

Election Timing in Majoritarian Parliaments

ALASTAIR SMITH*

I propose and test an informational theory of endogenous election timing. I assume leaders have more accurate estimates of future outcomes than citizens. The prospect of declining future performance spurs leaders to call early elections. Since leaders condition their timing decisions on their expectations of future performance, early elections signal a leader's lack of confidence in future outcomes. The earlier elections occur, relative to expectations, the stronger the signal of demise. Using data on British parliaments since 1945, I test hypotheses relating the timing of elections, electoral support and subsequent economic performance. As predicted, leaders who call elections early, relative to expectations, experience a decline in their popular support relative to pre-announcement levels.

Under the British system almost all elections lost by the prime ministers are *ex hypothesi* thought to have been held on the wrong date. Roy Jenkins¹

Her [Margaret Thatcher's] view was that a Government should always wait until the final year of the quinquennium, but once there should go as soon as it is confident it will win – a maxim that it is hard to fault. Nigel Lawson²

A decision on election-timing is a lonely one. Harold Wilson³

In many parliamentary systems the timing of the next election is at the discretion of the current government.⁴ This gives leaders in these systems the power to call elections at the most advantageous time for them – when they expect to win. It is claimed that '[t]he choice of election date may well be the most important single decision taken by a British prime minister'.⁵ Despite the apparent importance of this decision and the volume of editorials

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¹ Roy Jenkins, *A Life at the Center* (New York: Random House, 1991), p. 367.

² Nigel Lawson, *The View from No. 11: Memoirs of a Tory Radical* (London: Corgi, 1992), p. 264.

³ Harold Wilson, *The Labour Government 1964–1970: A Personal Record* (London: Weidenfeld & Nicolson and Michael Joseph, 1971), p. 201.

⁴ There has been debate as to whether the prime minister has complete discretion over the decision to dissolve parliament, or whether he or she requires legitimate circumstances (see Harold Wilson, *The Governance of Britain* (London: Weidenfeld & Nicolson and Michael Joseph, 1976), for a discussion of the prerogative of the prime minister to dissolve parliament). In practice, little has stood in the way of British prime ministers in the twentieth century, although nominally the decision to dissolve parliament rests with the monarch (see Gary W. Cox, *The Efficient Secret* (Cambridge: Cambridge University Press, 1987), and cites therein for discussion of this evolution). In Australia there have been several instances when the governor general (appointed by the monarch) has refused a request for dissolution (L. M. Barlin, ed., *House of Representative Practice* (Canberra: Government Publishing Service, 1997)).

⁵ Kenneth Newton, 'Caring and Competence: The Long, Long Campaign', in Anthony King, ed., *Britain at the Polls, 1992* (Chatham, NJ: Chatham House, 1993), 129–70.

and after dinner conversation it generates, political scientists have done little to explain when elections are called and how and why this timing affects electoral outcomes. This article addresses these questions.

Most parliamentary systems specify a maximum time between elections – five years in Britain, for example. Yet, leaders are not bound to wait five years and may call an election whenever ‘the time is right’. Although extant research into endogenous election timing is scarce, most studies have focused on the idea of ‘political surfing’.⁶ In this view, leaders simply wait until conditions are advantageous and then go to the polls. These studies assume the electoral outcome is simply an expression of relative support for the government at the time the election is called. As such, a party’s vote share simply reflects the government’s performance during its time in office. There is no conception that the timing of an election influences the outcome beyond it being chosen when the government looks at its best.

Anecdotal evidence, however, suggests that the timing decision itself influences the

⁶ Thomas F. Cargill and Michael M. Hutchison, ‘Political Business Cycles with Endogenous Election Timing: Evidence from Japan’, *Review of Economics and Statistics*, 73 (1991), 733–9; Abdur R. Chowdhury, ‘Political Surfing over Economic Waves: Parliamentary Election Timing in India’, *American Journal of Political Science*, 37 (1993), 1100–18; Maria Gallego, ‘Strategic Election Timing with Two Levels of Government in Canada’, and ‘Election Timing and Strategic Voting in the Presence of Institutional Balancing’ (both working papers from Department of Economics, Wilfrid Laurier University, 1998); Takoshi Inoguchi, ‘Political Surfing over Economic Waves: A Simple Model of the Japanese Political Economic System in Comparative Perspective’ (paper presented at the Eleventh World Congress of the International Political Science Association, Moscow, 1979); Takoshi Inoguchi, ‘Explaining and Predicting Japanese General Elections, 1960–1980’, *Journal of Japanese Studies*, 7 (1981), 255–318; Takatoshi Ito, ‘International Impacts on Domestic Political Economy: A Case of Japanese General Elections’ (Washington, DC: NBER working paper No. 3499, 1990); Takatoshi Ito, ‘The Timing of Elections and Political Business Cycles in Japan’, *Journal of Asian Economics*, 1 (1990), 135–56; Takatoshi Ito and Jan Hyuk Park, ‘Political Business Cycles in the Parliamentary System’, *Economic Letters*, 27 (1988), 233–8; Lanny W. Martin and Randolph T. Stevenson, ‘Government Formation in Parliamentary Democracies’, *American Journal of Political Science*, 45 (2001), 33–50; Lanny W. Martin, ‘Public Opinion Shocks and Government Termination’ (Working paper, Department of Political Science, Florida State University, 2000); Harvey D. Palmer and Guy D. Whitten, ‘Government Competence, Economic Performance and Endogenous Election Dates’, *Electoral Studies*, 19 (2000), 413–26; Bradford G. Reid, ‘Endogenous Elections, Budget Cycles and Canadian Provincial Governments’, *Public Choice*, 97 (1998), 35–48; Jun Saito, ‘A Political Model of Election-Timing Decision: Japan under the LDP Regime, 1955–1993’ (unpublished, Yale University, 1999).

There is a much wider literature of government termination. For example, Henry Bienen and Nicolas van de Walle, ‘A Proportional Hazard Model of Leadership Duration’, *Journal of Politics*, 54 (1992), 685–717; Eric C. Browne, John P. Frenreis and Dennis W. Gleiber, ‘The Process of Cabinet Dissolution: An Exponential Model of Duration and Stability in Western Democracies’, *American Journal of Political Science*, 30 (1986), 628–50; Daniel Diermeier and Antonio Merlo, ‘Government Turnover in Parliamentary Democracies’, *Journal of Economic Theory*, 94 (2000), 46–79; Gary King, James Alt, Nancy Burns and Michael Laver, ‘A Unified Model of Cabinet Dissolution in Parliamentary Democracies’, *American Journal of Political Science*, 34 (1990), 846–71; Kaare Strom, ‘Competing Models of Cabinet Stability’, *American Political Science Review*, 82 (1988), 923–30; Paul V. Warwick, *Government Survival in Parliamentary Democracies* (Cambridge; Cambridge University Press, 1995); Paul V. Warwick, ‘Economic Trends and Government Survival in West European Parliamentary Democracies’, *American Political Science Review*, 86 (1992), 875–87.

