1987	Lab 1987 1992	Lib 1987 1992	Lab 1992 1997	Lib 1992 1997
χ^2 VOTE	0.32	6.23**	2.70	7.97***	1.14	13.25***	0.21	0.90	0.27	15.76***	0.84	0.00	0.03	0.53	0.05	5.21**	1.59	0.41
Durbin-Watson d statistic	1.910	1.892	2.094	2.049	2.428	2.222	2.429	2.399	2.314	2.142	2.405	2.191	2.159	2.231	2.394	1.980	2.513	2.015
Ljung-Box Q statistic	5.959	21.791	30.997	15.451	23.160	38.277	18.167	16.502	18.618	19.934	49.860***	14.234	19.177	25.415	32.786	21.291	17.674	23.946
ARCH(1)	2.876	0.367	0.556	1.384	0.007	1.577	0.144	0.079	1.046	0.213	0.904	0.001	2.785	0.305	0.500	0.000	0.304	0.092
Breusch-Godfrey (12)	16.349	11.405	19.656	5.219	18.577	22.173*	16.640	12.176	11.381	11.229	25.176**	7.605	13.476	13.427	15.789	9.291	14.981	12.278
Start	March 1971	February 1974	May 1979	June 1983	June 1987	April 1992	March 1971	March 1971	February 1974	February 1974	May 1979	May 1979	June 1983	June 1983	June 1987	June 1987	April 1992	April 1992
End	February 1974	May 1979	June 1983	June 1987	April 1992	January 1997	February 1974	February 1974	May 1979	May 1979	June 1983	June 1983	June 1987	June 1987	April 1992	April 1992	January 1997	January 1997
N	35	63	49	48	58	57	35	35	63	63	49	49	48	48	58	58	57	57
Lag Order	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

* p < .10, ** p < .05, *** p < .01 (two-tailed tests)

(b) Vote intention granger-causes best party

	Government						Opposition											
	Con	Lab	Con	Con	Con	Con	Lab	Lib	Con	Lib	Lab	Lib	Lab	Lib	Lab	Lib	Lab	Lib
	1971 1974	1974 1979	1979 1983	1983 1987	1987 1992	1992 1997	1971 1974	1971 1974	1974 1979	1974 1979	1979 1983	1979 1983	1983 1987	1983 1987	1987 1992	1987 1992	1992 1997	1992 1997
χ^2 BEST PARTY	0.28	0.01	0.15	0.39	0.11	0.00	5.41**	10.05***	4.03*	4.63*	5.03**	5.78**	0.00	2.03	1.10	0.47	1.07	6.36**
Durbin-Watson d statistic	1.881	1.692	1.862	2.006	2.283	1.951	2.207	1.900	2.114	1.874	2.143	2.193	2.290	2.037	2.127	1.723	2.361	2.184932
Ljung-Box Q statistic	8.974	24.9441	19.254	22.5533	23.223	21.291	11.080	13.0913	16.402	28.2137	25.681	15.7009	17.470	23.6086	28.993	30.6575	20.564	24.5428
ARCH(1)	1.022	1.419	4.869*	0.140	1.153	1.790	0.710	0.093	1.261	1.598	4.274*	0.193	2.052	0.032	0.202	0.002	3.133	0.012
Breusch-Godfrey (12)	14.836	12.040	8.339	10.468	12.834	19.783	11.191	18.858	14.234	16.543	10.028	10.033	13.788	10.569	9.204	9.739	7.616	10.692
Start	March 1971	February 1974	May 1979	June 1983	June 1987	April 1992	March 1971	March 1971	February 1974	February 1974	May 1979	May 1979	June 1983	June 1983	June 1987	June 1987	April 1992	April 1992
End	February 1974	May 1979	June 1983	June 1987	April 1992	January 1997	February 1974	February 1974	May 1979	May 1979	June 1983	June 1983	June 1987	June 1987	April 1992	April 1992	January 1997	January 1997
N	35	63	49	48	58	57	35	35	63	63	49	49	48	48	58	58	57	57
Lag Order	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

