



ELSEVIER

International Journal of Forecasting 15 (1999) 153–162

international journal
of forecasting

Local votes, national forecasts – using local government by-elections in Britain to estimate party support

Colin Rallings*, Michael Thrasher

Local Government Chronicle Elections Centre, University of Plymouth, Plymouth PL4 8AA, UK

Abstract

In the wake of the debacle suffered by the opinion polls at the 1992 British general election, we developed a model for estimating national party support based not on the expressed preferences of electors but on how they actually behaved in the ballot box when voting in local government elections. This model proved successful in forecasting the outcome of annual local elections in each of four years, but was less accurate when tested retrospectively against the result of the 1992 general election. In 1997, however, it did correctly forecast both the Labour and Conservative general election shares of the vote and the winning party's margin in the popular vote. In doing so it out-performed all the eve of election opinion polls. © 1999 Elsevier Science B.V. All rights reserved.

Keywords: Elections; Forecasting; Great Britain; Opinion polls

1. Introduction

The result of the 1992 general election in Britain took most observers by surprise. The reason it did so was that the opinion polls both before and during the campaign consistently reported Labour either level with or ahead of the Conservatives, and their findings heavily influenced the way the election was covered in the media. In particular, the last week of the campaign was dominated by speculation on what would happen in the apparently likely event of a 'hung parliament'.

The pollsters and their clients each reacted to the Conservatives' decisive victory. The polling companies began an intense search for any flaws in their

methods and co-operated with an enquiry set up by the Market Research Society (Curtice, 1996). Those parts of the broadcast and print media which had commissioned polls were less interested in explanations than in the fact that, having wasted considerable sums of money on what proved to be false prophets, they had misled their viewers, listeners and readers. Hugo Young complained in the *Guardian* (11/4/92), 'The opinion poll business has proved to rest on fantasy . . . They simply did not find out what sort of nation this really is.', and Andrew Neil, editor of the *Sunday Times*, wrote in a signed editorial that 'Newspapers . . . will have to think again about allowing polls to determine their front-page news stories' (12/4/92).

Sophisticated econometric models of the British economy and of its impact on voters' perceptions and partisanship were more successful in predicting

*Corresponding author. Tel.: +44-752-233205; fax: +44-752-233206.

the outcome in 1992, but they received far less public coverage, tended to react to changing events only slowly, and were based on techniques difficult to summarise and explain to the lay person (Sanders, 1993). Moreover, they too relied on opinion poll data to gauge likely reaction to economic events.

2. The by-election model

It was against this background that the Sunday Times, for whom we had written on elections since 1986, asked us whether it was possible to develop any surrogate measure of the state of national political opinion which did not rely on polling data. Our thoughts immediately turned to the possible utility of election returns and Austin Ranney's (Ranney, 1962) pertinent comments on aggregate data analysis. He wrote:

“Aggregate election returns are the ‘hardest’ data we can get, in the sense that their meaning and comparability vary less from area to area, from time to time, and from study to study than do most survey data... Whatever complex socio-psychological processes may underlie the voter's decisions to make particular allocations, the votes themselves constitute a basic medium of political exchange. Thus their relative ‘hardness’ as much as their accessibility, makes election returns a significant body of data for political analysis”.

In Britain a regular supply of election returns is provided by the local government electoral contests which take place each week up and down the country. Like their parliamentary counterparts these local by-elections, of which there are an average of 8 per week, are consequent on the death, resignation or disqualification of incumbents and give the electorate in wards where they fall an additional and unexpected opportunity to exercise their franchise. Unlike parliamentary by-elections, however, these contests generally take place far from the glare of national media and party attention and may be said to be a more accurate reflection of voters' underlying and unprompted partisanship. Of course some will be dominated by local issues and local personalities, but in most cases those electors who turn out are likely

to be expressing their current party preference at least as far as the running of their local council is concerned.

For each individual result it is possible easily to calculate changes in share of the vote and “swing” since the last time the ward was contested in a ‘general’ local election. A number of results can be used to provide a broad indication of the current ebbs and flows in party support. However, just as added interest in parliamentary by-elections stems from comparing the result in terms of what would have happened across the nation rather than just in one constituency at the previous general election, so it is the case that drawing wider conclusions from local by-elections requires the establishment of a benchmark against which all results can be measured. Without such a benchmark we have no way of knowing how far the electoral behaviour in any ward accorded with, or deviated from, the national average and thus the significance of the movement it displays.