David P. Baron, ‘Comparative Dynamics of Parliamentary Governments’, *American Political Science Review*, 92 (1998), 593–610; Daniel Diermeier and Randolph T. Stevenson, ‘Cabinet Terminations and Critical Events’, *American Political Science Review*, 94 (2000), 627–41; Daniel Diermeier and Randolph T. Stevenson, ‘Cabinet Survival and Competing Risks’, *American Journal of Political Science*, 43 (1999), 1051–69; John D. Huber, ‘The Vote of Confidence in Parliamentary Democracies’, *American Political Science Review*, 90 (1996), 269–82; and Arthur Lupia and Kaare Strom, ‘Coalition Termination and the Strategic Timing of Parliamentary Elections’, *American Political Science Review*, 89 (1995), 648–65, discuss election timing within the context of coalition dynamics.

electoral result and that early elections are more than a simple conversion of popular support into vote share.⁷ In May 1970 the governing British Labour party over took the Conservative opposition in the opinion polls for the first time in three years. Harold Wilson, the then Labour prime minister, called a snap election to take advantage of Labour's sudden recovery. Yet, at the election Labour's support collapsed and the Conservatives won 330 of 630 seats. This is not an isolated incident. In 1997, President Jacques Chirac's decision to call an early election for the French lower house led to an immediate decline in the right wing's support and large electoral gains for the left.⁸

I propose and test an informational theory of endogenous election timing. The timing of elections influences electoral outcomes because the decision of a leader to call an election reveals information concerning her expectations about future performance. The article proceeds as follows: I start by presenting the theoretical argument and explain the linkages between the timing of elections, leader support and future performance. Having outlined the basic argument, I examine the suppositions of the arguments. In particular, I focus on the assumption of the government's informational advantage over the electorate and its relationship to political business cycles. I then test the theory's predictions by asking, first, what factors influence election timing, secondly, how the timing decision influences electoral support and subsequent economic performance.

The basis of my argument is informational. I assume leaders have better information about likely future performance than the electorate. In the theory I propose, the date of the election signals a leader's expectations about the future. Unfortunately for leaders, in using their information advantage in determining the attractiveness of immediate elections, they tip their hand as to what the information is. This signalling mechanism provides a link between the date of elections, electoral outcomes and future performance. Since I provide a formal model elsewhere,⁹ here I use accounts of British political events as a vehicle to explain the theory.

Following the successful conclusion of the Falklands war in 1982 the British Conservative government under the leadership of Prime Minister Margaret Thatcher was extremely popular. Given that she was elected in 1979, she did not need to call an election before 1984. Yet her enormous popularity following the war, might have made for an excellent opportunity to secure another five-year term. Indeed, speculation about the possibility of an early election was sufficiently intense that polling organizations took polls of the desirability and likelihood of an early election.¹⁰ Suppose, consistent with the 'surfing' hypothesis, her popularity would have ensured her victory if she had called an election in 1982. By waiting, she risked having her popularity undermined by policy failures. However, the extent to which she feared this, depended upon how well she expected to perform over the coming year. If she believed she had effective solutions to problems and if she believed that her party had both the appropriate policies and was competent to implement these policies, then waiting posed little threat as she could expect to get re-elected in the future anyway. Yet, if she were less confident about her policies or her ability to implement them effectively, then waiting jeopardized a second term in

⁷ Of the fifteen elections since the Second World War four have gone against the opinion poll leader, two in favour of the incumbent and two against the incumbent.

⁸ Michael S. Lewis-Beck, ed., *How France Votes* (New York: Chatham House, 2000).

⁹ Alastair Smith, 'Endogenous Election Timing in Majoritarian Parliamentary Systems', *Economics and Politics*, 8 (1996), 85–110; Alastair Smith, *Election Timing* (forthcoming).

¹⁰ See for example, *Index of International Public Opinion, 1982–83* (Westport, Conn.: Greenwood, 1982–83), p. 353.

office, since policy failure would be likely to undermine her support. In short, the more confident she was about the future, the smaller her incentive to call an early election; the less confident she was, the greater the incentive to cash in on past successes with a snap election.

The timing of elections reveals information about how well incumbents expect to perform in the future. The less confident Margaret Thatcher was in her ability to rule well, the greater her incentive to call an early election when she was ahead in the polls. Competent governments wait longer before calling elections. Unfortunately, the above analytic narrative presents only half the picture. The initial supposition was that she would have been re-elected if she had called an election immediately following the war. However, it is incompetent, not competent, leaders that want to take advantage of this opportunity. What then is the inference that the voters should draw upon seeing an early election? They should infer that the incumbent doubts her ability to continue producing good outcomes in the future. Leaders that call early elections should expect to see their support decline. This is exactly what happened to Wilson in 1970 and to Chirac (in France) in 1997. The early election is a signal leaders do not expect conditions to be as rosy in the future. In anticipation of this upcoming decline, the electorate re-evaluate their assessment of the government's success.

If early elections, being a signal of incompetence, lead to a decline in support, why do leaders ever call early elections? It is worth returning to Thatcher's first term in office to consider this question. Although she resisted the temptation of an election in 1982, she did not wait until 9 May 1984, the last possible moment, but rather on 9 May 1983 announced elections for 9 June 1983. In their autobiographies, both she and her future chancellor, Nigel Lawson, mention fears of increasing inflation: 'It was pointed out that the main economic indicators would look slightly better than in the autumn because inflation was due to rise slightly in the second half of the year.'¹¹

By calling the election in June 1983, they prevented the electorate from observing this worsening of inflation, which presumably would have resulted in a decline in popularity for the Tories. However, if as I propose, the signal of an early election reveals that the future will not be so rosy, then the very act of calling an election reveals the information that the government was trying to conceal. This is borne out in public opinion data. In May 1983, prior to the election announcement, Gallup reported a voting intention of 49 per cent for the Conservatives. Yet, in June's general election they received only 42.2 per cent of the vote.¹² While the margin of error in the opinion data accounts for some of this difference, it is clear that elections are more than a direct translation of popularity into vote share. The objective of politicians is not to maximize vote share, but to remain in power. Despite their decline in popularity, the Conservatives won 397 of 650 seats. In contrast, the opposition was split between the traditional opposition Labour party, which obtained 209 seats with a vote share of 27.6 per cent and an alliance between the Liberals and Social Democrats, which together obtained twenty-three seats from a vote share of 25.4 per cent. The Conservative victory, the largest since 1945, was not a result of overwhelming popularity for the Tories, but was instead the result of fighting a divided and demoralized opposition. As Nigel Lawson put it, 'Labour was in such a mess with an unelectable leader, left wing

¹¹ Margaret Thatcher, *The Downing Street Years* (London: Harper Collins, 1993), p. 288. See also Lawson, *The View from No. 11*, p. 246.

¹² Approval of the government's record and satisfaction with Thatcher dropped much more modestly by 1 per cent and 2 per cent respectively over the same period. A MORI poll for the same time period gave the Conservatives a 46 per cent vote share.

policies which the country would never stomach, and suffering badly from the Social Democrats defection'.¹³ In fact, Lawson goes on to state that at the time he thought Labour was in such a poor position that the Conservatives could have won anytime. However, he also admits that with hindsight a 'bird in the hand' is a powerful argument for an election.

Given the first-past-the-post, plurality electoral system in Britain, with such large divisions the opposition had little hope of unseating the Tories.¹⁴ However, had the opposition overcome their differences and presented a unified opposition the Tory reign looked much more assailable.¹⁵ Had the 1979 parliament continued towards its statutory termination (9 May 1984), the impetus of an impending election might have enabled the opposition to present a unified front. However, Thatcher forestalled any such developments by going to the polls before the opposition could reorganize.