* p < .10, ** p < .05, *** p < .01 (two-tailed tests)

Table 3. Direction of granger-causality between best party (Gov) and best party (Opposition)³⁰

	Lab/Con 1971 1974	Lib/Con 1971 1974	Con/Lab 1974 1979	Lib/Lab 1974 1979	Lab/Con 1979 1983	Lib/Con 1979 1983	Lab/Con 1983 1987	Lib/Con 1983 1987	Lab/Con 1987 1992	Lib/Con 1987 1992	Lab/Con 1992 1997	Lib/Con 1992 1997
χ^2 BEST(OPP)	3.13	0.01	1.38	0.56	0.60	1.01	2.41	1.43	6.63**	5.91**	6.69**	0.38
P	0.077	0.908	0.240	0.453	0.437	0.315	0.120	0.232	0.010	0.015	0.010	0.536
Durbin-Watson d statistic	2.322	2.524	2.061	2.038	2.222	2.337	2.204	2.061	2.261	1.692	2.243	2.380
Ljung-Box Q statistic	10.451	13.137	14.424	22.445	23.152	22.287	14.951	20.678	26.524	44.161**	21.236	17.842
ARCH(1)	0.496	0.065	0.062	0.252	3.488	1.288	0.375	0.208	0.191	0.187	4.018*	0.715
Breusch- Godfrey (12)	14.158	23.965**	4.201	10.800	14.075	15.637	11.975	9.273	10.071	12.081	8.009	15.322
N	35	35	63	63	49	49	48	48	58	58	57	57
Lag Order	1	1	1	1	1	1	1	1	1	1	1	1

* $p < .10$, ** $p < .05$, *** $p < .01$

Note: The models of governing party support reported in Table 3 exclude measures of personal economic expectations (Gallup 1974-1997) and national economic expectations (MORI 1979-1997) that have significant effects in the studies of Sanders (1999) and Clarke et al. (1997; 1998; 2000). In contrast, neither of these measures of economic expectations are significant for any of the electoral cycles considered in this analysis (and so therefore are not included in the final models). Whilst this finding is surprising, given similarities in the Gallup data and in the specification of error-correction models, it suggests that subjective evaluations of economic circumstances are (for measures used in this analysis) incorporated within the long-run equilibrating relationship between party support and competence evaluations, negating otherwise significant effects of economic expectations variables. That implies that best party ratings include some information about economic expectations. Thus, the mechanism of translation might be that an exogenous shock disturbs the long-run equilibrium between governing party support and competence evaluations, and is corrected at a greater or lesser rate. Whereas the models of Clarke et al. and Sanders find these effects transmitted through either personal or national expectations about the economy, here those effects are incorporated into the measure of competence.

³⁰ The comparisons are opposition party/governing party in each case.

Table 4. Error-Correction model of governing parties support, by electoral cycle, 1971-1997

	Δ Vote (Gov)					
	Equation		Equation			
	Con	Lab	Con	Con	Con	Con
	1971	1974	1979	1983	1987	1992
	1974	1979	1983	1987	1992	1997
Short-run effects: Δ Best Party _t	0.522*** (0.090)	0.632*** (0.085)	0.616*** (0.078)	0.758*** (0.071)	0.667*** (0.070)	0.832*** (0.087)
Long-run effects: ECM _{t-1}	-0.587*** (0.155)	-0.577*** (0.113)	-0.403*** (0.109)	-0.994*** (0.144)	-0.252*** (0.077)	-0.873*** (0.128)
Constant	0.046 (0.290)	0.045 (0.262)	0.073 (0.281)	-0.011 (0.214)	-0.025 (0.227)	-0.007 (0.237)
<i>Model diagnostics</i>						
N	35	63	49	48	58	57
Start	March 1971	February 1974	May 1979	June 1983	June 1987	April 1992
End	February 1974	May 1979	June 1983	June 1987	April 1992	January 1997
R ²	0.615	0.581	0.612	0.770	0.657	0.718
Adjusted R ²	0.591	0.567	0.595	0.706	0.644	0.708
Root MSE	1.714	2.078	1.965	1.482	1.728	1.789
Durbin-Watson d statistic	2.181	2.037	2.288	1.970	2.393	2.116
Serial correlation						
Breusch-Godfrey (12)	20.178	2.972	23.612**	12.001	13.542	12.909
Ljung-Box Q statistic	32.707**	15.770	31.925	16.669	21.408	31.0106
Heteroscedasticity						
ARCH (1)	0.140	0.107	0.489	0.000	0.174	0.029
Normality	0.96	6.53*	11.46***	3.51	0.56	1.96