As it happens the idea of taking the national political temperature by means of local election results was itself not novel. Annual local elections take place in large, though varying parts of Britain each first Thursday in May and ever since the early 1980s two independent calculations have been made and published of what level of support the parties would have received IF those elections had been contested in every part of the country as in a general election. The reliability and robustness of this measure of each party's ‘national equivalent share of the vote’ may be gleaned from the degree to which the estimates have been in accord (Curtice and Payne, 1991; Rallings and Thrasher, 1993). This national equivalent vote was the foundation on which we developed our model for estimating the impact of local by-election results on the standing of the political parties.

The first step in this process was to record the shares of the vote obtained by each of the three major parties at the by-election and on the last occasion the ward was fought in the annual May elections. Only elections which featured Conservative, Labour and Liberal Democrat candidates in both contests were used. The share of the vote for any independent or other party candidates had also to be taken into account. Where their total vote

(<10%) was small or where there was a similar pattern of candidature in the two elections, it was accepted that the shares of the three major parties would not add up to 100%. However, where the presence of such candidates would lead to a distorted comparison between election results, each major party’s share of the three party vote at each election was used as the base. Next, the year in which those May elections occurred and the national equivalent vote share published at the time were noted. Then, the change in each party’s share of the vote between the by-election and the relevant May elections was calculated and those change figures applied to the appropriate national equivalent vote. A simple worked example is provided in Table 1. Naturally, as when a party’s local election share increases or decreases by a factor greater than its national equivalent level of support, some of the results produced by this model will be nonsensical. However, by averaging each party’s new national equivalent vote in all those by-elections which occur over the period of either a fixed or rolling month or quarter, extreme results are smoothed out and a gauge of each party’s overall national level of electoral support can be produced.

The model may be more formally expressed as follows:

Let S_i be the ward vote share for i party ($i \in \{C, L, D\}$) where C, L, and D stand for Conservative, Labour and Liberal Democrat respectively.

The national equivalent vote for party i is designated as N_i . The date of the by-election is t_1 while t_2 represents the date of the relevant previous May local election.

Hence a party’s vote share at a by-election can be designated formally as $S_i(t_1)$ while its vote share at

the previous ward election held in May would be $S_i(t_2)$.

The difference $S_i(t_1) - S_i(t_2)$ for enumerated parties might then be represented as follows:

$$S_C(t_1) - S_C(t_2), S_L(t_1) - S_L(t_2), S_D(t_1) - S_D(t_2).$$

Finally, to calculate the current national equivalent vote we add to the previous national equivalent vote the difference between a party’s by-election vote share and its vote share recorded at the May election:

Current national equivalent vote share is $N_i + (S_i(t_1) - S_i(t_2))$, or for enumerated parties,

$$N_C + (S_C(t_1) - S_C(t_2)), N_L + (S_L(t_1) - S_L(t_2)), N_D + (S_D(t_1) - S_D(t_2)).$$

This process is repeated for as many by-elections as fit our specified criteria and each party’s current national equivalent vote is arrived at by averaging the results over a stated time period.

It does not appear that the generally low turnouts in local by-elections (an average of 36% in more than 2100 three-way contests since 1987) have much impact on the accuracy of the model. There is little evidence that turnout patterns consistently favour one or other political party and abstentions will be reflected in the result and thus in the model. Similarly, the cause of the by-election seems to have much less impact on the result than in parliamentary contests where parties creating “voluntary” vacancies are sometimes punished by the electorate. Once again, it is the very anonymity of local by-elections that seems to be their strength as a mechanism for measuring the ebb and flow of partisan preferences.

Table 1

Using a local by-election to calculate “national equivalent vote”, result on 21st November 1996 in the Ixworth ward of St. Edmundsbury District Council

	Conservative	Labour	Liberal Democrat
a) By-election share	43.4	26.2	30.4
b) 1995 “annual” local election share	36.1	29.6	34.3
c) Difference = a) – b)	7.3	–3.4	–3.9
d) 1995 “national equivalent vote”	25	47	23
e) Current “national equivalent vote” i.e. d) + c)	32.3	43.6	19.1

3. Testing the model

In the immediate aftermath of the 1992 general election the figures for party support reported by our model and by an average of published opinion polls were quite similar – both to each other and to the actual result of the general election – see Table 2. Thereafter, however, they began to diverge. Labour's support was consistently higher in the polls than in by-elections, whereas the Liberal Democrats experienced the reverse fate. The Conservatives recorded a very similar level of support on both measures – see Fig. 1.