An inherent feature of the British political system is the shortness of campaigns. For example, in 1983 Thatcher announced the election on 9 May, Parliament dissolved on 13 May and the general election was held on 9 June. The opposition had only one month in which to adopt a policy platform, prepare a manifesto, find candidates for each seat and organize a campaign. Given such time pressures the opposition needs to be ready. Unfortunately, parties have only limited resources with which to prepare for office. If they use them immediately following an election, then by the time an election is actually called their manifesto appears dated. However, if they save all their resources until the election is called, then they risk having insufficient time to prepare. This dilemma between husbanding resources and being prepared becomes easier to resolve as the statutory five-year limit approaches, since an election becomes inevitable. Yet, early in the electoral cycle, opposition preparedness is lacking. This suggests a relationship between the timing of elections and subsequent performance. All else being equal, early elections are fought between incompetent incumbents and ill-prepared challengers. A further implication is that until its announcement, the electoral date is a closely guarded secret and the campaigning period is kept as short as possible. Indeed, Margaret Thatcher chastised John Major for announcing the 1997 election six weeks in advance, 'Three weeks is quite enough'.¹⁶ However, since he announced the last practical day possible, there was little surprise or advantage left to be gained. There is a negative relationship between the length of time between the announcement of elections and their actual occurrence and the time remaining in the electoral period: the earlier the election, the shorter the period of time the government allows the opposition to prepare.¹⁷

The above discussion implicitly made several assumptions which need to be explored and fleshed out before proceeding. In particular, I address the motivation of leaders and

¹³ Lawson, *The View from No. 11*, p. 246.

¹⁴ M. Duverger, *Political Parties: Their Organization and Activity in the Modern State*, trans. B. North and R. North (New York: Wiley Science, 1963); Arend Lijphart, *Electoral Systems and Party Systems: A Study of Twenty-seven Democracies, 1945–1990* (Oxford: Oxford University Press, 1994); Douglas W. Rae, *The Political Consequences of Electoral Laws* (New Haven, Conn.: Yale University Press, 1967); William H. Riker, 'The Two-Party System and Duverger's Law: An Essay on the History of Political Science', *American Political Science Review*, 76 (1982), 753–66.

¹⁵ Stephen D. Fisher, 'Party Preference Structure in England, 1987–97', in P. Cowley, D. Denver, A. Russell and L. Harrison, eds, *British Elections and Parties Review* (London: Frank Cass, Fisher, 2000), pp. 64–84, maintains the Tories were the Condorcet winner in both 1983 and 1987, with the Liberal Democrats being the Condorcet winner in 1992.

¹⁶ Cited in David Butler and Dennis Kavanagh, *The British General Election of 1997* (New York: St Martin's Press, 1997).

¹⁷ Smith, *Election Timing*.

the nature of a leader's private information. In the process of doing so, I propose variables likely to affect election timing.

Leaders call elections when they expect to win. Hence the more popular the government, particularly relative to the main opposition, the more likely elections become. The rapid rise in support for Labour in 1970 triggered the election. In contrast, following the Conservatives' decision to leave the European Exchange Rate Mechanism shortly after their surprise victory in the 1992 election, John Major's party trailed Labour by a large margin, often in double figures. Given its unpopularity, electoral defeat was almost inevitable and Major allowed the parliament to run its full term.

An inherent feature of the theory is that leaders enjoy holding office. Factors that effect the value of office affect the decision to call elections. This can manifest itself in several ways. In the 1950 general election, against expectations, Clement Attlee's Labour government managed to retain power although with a much reduced majority of only six.¹⁸ The government was only able to push through its legislation in the House with every member present and the threat by the Tories to challenge every bill meant Labour MPs had to stay in the House until late most nights. The result was exhaustion and many Labour MPs thought the cost of office was too high. In the end Attlee folded, calling an election he anticipated losing. As Roy Jenkins put it, 'Considering the vicissitudes which the government had suffered, and an election date chosen more in response to that of exhaustion than to any tactical game plan, it was a surprisingly narrow defeat.'¹⁹ When holding office is worth little, going to the electorate early has little down side. Hence, it may be predicted that, when the government has a large majority, it is less likely to go to the polls early. In contrast, a minority government, or one with only a slim majority, has a greater incentive to seek a working majority, or as in the 1951 case, simply give up trying to rule against an obstructionist opposition.

Although I will subsequently find only very weak statistical support for this idea, the need for a mandate is often perceived as the pretext for an early election. For example, Anthony Eden's decision to call an early election nine days after taking over as prime minister following Winston Churchill's resignation (6 April 1955) can be justified on a mandate basis. Similarly, Prime Minister Edward Heath primarily fought the February 1974 election on the mandate issue of 'who governs', resulting from a conflict between the Conservative government and striking coal miners.

The theory assumes an information asymmetry, with governments having better expectations about future performance than the electorate. Governments care about performance since it affects their popularity and hence their ability to win the next election. Since it is the most easily quantified aspect of government performance, I focus predominantly on economic outcomes. There are large literatures on economic voting and the determinants of popularity.²⁰ The informational advantage can be conceptualized in a variety of forms. Here I consider two: competence and foreknowledge.

¹⁸ David Butler, *The British General Election of 1951* (London: Macmillan, 1952).

¹⁹ Jenkins, *A Life at the Center*, p. 88.

²⁰ C. A. R. Goodhart and R. J. Ghansali, 'Political Economy', *Political Studies*, 18 (1970), 43–106; Michael Lewis-Beck, *Economics and Elections: The Major Western Democracies* (Ann Arbor: Michigan University Press, 1988); Helmet Norpoth, 'Guns and Butter and Economic Popularity in Britain', *American Political Science Review*, 81 (1987), 949–59; Helmet Norpoth, Michael S. Lewis-Beck and Jean-Dominique Lafay, eds, *Economics and Politics: The Calculus of Support* (Ann Arbor: University of Michigan Press, 1970); Palmer and Whitten, 'Government Competence, Economic Performance and Endogenous Election Dates'; Simon Price and David Sanders, 'Modeling Government Popularity in Postwar Britain: A Methodological Example', *American Journal*

Competence: Suppose that while the government is ignorant of precise future outcomes, it is aware of its own abilities, or competence, and aware of how these abilities are likely to influence future outcomes. By level of competence I mean the extent to which the government has appropriate policies for its nation's problems, can enact these policies efficiently, and can appoint competent ministers and gain the confidence of other governments and business. The performance of the government is a stochastic process with, on average, competent leaders performing better than incompetent ones. It is not the case that leaders know with certainty their performance in the future, but rather leaders have beliefs about their abilities. On average, the stronger these beliefs, the better they expect their party to perform in government. Of course, even the best leaders can be undermined by factors beyond their control. So all leaders, regardless of ability, fear suffering a future demise. This creates an incentive for leaders, whose present stock is high, to go to the polls. The risk of waiting, and hence the incentive to call an early election, is of course still greater the less competent the leader.