p < .10, ** p < .05, *** p < .01

Table 5. Error-Correction model of opposition parties' best party ratings, by electoral cycle, 1971-1997

	Δ Best Party (Opposition)											
	Equation											
	Lab 1971 1974	Lib 1971 1974	Con 1974 1979	Lib 1974 1979	Lab 1979 1983	Lib 1979 1983	Lab 1983 1987	Lib 1983 1987	Lab 1987 1992	Lib 1987 1992	Lab 1992 1997	Lib 1992 1997
Short-run effects: Δ Vote _t	0.696*** (0.129)	0.475*** (0.053)	0.867*** (0.093)	0.298*** (0.067)	0.698*** (0.072)	0.523*** (0.073)	0.905*** (0.071)	0.493*** (0.059)	0.658*** (0.088)	0.411*** (0.049)	0.857*** (0.077)	0.672*** (0.054)
Long-run effects: ECM _{t-1}	-1.286*** (0.192)	-1.011*** (0.180)	-0.747*** (0.131)	-0.632*** (0.121)	-0.490*** (0.125)	-0.627*** (0.136)	-0.455*** (0.135)	-0.733*** (0.147)	-0.433*** (0.125)	-0.702*** (0.132)	-0.552*** (0.117)	-0.707*** (0.128)
Short-run effects: Δ Best Party (Gov) _t	-0.130 (0.120)	-0.015 (0.044)	0.087 (0.086)	-0.102** (0.035)	-0.186** (0.072)	-0.041 (0.083)	-0.149 (0.085)	-0.068 (0.069)	-0.325*** (0.088)	-0.068 (0.037)	-0.086 (0.088)	0.054 (0.044)
Constant	-0.065 (0.323)	-0.001 (0.139)	0.001 (0.237)	0.001 (0.107)	0.024 (0.255)	0.055 (0.275)	0.064 (0.234)	-0.013 (0.203)	0.007 (0.245)	0.010 (0.115)	-0.058 (0.212)	0.041 (0.122)
<i>Model diagnostics</i>												
N	35	35	63	63	49	49	48	48	58	58	57	57
Start	March 1971	March 1971	February 1974	February 1974	May 1979	May 1979	June 1983	June 1983	June 1987	June 1987	April 1992	April 1992
End	February 1974	February 1974	May 1979	May 1979	June 1983	June 1983	June 1987	June 1987	April 1992	April 1992	January 1997	January 1997
R ²	0.754	0.818	0.681	0.407	0.752	0.657	0.828	0.681	0.724	0.650	0.768	0.790
Adjusted R ²	0.730	0.800	0.665	0.376	0.7350	0.634	0.816	0.659	0.709	0.631	0.755	0.778
Root MSE	1.892	0.816	1.877	0.847	1.780	1.918	1.621	1.402	1.863	0.876	1.596	0.916
Durbin-Watson d statistic	1.962	2.181	1.746	1.906	2.141	2.134	2.218	1.997	2.301	1.880	1.833	2.019
Serial correlation												
Breusch-Godfrey (12)	7.610	22.966*	15.842	8.696	14.222	7.614	10.930	8.162	16.379	17.610	19.675	7.527
Ljung-Box Q statistic	9.296	9.925	19.766	13.0694	17.119	12.373	24.410	9.788	27.770	46.990**	50.440***	18.617
Heteroscedasticity												
ARCH(1)	0.441	2.147	1.579	5.121**	0.248	0.033	0.088	0.664	3.973*	0.009	0.689	1.198
Normality	0.49	5.43	4.84	1.33	1.41	16.48***	0.43	0.57	1.10	2.13	3.11	2.41

p < .10, ** p < .05, *** p < .01

Table 6. VAR-intervention models of party support and competence evaluations (1971-1997)