The first opportunity for an empirical test of the accuracy of our model came with the local elections in 1993 when our prediction of the national equivalent share of the vote, based on by-elections taking place in the preceding quarter, was within 2 percentage points for each party. The model was similarly successful in 1994 and 1995 when the maximum error was just 1% and in 1996 – see Table 3. In 1995 Labour's support was reported as above 50% in 12 of the 14 polls published in the four months prior to the May local elections: it never reached that level on our model. Even a MORI poll published in the Times on 28th April 1995 and specifically designed to elicit *local* voting intentions among respondents who had a vote the following week was badly awry. It put Labour on 55% (8 points above the outcome), the Conservatives on 22% (3 points below) and the Liberal Democrats on 18% (6 points below).

The contrast between our figures and those of the opinion polls prompted National Opinion Polls (NOP) to ask us retrospectively to apply the model for the 1987–92 parliament based on the methods we had developed. The overall pattern was similar to that for the later period – see Fig. 2. In particular Labour's poll performance outpaced that in by-elections

with the opposite being the case for the Liberal Democrats. Crucially, however, it appeared that the by-election model too would have shown Labour to be ahead of the Conservatives just prior to the 1992 general election – Fig. 3.

In their post-mortem the pollsters claimed 'late swing' had undermined their accuracy. Certainly our method, which uses a completely different set of data to arrive at its forecast, lends support to that finding. Although our figures placed Labour closer to its eventual share of the vote than did the polls, we significantly underestimated the Conservative vote and over-stated that for the Liberal Democrats – see Table 4. It would appear that many Liberal Democrat local voters switched to the Conservatives when national issues were at stake.

These retrospective findings served to make us cautious about the significance of our seemingly uncanny ability accurately to predict local vote shares. Would the 1997 general election provide a similar embarrassment for our model? As the election drew closer, although the trend in Labour's lead over the Conservatives as measured by ourselves and by the polls took a similar path, the gap in the size of lead suggested by the two indicators remained stubbornly consistent – see Fig. 4. Our final prediction, taking into account all local by-elections contested during the campaign period, was published in the Sunday Times on April 20th. It proved to be spot on in terms of the Conservative and Labour share of the vote and thus the Labour lead, and out-performed both the campaign and eve-of-election polls – see Table 5. The polls appeared to have over-stated Labour's support throughout the parliament and did so right up to polling day. The significant error as far as our model was concerned was the over-estimation, as in 1992, of the Liberal Democrat vote.

4. Evaluation

The success of our model in terms of headline figures in 1997 was very pleasing. However, a number of questions remain about why it seems to work and how it might be refined to deal with identifiable weaknesses.

The main strength of using by-election results as a surrogate indicator for national party support is that

Table 2
Base for tracing party support during 1992–97 parliament

	1992 general election	Apr–Jun '92 polls	Apr–Jun '92 by-elections
Conservative	43	44	45
Labour	35	37	34
LibDem	18	15	18