Foreknowledge: In this formulation of the incumbent's informational advantage, I assume the prime minister knows future performance. Of course, a more realistic way to phrase this might be to say that the prime minister's privileged position means she has more accurate estimates of the future than others. Regardless, to keep the distinction as sharp as possible, I assume leaders know future performance precisely. The theory suggests a decline in future performance makes elections more likely. Consistent with this, earlier quotations from Thatcher and Lawson both pointed to impending inflation in the third quarter as motivation for a June election in 1983. Improving conditions caution delay, as John Major indicates for the parliament ending 1997:

[A]n earlier date would have left us exposed to the taunt that we were cutting and running, opting to go early because we were privately aware that the economy was about to turn sour. Since Ken Clarke and I knew it was in fact going from strength to strength it seemed wise to leave as much time as possible for this to be demonstrated.²¹

On the whole, it is leaders who fear the future, not those who expect their fortunes to improve, who call early elections. The opposition are not slow to point this out. Hugh Gaitskell gave the following reply to Eden's 1955 election announcement, 'The real reason for having an election eighteen months early is, however, not that we have a new Prime Minister ... [but] that the government are worried about the economic situation.'²²

The technical difference between the two conceptualizations of the government's informational advantage is that in the competence formulation leaders know the stochastic process that generates future performance, but they do not yet know the value of the random variable generated by this process. In contrast, in the foreknowledge formulation the leader is assumed to know precisely the random variable generated by the process. In both

(F'note Continued)

of *Political Science*, 37 (1970), 317–34; David Sanders, 'Economic Performance, Management Competence and the Outcome of the Next General Election', *Political Studies*, 44 (1996), 203–31; David Sanders, 'Government Popularity and the Next General Election', *Political Quarterly*, 62 (1991), 235–61.

²¹ John Roy Major, *John Major: The Autobiography* (London: Harper Collins, 1999), p. 707.

²² Quoted in David Butler, *The British General Election of 1955* (London: Macmillan, 1955). Bevan also rejects Eden's claims that the election was motivated by need for an electoral mandate by pointing out '[i]t is an extraordinary thing for Sir Anthony Eden to announce an election before the electorate has had time to pronounce either on his policies or his conduct.'

conceptualizations, the voters use past performance and the timing of elections to estimate the properties of the underlying stochastic process – the ability of the government.

The foreknowledge conceptualization provides a link to another branch of political economy: political business cycles.²³ In this literature, leaders manipulate policy instruments to generate favourable economic conditions under which to hold elections. In this context, one reason currently successful leaders anticipate a decline in performance is because they engineered their current success in the first place.

In systems with fixed electoral terms the incumbent cannot choose elections when conditions are rosy. Instead, the political business cycles literature suggests leaders manipulate policy instruments such that their performance looks good at the time of the election, even if such manipulations lead to lower aggregate performance in the long run. Suppose that leaders in parliamentary systems can manipulate policy instruments to manufacture short-term booms at the expense of long-run performance. In terms of the modelling strategy I propose, such policy manipulations should be interpreted as information that the incumbent has about future performance. As discussed above, incumbents with strong current performance but low expectations about the future have an incentive to call early elections. Thus, an electorate that sees an early election called during a string of government successes, particularly a short string of successes, should be wary of crediting the government. The fact that the government wants an election suggests that the future is not as rosy and that the boom might be a product of myopic government manipulation rather than underlying successful policies.

Rational expectations proponents doubt the ability of governments to produce real changes in the economy. For example, they propose that if economic actors see prices rise at the end of the electoral term then they infer that it is not the result of real economic expansion but rather of the government's attempt to increase demand artificially. However, in the endogenous election timing framework economic actors do not always know when the election is coming and so there is more ambiguity as to how they should interpret 'boom'. This perhaps suggests that parliamentary leaders have more flexibility to engineer an economic expansion than fixed-term presidential leaders, since everyone knows the latter has incentives to do so. Although suggestive of a difference in the ability of leaders to create an artificial boom, the theory proposed here suggests leaders from both systems face the same difficulty in capitalizing on such manipulation. In the fixed-term system, 'rational expectations' actors know the government wants to stimulate the economy and so they ignore economic signals. In the endogenous election system, at least for early elections, economic actors, not certain that an election is coming, respond more positively to manipulation creating a boom. However, although the boom creates good short-run economic results, it harms long-run expected performance. Unfortunately for the

²³ Alberto Alesina, Gerald Cohen and Nouriel Roubini, 'Electoral Business Cycles in Industrial Democracies', *European Journal of Political Economy*, 9 (1993), 1–24; Nathaniel Beck, 'Elections and the Fed: Is There a Political Monetary Cycle?' *American Journal of Political Science*, 31 (1987), 194–216; D. Chappell and D. A. Peel, 'On the Political Theory of the Business Cycle', *Economic Letters*, 2 (1979), 327–32; Goodhart and Bhansali, 'Political Economy'; Kevin B. Grier, 'On the Existence of a Political Monetary Cycle', *American Journal of Political Science*, 33 (1989), 376–89; Ulrich Lacher, 'On Political Business Cycles with Endogenous Election Dates', *Journal of Public Economics*, 17 (1982), 111–17; Lewis-Beck, *Economics and Elections*; William D. Nordhaus, 'The Political Business Cycle', *Review of Economic Studies*, 42 (1975) p. 169–90; Reid, 'Endogenous Elections, Budget Cycles and Canadian Provincial Governments'; Kenneth Rogoff, 'Equilibrium Political Budget Cycles', *American Economic Review*, 80 (1990), 21–36; Kenneth Rogoff and Anne Sibert, 'Elections and Macroeconomic Policy Cycles', *Review of Economic Studies*, 55 (1988), 1–16; Edward Tufte, *Political Control of the Economy* (Princeton, Conn.: Princeton University Press, 1978).

government, it cannot cash in on its engineered boom, since doing so signals that the boom is itself a short-term phenomenon and leaner economic times are to follow.²⁴

To a great extent, the informational theory I propose unifies the concepts of ‘surfing’ and ‘manipulation’ that the literature sees as distinct. The theory predicts early elections are triggered when the government anticipates an economic decline. It does not matter whether these expectations arise passively (surfing) or as the result of prior attempts by the government actively to engineer a boom (manipulation). Fortunately, to test the argument that anticipation of an economic slowdown triggers elections, the source of future performance does not matter.

The theory predicts that elections are called in advance of economic declines. The empirical tests will show that this is indeed the case: the greater the decline in economic conditions in the future, then the greater the probability that elections are announced. While such evidence supports the election timing argument, it is also consistent with arguments that elections create economic downturns. To distinguish the election timing arguments from such alternative explanations, I provide two additional sets of tests. I show that the relative timing of an election affects both the popular support of the government and the magnitude of a subsequent economic decline.

If, contrary to election timing arguments, expectations of future conditions do not influence the timing of the election announcement, and the economic decline which follows elections is caused solely by the elections themselves, then the extent of economic decline and changes in the popularity of the government should be unrelated to the relative timing of elections. However, tests show that changes in subsequent economic conditions and government popularity are both strongly related to relative election timing. The earlier an election is called relative to expectations, the greater the economic downturn that follows, and the greater the government’s loss of popular support. These latter analyses suggest the causal relationship is from future economic conditions to election timing rather than elections shaping subsequent performance.

TESTING THE TIMING OF AN ELECTION AND ITS ELECTORAL AND ECONOMIC CONSEQUENCES

The informational theory above proposes that prime ministers use their informational advantage over the electorate in determining when to call elections. However, precisely because the timing decision is based on the leader’s private information, early elections provide a signal of the government’s private information. If leaders call early elections when they anticipate future decline in performance, then following an early election performance should indeed decline. Since voters utilize the information revealed via the timing decision, the timing of elections also influences support for the incumbent.

These arguments lead to three sets of empirical tests. First, I examine the timing of elections using hazard analysis and show that future economic decline triggers elections. Secondly, I construct a measure of how government popularity changes with the announcement of elections and demonstrate that these changes are systematically related

²⁴ Even though it is difficult for politicians to benefit from engineered booms, this does not mean they have no incentive to carry them out. As Rogoff, ‘Equilibrium Political Budget Cycles’, points out, if voters are already going to discount your performance, believing you manipulated conditions, then if you fail to manipulate conditions, once discounted your performance looks even worse. Alternatively expressed, rather than manipulation helping, failing to manipulate hinders.

to relative election timing. Thirdly, I show that relative election timing affects subsequent economic performance.