		Labour		Conservative		Liberal	
		Vote	Best Party	Vote	Best Party	Vote	Best Party
VOTE _{t-1}		0.428*** (0.090)	0.102 (0.095)	0.281*** (0.087)	-0.007 (0.096)	0.568*** (0.087)	0.230*** (0.059)
VOTE _{t-2}		0.070 (0.089)	0.002 (0.093)	0.305*** (0.082)	0.149 (0.091)	0.079 (0.086)	-0.032 (0.059)
BEST _{t-1}		0.119 (0.087)	0.436*** (0.091)	0.354*** (0.079)	0.629*** (0.087)	0.153 (0.128)	0.338*** (0.088)
BEST _{t-2}		0.103 (0.087)	0.096 (0.091)	-0.160* (0.081)	-0.068 (0.089)	0.194 (0.127)	0.172* (0.087)
Constant		13.723*** (2.154)	10.530*** (2.255)	8.480*** (1.539)	7.661*** (1.696)	2.727 (0.670)	0.053 (0.459)
<i>Exogenous Shocks to the VAR model</i>							
Three-day week	Dec-73 (Jan-74)	-1.230 (0.780)	0.096 (0.817)	0.535 (0.676)	0.656 (0.745)	-0.345 (0.700)	0.116 (0.480)
Harold Wilson resigns as Prime Minister	Apr-76	-0.838 (0.752)	-0.572 (0.787)	1.422* (0.725)	1.156 (0.799)	-0.644 (0.712)	-0.269 (0.487)
Winter of discontent	Jan-79	1.105 (0.783)	1.648* (0.820)	-1.928** (0.716)	-0.910 (0.789)	1.444* (0.723)	0.154 (0.496)
Split of SDP from Lab	Jan-81 (Feb-81)	-4.857*** (1.116)	-1.399 (1.168)	-1.818 (0.990)	-3.004** (1.091)	3.367*** (1.055)	1.914** (0.723)
Falklands War	(Mar-82) Apr-82	0.604 (0.974)	-0.444 (1.020)	3.787*** (1.009)	3.366*** (1.113)	-3.482*** (0.959)	-0.465 (0.657)
Miner's strikes	Mar-84 (Apr-84)	1.312 (0.735)	2.184** (0.769)	-1.712** (0.641)	-1.908** (0.707)	0.244 (0.637)	-0.367 (0.436)
Poll tax riots	Mar-90 (Apr-90)	2.661* (1.223)	0.318 (1.281)	-1.029 (1.060)	2.352** (1.168)	-1.203 (1.049)	-0.668 (0.719)
Margaret Thatcher resigns as Prime Minister	Nov-90 (Dec-90)	-1.907 (1.263)	-0.559 (1.323)	1.313 (1.118)	-0.452 (1.233)	0.396 (1.113)	0.465 (0.762)
Black Wednesday	Sep-92	2.026 (1.108)	2.589* (1.160)	-2.740** (1.043)	-4.282*** (1.150)	0.896 (0.996)	1.072 (0.682)
Maastricht rebellions	Jul-93 (Aug-93)	-0.115 (1.541)	-0.267 (1.614)	-0.418 (1.447)	0.296 (1.596)	-1.476 (1.468)	-0.045 (1.006)
Sleaze scandals	Jan-94	1.080 (1.498)	3.376 (1.569)	-0.907 (1.309)	-1.568 (1.443)	-0.135 (1.364)	-0.734 (0.935)
Major holds vote of confidence in leadership	Jun-95 (Jul-95)	0.364 (0.963)	-1.261 (1.008)	1.041 (0.854)	1.611 (0.941)	-0.425 (0.880)	0.140 (0.603)
N		309		308		309	
Lag Order (AIC)		2		2		2	
Start		March 1971		March 1971		March 1971	
End		January 1997		January 1997		January 1997	
R ²		0.807	0.786	0.872	0.829	0.863	0.834
RMSE		2.931	3.069	2.657	2.930	2.720	1.863
Durbin-Watson d-statistic		1.977		2.007		2.031	
Lagrange-Multiplier (1)		1.428		10.689*		4.227	
Lagrange-Multiplier (2)		2.074		7.4713		6.067	
Lagrange-Multiplier (3)		2.105		1.5607		4.251	
Ljung-Box Q statistic		21.994		36.462		39.836	