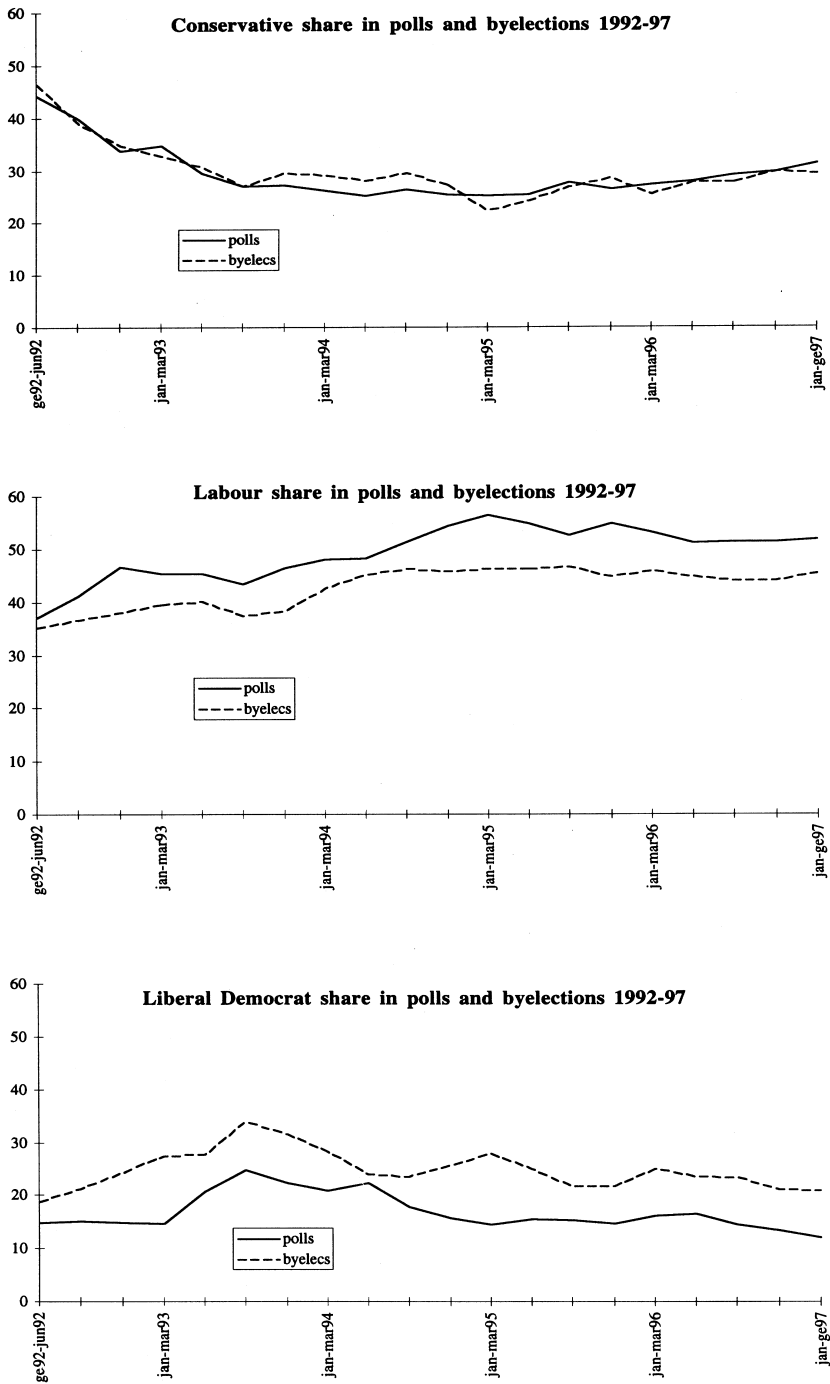


Fig. 1. Party share of the vote in opinion polls and by-election model compared, 1992–97.

Table 3
Projected and actual national equivalent shares of the vote at local elections

	1993		1994		1995		1996	
	Proj	Actual	Proj	Actual	Proj	Actual	Proj	Actual
Conservative	32	31	29	28	26	25	26	28
Labour	43	41	41	40	47	47	46	44
LibDem	23	24	27	27	23	24	23	23

*All figures as published in *The Sunday Times* before and after elections.

they reflect real votes in a ballot box rather than opinions offered to pollsters. A de-aligned and detached electorate is likely to give almost random responses to a hypothetical question about how they would vote “if there were a general election tomorrow”, especially when no election is imminent. Instead, they will be influenced by recent positive and negative images of the parties and by any bandwagon effect that they perceive to be happening. By contrast the casting of a vote, even in a relatively “cost-free” local election, will be the product of a more concentrated mind. Labour’s almost entirely favourable media coverage from the time Tony Blair became leader in July 1994 was reflected in very high poll ratings which party insiders profess never to have believed. By-election results matched and in some cases were precursors of trends in the polls, but differed from them throughout in terms both of Labour’s share of the vote and the party’s lead over the Conservatives.

As far as the Conservatives themselves are concerned there is a striking similarity in the levels of support reported by both by-elections and polls over the 10 year run of our data. Both measures seriously under-stated the Conservative vote in 1992, but both were accurate to within 1% in 1997. In a hostile political climate core supporters appear to have stuck with their chosen party, and there will have been little incentive for others to join them either at the ballot box or in answer to pollsters’ questions.