The empirical tests require three types of data: timing data, performance data and electoral data. Timing refers to the parliamentary calendar and when elections are announced.²⁵ Performance is how successful the government is, both subjectively and objectively. Public opinion data relating to approval of the government, satisfaction with the leader and voting intentions provide a subjective gauge.²⁶ Economic data provide more objective measures of the success of the government's policies in economic terms.²⁷ Since I am interested in how timing affects electoral support, I compare the incumbents' vote share with their pre-announcement support expressed as voting intentions. This provides a measure of change in popular support, though, as discussed above, the politicians care about gaining a working majority.²⁸

²⁵ The timing data were obtained primarily from David Butler and Gareth Butler, *British Political Facts, 1900–1994*, 7th edn (New York: St Martin's Press, 1994). This source provided the session of parliaments, change in prime minister, by-election results, change of allegiance, election results and public opinion data. These data were supplemented by the Nuffield College series on British general elections. This series provides detailed accounts of the run up to each election from 1945 until the most recent election. In particular, I used this series to code the announcement date for each election. *Keesing Record of World Events* (Cambridge, Mass.: Keesing Worldwide, 1997) provided the data on the opening of parliament in 1997 which was missing at the time when I conducted the research.

²⁶ Gallup public opinion data are compiled for the years prior to 1994 in Butler and Butler, *British Political Facts, 1900–1994*. They include voting intentions, approval of government record, approval of prime minister and opposition leader and which party is thought most likely to win the next election. For the post-1994 period, I supplemented these data with MORI (Market & Opinion Research International Ltd.) data, <http://www.mori.com/>.

²⁷ I obtained economic data on gross domestic product, inflation, interest rates and exchange rates from International Financial Statistics CD-ROM (Washington, DC: International Monetary Fund, 2000). The unemployment data were compiled from a variety of sources. Unfortunately, I could not obtain consistent monthly data over the whole period. From January 1945 to June 1964 I used the International Labour Organization's monthly data (*Year Book of Labour Statistics* (Geneva: ILO, various years)). This series became available yearly only after 1964. From January 1975 I used OECD's, *Quarterly Labour Force Statistics* (various years). These data are quarterly from October 1975 and monthly from December 1980 onwards. All additional economic data are from the Office of National Statistics (ONS) available through the University of Essex data archive (<http://www.data-archive.ac.uk/>).

²⁸ I modified the seat share according to by-election results. These data are from Butler and Butler, *British Political Facts, 1900–1994*, the Nuffield College series on British general elections and the British parliament's official website (<http://www.parliament.uk/>). It is common for by-elections to occur as the result of the death or incapacitation of an MP. Unfortunately, I do not have information as to when the seat became vacant, so I code the change as occurring on the day of the by-election. Although these differences are small, we should bear in mind that the presence of Alfred Broughton, who remained at home on sick leave, would have prevented Labour's defeat in the 1979 no-confidence vote (28 March 1979). See Baron, 'Comparative Dynamics of Parliamentary Governments'; Diermeier and Stevenson, 'Cabinet Terminations and Critical Events'; Diermeier and Stevenson, 'Cabinet Survival and Competing Risks'; Huber, 'The Vote of Confidence in Parliamentary Democracies'; Lupia and Strom, 'Coalition Termination and the Strategic Timing of Parliamentary Elections' for discussions of election timing and coalition dynamics. I also coded for change in allegiance using data from Butler and Butler, *British Political Facts, 1900–1994*. Unfortunately, I have found no reliable sources to code these data beyond 1994. I included in the change of allegiance data MPs who had had the whip removed. These data are typically only coded to the nearest month. In these circumstances, I took the shift of allegiance (and any reinstatement) to occur on the first on the month. Again with the exception of the simultaneous (and temporary) defection of twenty-four Labour MPs in 1968 these changes are small in magnitude.

An Econometric Model of the Timing of Elections

In assessing what factors influence the timing of elections the relevant dependent variable is the length of time that each parliament lasts. Each parliament starts with its first sitting, which is time zero. The parliament continues either until the prime minister goes to the monarch and asks for permission to dissolve parliament and hold new elections, or until five years have elapsed, in which case presumably the monarch would automatically dissolve parliament. Statistically, analysing such data falls under the domain of duration analysis, often also called hazard analysis. The objective is to estimate the probability that elections are announced on each particular day conditional upon an election not having already been announced.²⁹

I examine British parliaments since 1945, a sample of sixteen parliaments or approximately 19,700 days. The events of interest are the days on which the prime minister announces elections. In hazard analysis this is referred to as the failure event.³⁰ The objective of the analysis is to determine the extent to which various factors influence the hazard rate, the probability that an election is called.

The analyses are based on daily data. While elections occur on Thursdays, election announcements occur throughout the week, with Monday being the modal category. One might propose that a monthly level of analysis is more appropriate since economic and other data are rarely available at finer units than months. It would of course have been easier to look at events on a monthly basis, but the daily analysis is more appropriate for several reasons. A month of economic conditions can be equivalently coded as about thirty days with identical conditions. Unfortunately, the reverse is not always true. Although opinion polls are taken approximately monthly, their timing does not coincide with the start of the month. With a monthly analysis there is ambiguity as to which poll is appropriate. For example, an election might be announced early in the month prior to the monthly poll being taken. Any ambiguity as to whether the appropriate poll data is that month's figure or the preceding month's figure is removed with a daily analysis which would look at the most recent prior poll. Further, as the end of the term approaches the risk of an election is expected to increase radically. In the last months of a term, the hazard rate for days at the end of the month might be expected to be considerably higher than the hazard rate for days at the beginning of the month. A monthly analysis artificially constrains all days in a month to the same hazard rate. As a practical matter, there are no substantive differences between analyses based on monthly and daily data.

Table 1 provides a definition of the variables presented. With respect to the appropriate form of the hazard model, I estimated a variety of standard parametric specifications (exponential, Weibull, lognormal, loglogistic, gompertz and gamma).³¹ In addition to a variety of residual-based tests used to examine the appropriateness of model

²⁹ John D. Kalbfleisch and Ross Prentice, *The Statistical Analysis of Failure Time Data* (New York: John Wiley, 1980); William H. Greene, *Econometric Analysis*, 2nd edn (Englewood Cliffs, NJ: Prentice-Hall, 1993), chap. 22.

³⁰ An alternative would be to examine the date of dissolution or that of elections. I chose to focus on the announcement decision to examine the conditions under which prime ministers go to the people. I code the 1979 announcement of an election as a censored event, since it was brought about by the government's defeat on a confidence motion.

³¹ Cox proportionate hazard models produced similar results to the parametric regression presented in the article. Having divided the data into simple categories, for example popular and unpopular governments, the non-parametric Kaplan–Meier estimator also provided results supportive of those presented. I used STATA (version 6) throughout. I experienced considerable difficulty in getting the gamma specification to converge.