* p < .10, ** p < .05, *** p < .01

Note: each VAR model uses the lag order selected with Akaike's information criterion (AIC), with a maximum lag of three months permitted (and inclusive of the exogenous variables). Dates in parentheses if fieldwork dates differed from events.

Figures

Figure 1: Timeline of Conservative, Labour and Liberal vote intention, and events (1971 – 1997)

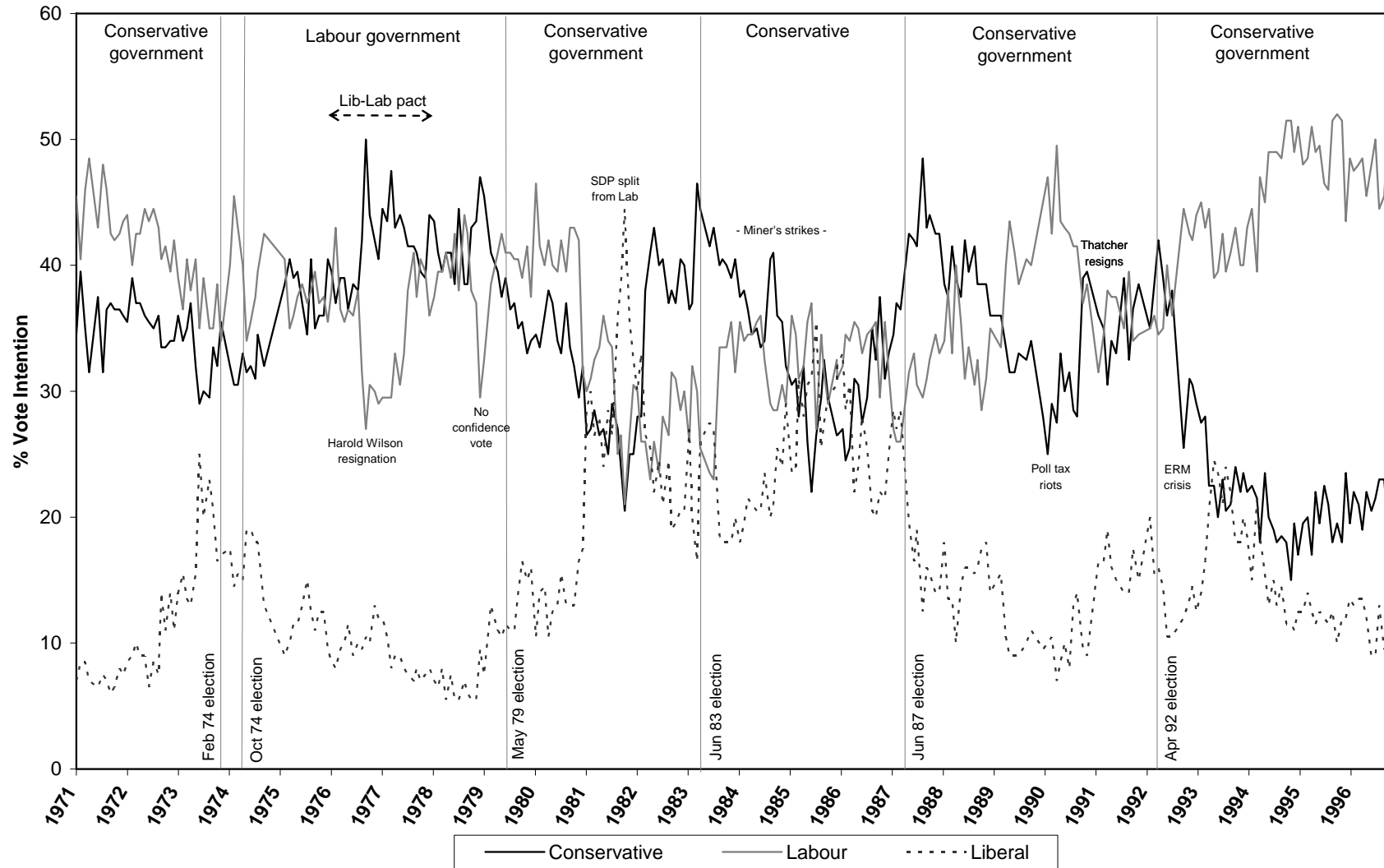
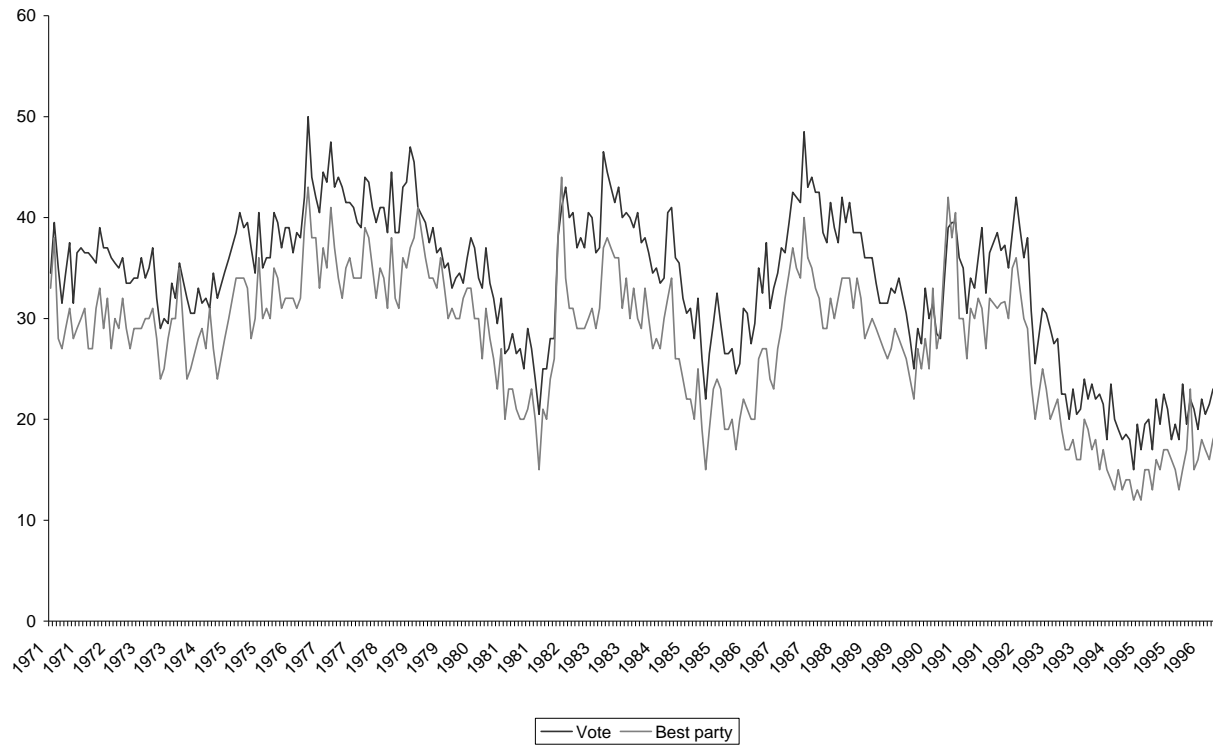


Figure 2. Vote intention and best party (1971-1997) (Conservative)



Appendix I. Unit root test results for vote/valence series (1971-1997)