The major problem with the by-election model for forecasting general election results appears to be in its consistent over-estimate of Liberal Democrat support. This is a product both of the method used and of the electoral positioning of that party. More than the other parties the Liberal Democrats appeal to local voters on the basis of their concern with

local issues. In most cases where they field candidates they run high profile campaigns precisely to emphasise their community involvement. Where they think they have little chance they often do not stand. This strategy has paid off in terms of the rapid increase over the past decade in their number of councillors and councils controlled. However, the requirement of our model that both the by-election and the previous annual local election should each have been contested by the three major parties probably does lead to an exaggeration of Liberal Democrat overall national support. This could be mitigated by a crude adjustment down of some 2–3% in the Liberal Democrat national equivalent vote share, but that would itself raise a new issue of how precisely those votes should be re-allocated to the other parties.

Of course the by-election model can only measure vote share whereas polls offer a range of more subtle data about issues and perceptions. In point of fact, however, most media clients of polling companies are interested only in the headline – the ranking of party popularity and any movement since the last poll was taken. It is also the case that the by-election model is ill-suited to detect swing taking place just prior to an election. For although individual results can often send signals of a change in political mood, the reliability of the model itself rests on data being available for a number of contests. In 1997, for example, the lack of any significant aggregate level change during the campaign boosted its performance. By contrast, in 1992, the model was no better placed than the polls to pick up the late movement to the Conservatives that appears to have occurred.

Such caveats notwithstanding, it does seem that local by-elections in Britain can be used to provide an accessible, cheap and accurate way of measuring party popularity. The model may prove particularly