TABLE 1 *Definition of Variables*

Variable	Definition
<i>Years-to-go</i>	Number of days remaining until the statutory five-year limit divided by 365.
<i>Voting Intentions</i> (two-party)	Public opinion data: voting intentions for the incumbent party minus voting intentions for the major opposition party.
<i>Gov. Majority</i> (two party)	Government's seat share minus the seat share of the major opposition party.
<i>New Leader</i>	Dummy variable coded 1 if the prime minister has changed within the last 100 days within the same parliament.
<i>Party</i>	Conservative = 1; Labour = 0.
<i>Growth Rate</i>	Annual percentage change in gross domestic product (constant currency).
<i>Unemployment Rate</i>	Unemployment as a percentage of the workforce.
<i>Inflation Rate</i>	Inflation, measured as the annual percentage change in the consumer price index.
<i>ΔGrowth Rate over next half year</i> (other economic variables are defined in an analogous manner)	Growth rate in 183 days minus the current growth rate: $\text{Growth}_{t+183} - \text{Growth}_t$.
<i>ΔGrowth Rate over previous half year</i> (other economic variables are defined in an analogous manner)	Growth rate today minus the growth rate 183 days before: $\text{Growth}_t - \text{Growth}_{t-183}$.
<i>Monthly Cumulative Hazard</i> (<i>Half yearly Cumulative Hazard</i> analogously defined)	The predicted hazard rate summed over the preceding thirty days: $\sum_{t-30}^t \hat{h}: \text{based on Model 3.}$
<i>Ratio of Cumulative Hazards:</i> month over half-year	$\frac{\sum_{t-30}^t \hat{h}}{\sum_{t-183}^{t-31} \hat{h}}$

specification,³² I distinguished between models on the basis of Akaike Information Criteria (AIC), a statistic that penalizes the loglikelihood function according to the number of parameters estimated.³³ Unlike conventional hazard analysis, election timing is unusual in that it specifies a maximum duration for a parliament. This places a fixed end point on the duration of a parliament. Since it is ambiguous how this should be modelled, I take a pragmatic approach and include variables coding time remaining in the term

³² See Terry M. Therneau, Thomas R. Fleming and Patricia M. Grambsch, 'Martingale-based Residuals for Survival Models', *Biometrika*, 77 (1990), 147–60; D. R. Cox and E. J. Snell, 'A General Definition of Residuals (with Discussion)', *Journal of the Royal Statistical Society B*, 30 (1968), 248–75; T. R. Fleming and D. P. Harrington, *Counting Processes and Survival Analysis* (New York: John Wiley, 1991).

³³ $\text{AIC} = -2 (\text{loglikelihood}) + 2(c + p + 1)$, where c is the number of model covariates and p is the number of ancillary parameters to be estimated. The preferred model is the one with the smallest AIC (H. Akaike, 'A New Look at the Statistical Model Identification', *IEEE Transactions and Automatic Control*, AC-19 (1974), 716–23.

(*years-to-go*). Comparisons of AIC and measures of fit (from residuals) showed that either a Weibull parameterization with the inclusion of *years-to-go* and (*years-to-go*)² or an exponential parameterization with a cubic form of the *years-to-go* variable included in the vector of covariates performed best. Since the impact of other variables is robust with regard to the precise specification of the model, I present only the results from the Weibull parameterization. In this specification, time affects the hazard rate, the probability of calling an election conditional on not having previously called one, in two ways: first, directly through the inclusion of the *years-to-go* and (*years-to-go*)² variables in the vector of covariates and, secondly, through the ancillary parameter p which indicates how the hazard rate varies over time. Specifically, the hazard rate for a Weibull model is $h(t) = \lambda p(\lambda t)^{p-1}$, where $\lambda = e^{\mathbf{X}\beta}$, \mathbf{X} being the vector of covariates. Although the inherent non-linearity of this specification makes direct interpretation of the coefficients difficult, all the analyses show that after a relatively flat hazard rate for the first three years, the hazard rate rises exponentially over the last two years.

As predicted, government popularity and majority size influence election timing decisions. As all the models in Table 2 indicate, popular rather than unpopular governments are more likely to call elections early and governments without firm majorities are more likely to go to the nation early.³⁴ Both the public opinion and majority variables are in the form of two-party comparisons (Labour and Conservative). Multiparty variants of these variables give similar, if slightly weaker, results. When used alone, alternative measures of public opinion such as comparisons of approval of prime ministers and opposition leaders, and comparisons of approval of government and opposition parties also support the conclusion that it is popular governments that call elections. However, in the presence of voting intentions data these alternative variables tend to wash out; prime ministers' decisions are driven more by likely electoral consequences than by the popularity of themselves or their party.

The models in Table 2 also include the variable *new leader*, a dummy variable that indicates whether the incumbent party has replaced the prime minister within the last one hundred days. This one hundred days, a period picked for its focal point rather than any more substantive criteria, is sufficient to capture Eden's announcement of his search for an electoral mandate after taking over from Churchill. However, Harold Macmillan's replacement of Eden, his subsequent replacement by Ian Douglas-Home, Jim Callaghan's succession following Wilson's resignation and Major's deposition of Thatcher all occurred without spurring parliamentary dissolution. The analysis suggests the presence of a new prime minister makes dissolution between five and thirteen times more likely. While the models reported show strong statistical significance, across a broader range of models than those reported here the impact of new leadership on dissolution was less significant. Similarly, while the coefficient on the party variable indicates Conservatives are only about half as likely to call an election as Labour, this effect is statistically insignificant, a theme maintained across a wide range of model specifications.

Model 1 (Table 2) shows contemporary economic conditions, such as the rate of growth, the unemployment rate and the inflation rate, have little impact on the timing of elections. It is perhaps not surprising that these objective measures of government performance have little impact when public opinion is controlled for. Voters presumably include economic factors in their assessment of the government and the voters can interpret this performance

³⁴ Majority size was the only variable that ever violated tests of the proportionality assumption in the Cox proportionate hazard model. Even then the null hypothesis was only rejected in a few model specifications.

TABLE 2 *Hazard Analysis of the Duration of British Parliaments, 1945–99*

Variables	Model 1	Model 2	Model 3	Model 4
<i>Voting Intentions</i> (two-party)	1.190** (0.0569)	1.231** (0.067)	1.146 (0.040)	1.218** (0.059)
<i>Gov. Majority</i> (two-party)	0.981** (0.007)	0.979** (0.007)	0.983 (0.006)	0.978** (0.007)
<i>New Leader</i>	5.052* (5.756)	10.809** (13.090)	6.925** (7.821)	12.925** (15.135)
<i>Party</i>	0.651 (0.468)	0.613 (0.434)	0.442 (0.289)	0.461 (0.353)
<i>Growth Rate (GDP)</i>	0.926 (0.090)			
<i>Unemployment Rate</i>	0.876 (0.100)			
<i>Inflation Rate</i>	1.041 (0.088)			
<i>ΔGrowth Rate over</i> <i>previous half year</i>		1.087 (0.084)		
<i>ΔUnemployment Rate over</i> <i>previous half year</i>		0.963 (0.618)		
<i>ΔInflation Rate over</i> <i>previous half year</i>		1.746** (0.336)		
<i>ΔGrowth Rate over next</i> <i>half year</i>				0.963 (0.053)
<i>ΔUnemployment Rate over</i> <i>next half year</i>				3.122** (1.935)
<i>Inflation Rate over next</i> <i>quarter year</i>				2.065** (0.615)
<i>(Years-to-go)</i>	0.007 (0.008)	0.023** (0.026)	0.005* (0.006)	0.005** (0.006)
<i>(Years-to-go)²</i>	3.818** (1.701)	3.346** (1.672)	3.890** (1.625)	7.187** (4.209)
<i>p, ancillary parameter</i>	6.787** (3.510)	8.380** (0.459)	1.830 (0.522)	12.590** (5.287)
LogLikelihood	8.921**	13.349**	8.037**	11.982**
Observations	17,903	17,720	19,742	17,720
Parliaments/Failures	15/13	15/13	16/14	15/13
AIC†	3.980	−4.880	0.01514	−2.028

Notes: Coefficients reported as proportionate hazards. In this context the null hypothesis is that the coefficient is 1. Hence a coefficient of 2 means a unit increase in the covariate doubles the risk of announcement, while a coefficient of 0.5 means a unit increase in the covariate halves the risk of announcement. The standard errors reported in parentheses are adjusted for clustering on parliaments.