	Vote Con	Vote Lab	Vote Lib	Best Party Con	Best Party Lab	Best Party Lib
<i>Augmented Dickey-Fuller (ADF) Test</i>						
<i>Statistic (Levels)</i>						
Random Walk	-3.699***	-4.460***	-3.672***	-4.182***	-4.541***	-4.206***
Trend	-4.399***	-4.661***	-3.632**	-4.854***	-6.062***	-4.329***
<i>Augmented Dickey-Fuller (ADF) Test</i>						
<i>Statistic (First Difference)</i>						
Random Walk	-22.626***	-23.881***	-22.290***	-21.075***	-23.597***	-23.208***
Trend	-22.582***	-23.864***	-22.274***	-21.039***	-23.572***	-23.180***
<i>Observations</i>	311	311	311	311	311	311
Start	March 1971	March 1971	March 1971	March 1971	March 1971	March 1971
End	January 1997	January 1997	January 1997	January 1997	January 1997	January 1997

* p < .10, ** p < .05, *** p < .01

Appendix II. Cointegrating Regression: vote intention and best party rating, by electoral cycle (a) governing parties

	Vote _t (Gov)					
	Con 1971 1974	Lab 1974 1979	Con 1979 1983	Con 1983 1987	Con 1987 1992	Con 1992 1997
Best Party _t (Gov)	0.605*** (0.123)	0.773*** (0.065)	0.876*** (0.062)	0.919*** (0.038)	0.946*** (0.096)	1.042*** (0.044)
Constant	16.831*** (3.638)	13.805*** (1.982)	8.790*** (1.826)	9.633*** (1.020)	6.816* (2.980)	4.216*** (0.849)
<i>Model diagnostics</i>						
N	35	63	49	48	58	57
R ²	0.417	0.697	0.807	0.926	0.632	0.911
Adjusted R ²	0.400	0.692	0.802	0.925	0.625	0.909
Root MSE	1.909	2.342	2.636	1.531	2.971	1.865
Dickey-Fuller test statistic (random walk) of model residuals	-3.743***	-5.023***	-3.559**	-6.794***	-2.761*	-6.545***

p < .10, ** p < .05, *** p < .01

(b) opposition parties

	Best Party _t (Opp)											
	Lab 1971 1974	Lib 1971 1974	Con 1974 1979	Lib 1974 1979	Lab 1979 1983	Lib 1979 1983	Lab 1983 1987	Lib 1983 1987	Lab 1987 1992	Lib 1987 1992	Lab 1992 1997	Lib 1992 1997
Vote _t (Opp)	0.736*** (0.087)	0.421*** (0.026)	0.852*** (0.054)	0.508*** (0.036)	0.601*** (0.044)	0.615*** (0.034)	0.960*** (0.073)	0.578*** (0.046)	0.644*** (0.062)	0.497*** .0334457	1.049*** (0.055)	0.599*** (0.032)
Constant	1.434 (3.605)	-0.371 (0.334)	-0.231 (2.143)	-0.949 (0.396)	10.393*** (1.531)	-2.722*** (0.775)	0.728 (2.327)	-0.674 (1.166)	10.677*** (2.278)	0.015 (0.475)	-3.890 (2.497)	0.159 (0.485)
<i>Model diagnostics</i>												
N	35	35	63	63	49	49	48	48	58	58	57	57
R ²	0.679	0.881	0.798	0.766	0.794	0.870	0.788	0.770	0.657	0.795	0.866	0.859
Adjusted R ²	0.669	0.878	0.795	0.762	0.790	0.867	0.783	0.767	0.651	0.791	0.864	0.856
Root MSE	1.899	0.803	1.914	1.002	2.116	2.045	1.868	1.449	2.260	0.928	1.978	0.966
Dickey-Fuller test statistic (random walk) of model residuals	-6.704***	-5.913***	-5.682***	-6.227***	-4.175***	-4.643***	-4.076***	-5.011***	-4.558***	-5.805***	-5.604***	-5.646***

p < .10, ** p < .05, *** p < .01