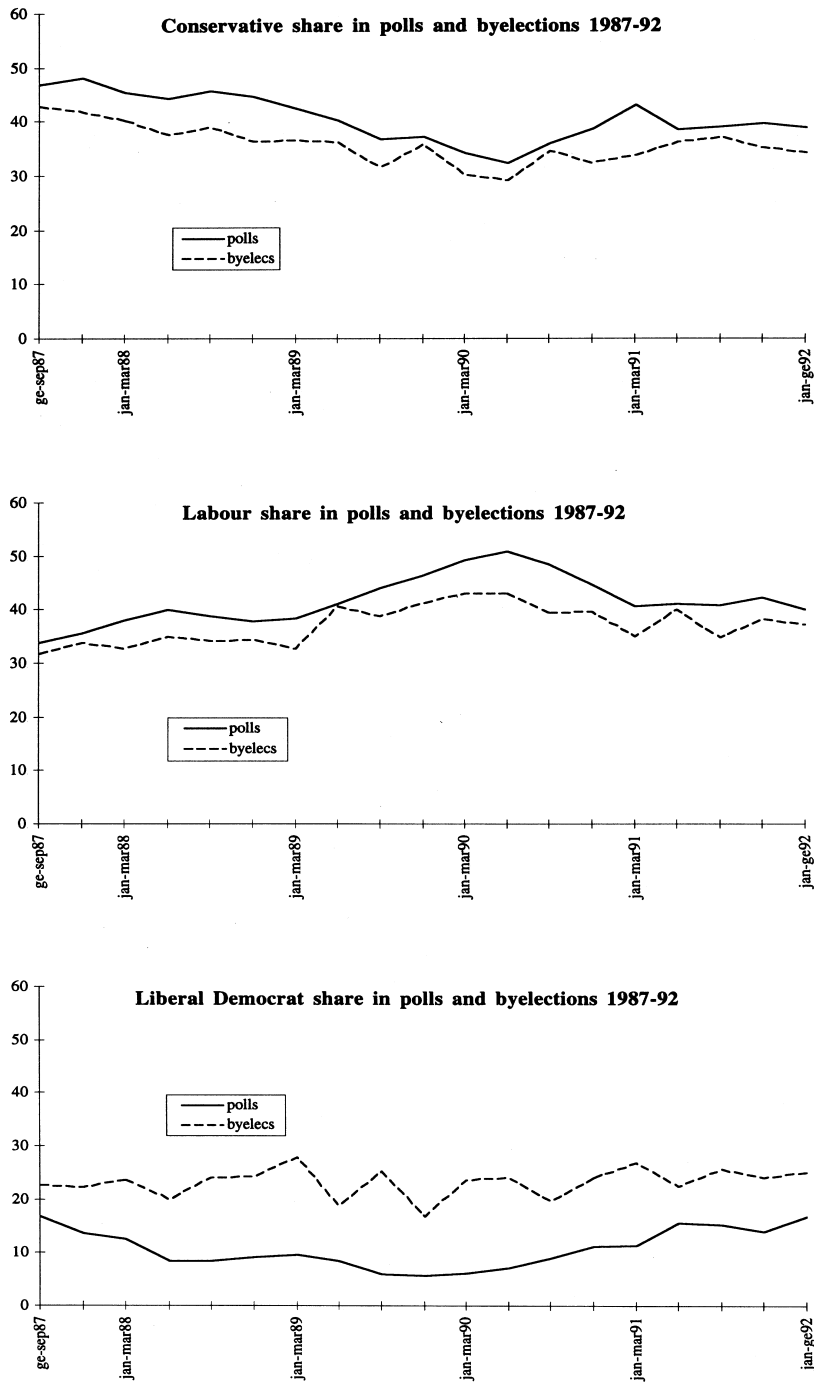


Fig. 2. Party share of the vote in opinion polls and by-election model compared, 1987–92.

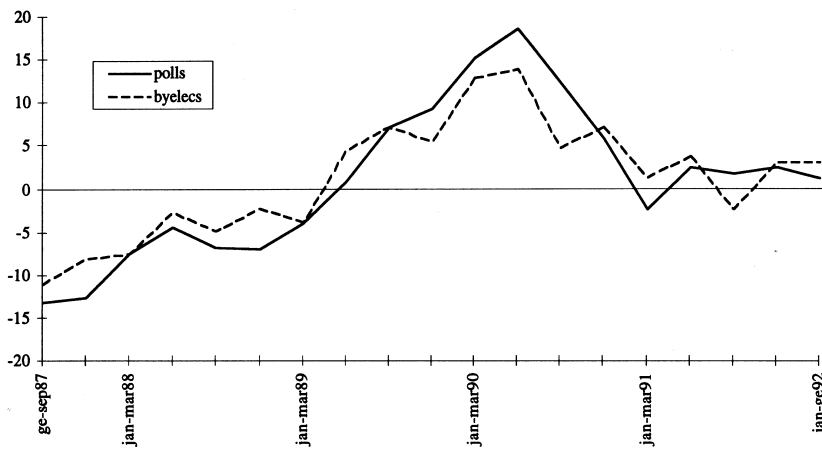


Fig. 3. Labour percentage point lead over the Conservatives, polls and by-elections 1987–92.

Table 4
Comparing opinion polls and by-election model, 1992 general election outcome

	Con		Lab		LDem	Con(+)/ Lab (-) lead		
Actual GB result	43		35		18	+8		
Average of campaign polls	38		40		17	-2		
Average of final day polls	38		39		19	-1		
Final by-election model	35		37		24	-2		
Final polls published 9th April	Con	± error	Lab	± error	LD	± error	av'ge error	error on lead
NOP/Independent	39	-4	42	+7	17	-1	4.0	11
Gallup/Telegraph	38.5	-4.5	38	+3	20	±2	3.2	7.5
ICM/Guardian	38	-5	38	+3	20	±2	3.3	8
Mori/Times	38	-5	39	+4	20	±2	3.7	9
By-election model last qtr	34	-9	37	+2	25	+7	6.0	11
By-election model thru campaign	35	-8	37	+2	24	+6	5.3	10

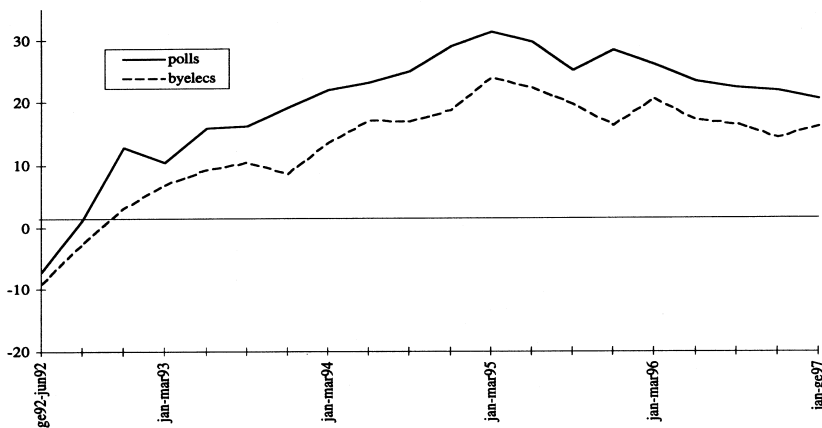


Fig. 4. Labour percentage point lead over the Conservatives, polls and by-elections 1992–97.