†AIC calculated on a comparable sample of 17,537 observations.

*Significant at greater than the 10 per cent level in a one-tailed test.

**Significant at greater than the 5 per cent level in a one-tailed test.

within the appropriate economic context, giving their assessment far more subtlety than fixing the relative importance of economic factors across the entire domain of the study. David Sanders shows that, despite high levels of ignorance about the economy, on aggregate voters are remarkably perceptive at drawing appropriate economic inferences.³⁵ Immediate economic conditions do not significantly effect the decision to call elections.

Model 2 assesses the effects of changes in economic conditions. Political Business Cycles (PBC) might suggest an improvement in conditions in the lead up to an election. Neither changes in the growth rate nor changes in the unemployment level over the previous six months have a significant effect, and this result holds for a wide variety of lags. However, elections appear to be preceded by periods of increased inflation. As Model 2 shows, a 1 per cent increase in the inflation rate relative to six months earlier makes elections approximately 1.75 times more likely than if inflation had remained constant. This is contrary to a PBC prediction. This anomalous result is predominately driven by two outliers in the data: 1951 and October 1974. Both these parliaments were extremely short. Hence the inflation humps going into these elections are, like as not, fall out from the preceding 1950 and February 1974 elections, respectively. Although its inclusion improves the fit of models, the lagged change in the inflation variable appears to be an artefact of two extremely short parliaments. For this reason, I exclude this variable from other analyses, noting that its inclusion or exclusion does not influence the impact of other variables.

Model 3 serves as a baseline model of the political incentives to call elections. Given the lack of evidence for contemporary economic effects this specification includes no economic variables.

Foreknowledge: The Role of Future Economic Performance in Triggering Elections

Theoretically, I assume an informational asymmetry: governments have better expectations of future performance than the electorate. Given this assumption the government can base its decision to go to the country not just on current conditions, but also on economic data in the future. Model 4 presents a Weibull hazard analysis that includes covariates reflecting the economic change that will occur after the election. For example, the variable $\Delta Growth\ next\ half\ year$ is the rate of growth 183 days into the future minus the rate of growth now (more generally for any variable X the quarterly change in the future is $\Delta X_t = X_{t+91} - X_t$, and a half year change is $\Delta X_t = X_{t+183} - X_t$). While contemporary economic variables have little effect, these future changes show a statistically significant effect in altering the probability of an election. A loglikelihood ratio test between Models 3 and 4 is significant at the 5 per cent level, based on a comparable sample of 17,537 days. In particular, an increase in either the future unemployment or inflation rate makes elections more likely. The analysis also suggests a decline in the future rate of growth makes election more likely, although this result is statistically insignificant.³⁶

The theory suggests that the prospect of economic decline triggers elections. Before proceeding further I discuss the appropriate length of lead for economic variables. The

³⁵ David Sanders, 'The Real Economy and the Perceived Economy in Popularity Functions: How Much Do Voters Need to Know? A Study of British Data, 1974–97', *Electoral Studies*, 19 (2000), 275–94.

³⁶ This result is far stronger when the pathological case of the February 1974 election is removed. This election occurred during a miners' strike, which forced the government to impose a three-day working week. Obviously this impeded economic output. Following the election, the new Labour government reached agreement with the miners, the three-day week ended and output returned to normal levels.

theory assumes that the incumbent government knows future performance. Of course, this assumption becomes less tenable the further into the future we consider. Obviously no one believes the government knows performance several years down the line, not least because another party might well be responsible for economic management by then. Hence it is inappropriate to consider extremely long lead times. Similarly, very short leads make little sense either. Although short, the campaign season is still around a month long, so economic data one month in advance at the time of announcement is typically revealed prior to the election itself. Given this, it is inappropriate to look at less than a quarter lead time, which for the purposes of calculation I define as ninety-one days.

Consistent with predictions, Model 4 shows future economic decline makes elections more likely. In particular, decline in the future growth rate or an increase in the future inflation or unemployment rates triggers early elections. Before discussing the substantive implications, I discuss the robustness and general trends in these findings. I checked the explanatory power of other leads, quarterly, half yearly and yearly (91, 183 and 365 days, respectively). I also examined the effects of future economic change of each variable in isolation, in pairs and in conjunction with other combinations of variables. Overall these results are robust. However, changes in the growth rate have the weakest effect, not appearing significant in all specifications. The strongest result is for inflation. The effect of the variables also differs temporally. The inflation effect is most significant over short time spans, while unemployment is important over the longer run. The effect of future unemployment appears particularly strongly when other variables are excluded. In addition to the variables reported, I examined the effect of various other economic and policy variables and their change, both past and future. These included interest rates, exchange rates, balance of payments and government consumption expenditure.³⁷ While some of these variables produced consistent patterns, they did not reject the null hypothesis (coefficient of 0) in sufficient specifications to warrant inclusion.

Model 4 supports the prediction that when a leader anticipates a downturn in performance, it triggers elections. From the theoretical perspective advanced here, all that matters is an informational advantage for the government, whether it is a manifestation of 'surfing' or manipulation is irrelevant. This might help explain the lack of concrete evidence one way or the other for political business cycles.³⁸

Electoral Support and the Timing of Elections

Given leaders call elections in anticipation of declining economic conditions, the announcement of elections signals declining conditions. The earlier elections are, relative to expectations, the stronger this signal is. Unanticipated elections called 'out of the blue' signal that leaders expect a drastic downturn; while an election announcement signals only

³⁷ The interest rate (treasury bill, deposit rate, government short-term and long-term bond rates) and exchange rate (US\$/sterling) are from the International Monetary Fund. The balance of payments (KTNC, and HBOP) and consumption expenditure (NMRY) are from the Office for National Statistics.

³⁸ Alberto Alesina and Nouriel Roubini, 'Political Cycles in OECD Economies', *Review of Economic Studies*, 59 (1992) 663–88; Nathan S. Balke, 'Partisanship Theory, Macroeconomic Outcomes, and Endogenous Elections', *Southern Economic Journal*, 57 (1991), 920–35; Fredrik Carlsen, 'Inflation and Elections: Theory and Evidence for Six OECD Economies', *Economic Inquiry*, 37 (1999), 120–35; William Roberts Clark, Usha Nair Reichert and Sandra Lynn Lomas, 'International and Domestic Constraints on Political Business Cycles in OECD Economies', *International Organization*, 52 (1998), 87–120; Jac C. Heckelman and Hakan Berument, 'Political Business Cycles and Endogenous Elections', *Southern Economic Journal*, 64 (1998), 987–1000; Kenneth A. Schultz, 'The Politics of the Political Business Cycle', *British Journal of Political Science*, 25 (1995), 79–99.