Table 5
Comparing opinion polls and by-election model, 1997 general election outcome

	Con		Lab		LDem		Con(+)/ Lab(-) lead	
Actual GB result	31.4		44.4		17.2		-13.0	
Average of campaign polls	30.7		49.4		13.6		-18.7	
Average of final day polls	30.6		47.2		15.4		-16.6	
Final by-election model	31.0		44.0		20.0		-13.0	
Final polls published 1st May	Con	± error	Lab	± error	LD	± error	av'ge error	error on lead
Harris/Independent	31	0	48	+4	15	-2	2.0	4
NOP/Reuters	28	-3	50	+6	14	-3	4.0	9
Gallup/Telegraph	33	+2	47	+3	14	-3	2.7	1
ICM/Guardian	33	+2	43	-1	18	+1	1.3	3
Mori/Times	28	-3	48	+4	16	-2	3.0	7
By-election model last qtr	30	-1	45	+1	20	+3	1.7	2
By-election model last 4 weeks	31	0	44	0	21	+4	1.3	0
By-election model thru campaign	31	0	44	0	20	+3	1.0	0

useful during inter-election periods when party identification is weak, loyalties fluctuate and the questions of opinion pollsters are hardly salient to the majority of electors. Following the May 1st 1997 general election, for example, there was an immediate divergence between the opinion polls and the by-election model in terms of the support recorded for the Labour and Conservative parties. In polls taken during June and July 1997, the average figures were Labour 60%, Conservatives 23% and Liberal Democrats 13% – implying a further swing of some 12% to Labour since its landslide general election victory in May! Local by-elections in the same period, however, did not register such a honeymoon for the government, showing instead a shrinking of Labour's lead from 13% at the general election to 9% (41% to the Conservatives' 32%). The result of the first parliamentary by-election of the parliament (in the marginal west London constituency of Uxbridge on 31st July 1997) more closely reflected the by-election model as the Conservatives' easily retained the seat with an increased majority and a swing from Labour of 5%. The local elections due annually throughout the current parliament will provide further opportunities for the testing and revision of our model. It may also be the case that local elections could be used to cast light on national trends in other countries. Better specified models,

more explicitly borrowing from work such as that on the effects of the macroeconomy on party support by Lewis-Beck (1988); Hibbs (1987) and others, would aid our understanding of the relationship between local and national behaviour.

References

- Curtice, J. (1996). What future for the opinion polls? The lessons from the M.R.S. enquiry. In: Rallings, C., Farrell, D., Denver, D., Broughton, D. (Eds.), *British Elections and Parties Yearbook 1995*. Frank Cass, London.
- Curtice, J., & Payne, C. (1991). Local elections as national referenda. *Electoral Studies*, 10(1), 3–17.
- Hibbs, D. (1987). *The American Political Economy: Macroeconomics and Electoral Politics*. University of Harvard Press, Cambridge MA.
- Lewis-Beck, M. (1988). *Economics and Elections: the Major Western Democracies*. University of Michigan Press, Ann Arbor MI.
- Rallings, C., & Thrasher, M. (1993). Explaining uniformity and variability in local election outcomes. *Electoral Studies*, 12(4), 366–384.
- Ranney, A. (1962). The utility and limitations of aggregate data in the study of electoral behaviour. In: Ranney, A. (Ed.), *Essays on the Behavioral Study of Politics*. University of Illinois Press, Urbana IL, p. 96.
- Sanders, D. (1993). Forecasting the 1992 general election result: the performance of an economic model. In: Denver, D., Norris, P., Broughton, D., Rallings, C. (Eds.), *British Elections and Parties Yearbook 1993*. Harvester Wheatsheaf, London.

Biographies: Colin RALLINGS is Professor of Politics and co-Director of the Local Government Chronicle Elections Centre at the University of Plymouth. Together with Michael Thrasher he is the author of *Local Elections in Britain* (Routledge, 1997) and *The Media Guide to the New Parliamentary Constituencies* (BBC/ITN/PA/Sky News 1995). He works as an elections analyst for the Sunday Times and for Independent Television News.

Michael THRASHER is Professor of Politics and co-Director of the Local Government Chronicle Elections Centre at the University of Plymouth. Together with Colin Rallings he has published widely on aspects of electoral politics in journals such as *Electoral Studies*, *British Journal of Political Science*, *Political Geography* and *Journal of Applied Statistics*. He works as an elections analyst for the Sunday Times and for the satellite TV network, Sky News.