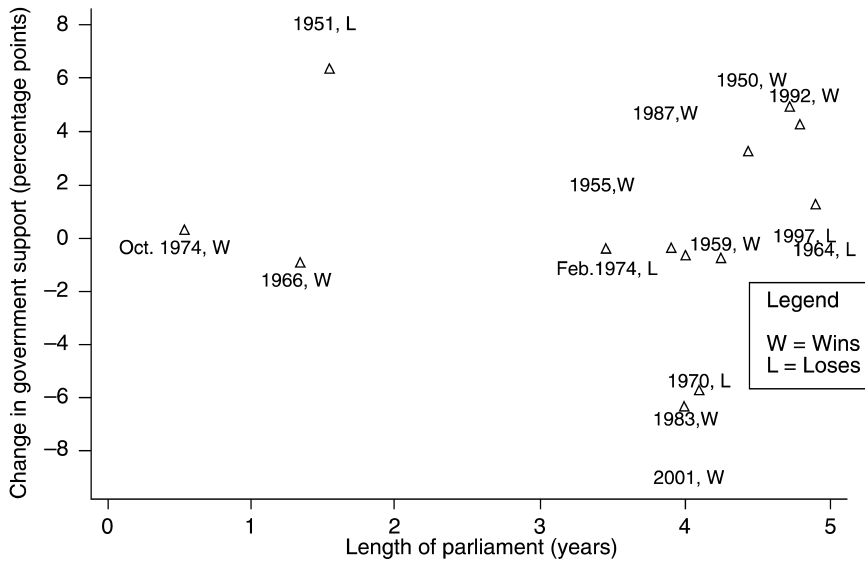


Fig. 1. Change in government support between announcement of an election and election day: how electoral support differs from pre-announcement voting intentions (the two-party version of the variable is shown by triangles)

a mild decline if elections have been widely anticipated for some time. The timing of an election relative to expectations informs the voters as to the type of conditions they should expect after the election. Given this information, voters should adjust their assessment of government performance (and hence support for the government) accordingly. In this section, I analyse how the relative timing of an election affects popular support for the government.

I define the change in support as the difference between the government’s actual vote share at the election and voting intentions for the incumbent at the time of announcement (*Chg. in Support* = Voter share for incumbent minus voting intentions for the incumbent at the time of announcement). I also construct a two-party version of this measure.³⁹ Figure 1 shows these variables plotted against the length of parliaments in years. As the figure clearly demonstrates, changes in government support are not directly related to the timing of elections *per se*. However, as the analyses below will show changes in government support are strongly related to the relative timing of elections. These tests require measures of relative election timing.

A comparison of the hazard analyses in Models 3 and 4 provide a useful heuristic from which to consider the relative timing of elections. Model 3 contains variables for government popularity, seat share, new leadership, party and time remaining in the term. All these variables are readily observable to voters and leaders alike. In terms of the theory, Model 3 (which I shall refer to as the uninformed model since it assumes no knowledge of future events) reflects the likelihood of elections from the voters’ perspective. It forms a baseline expectation against which the leader decides to call elections.

In contrast, Model 4 assumes a knowledge of future economic conditions, information which only leaders are assumed to know. Hence I refer to it as the informed model. This

³⁹ If, for example, the Conservatives were in power then *Chg. in two-party support* = 100% × (Conservative vote share/(Conservative vote share + Labour vote share)) – (Conservative Voting Intentions/(Conservative Voting Intentions + Labour Voting Intentions)).

TABLE 3 How the Timing of Elections Affects Government Support

Variables	Model 5	Model 6	Model 7	Model 8	Model 9
Difference in Predicted Hazard Rates between Models 3 and 4	-0.5587** (0.252)	-0.559** (0.265)			
Years-to-go		-0.044 (0.582)	-3.406* 1.926	0.245 (1.085) -3.650** (1.770)	-3.348** (1.292) -0.218** (0.060)
Ratio of Cumulative Hazards: month over half-year (Model 3)				-0.250** (0.069)	-0.023 (0.025)
Voting intentions (two-party)					
ln (Years-to-go + 1) × (two-party voting intentions + 50)					
Gov. Majority (two-party)				0.006 (0.015)	
New Leader				1.905 (2.765)	
Party				2.012 (1.977)	
Constant	2.112** (0.970)	2.178* (1.344)	2.907* (1.7290)	1.670 (4.491)	4.490** (1.736)
Observations (1979 and current parliaments are censored)	13	13	14	14	14
F-test (prob. in parentheses)	F(1,11) = 4.90 (0.048)	F(2,10) = 2.23 (0.158)	F(1,12) = 3.13 (0.102)	F(6,7) = 5.01 (0.026)	F(3,10) = 10.22 (0.002)
R ²	0.308	0.309	0.206	0.811	0.754

Notes: The dependent variable, the 2 party change in government support, is the difference between the government's vote share at the election and voting intentions for the government at the time of announcement compared to comparable figures for the opposition party. If, for example, the Conservatives were in power then *Chg. in two-party support* = 100% × (Conservative vote share / (Conservative vote share + Labour vote share)) - (Conservative Voting Intentions / (Conservative Voting Intentions + Labour Voting Intentions)). All independent variables calculated for the day of the election announcement.

OLS regression with standard errors in parentheses.

*Significant at greater than the 10% level in a one tailed test.

**Significant at greater than the 5% level in a one tailed test.

information provides leaders with an additional incentive to either call or postpone elections depending upon whether conditions are expected to decline or improve. When a leader has a much greater incentive to call an election than the voters anticipate, then the announcement of an election signals a decline in future government performance. We might regard the differences between Models 3 and 4 as a crude measure of a leader's informational advantage.

Table 3 presents a series of ordinary least squares (OLS) regressions to explain the two-party change in support for the government following the announcement of an election. The two-party version of the variable is used for consistency with two-party comparisons in the earlier table. The multiparty version of change generates slightly stronger results. Models 5 and 6 are OLS regressions of the difference between the predicted hazard rate in the informed (4) and the uninformed (3) models. The spirit of the analysis is to ask how unexpected was the election given known factors relative to the likelihood of an election with foreknowledge of future economic performance. Heuristically, this can be thought of as using the residuals from a regression to assess the extent of unknown factors.⁴⁰ The statistically significant negative coefficient for the difference in the predicted hazard variable means that when foreknowledge of future economic events makes elections more likely than without such foreknowledge, the government's support declines when it announces elections. The time remaining in the term has no significant effect on government support. This provides support to the prediction that voters do not punish the government for elections that are early *per se*, but rather they punish them for elections called early relative to expectations.

While Models 5 and 6 support the hypothesis that relative election timing informs voters of future performance, they do not allow contemporaneous prediction since they require foreknowledge. A comparison of the 1970 and 1998 elections serves to illustrate the construction of contemporaneous measures of relative earliness or tardiness. Although both elections were called approximately one year early, they occurred under very different circumstances. Wilson's 1970 Labour government had trailed the Conservatives for three years in the opinion polls. By contrast, Thatcher's Conservative government had led the Labour opposition in the opinion polls for much of the previous six months, often by double digits. While in the latter case the signal of an election might still reveal a decline over the coming quarters, the government had a long string of successes to weigh against this.⁴¹

⁴⁰ While standard OLS type residuals do not exist, a variety of generalized residuals have been suggested for hazard models. They can be interpreted as the number of failures relative to the expected number of failures (Therneau *et al.* 'Martingale-based Residuals for Survival Models'; see STATA manual version 6, Vol. 3, p. 453, for computational techniques). As such, these residuals provide a measure of earliness relative to expectations, and when included as regressors they significantly influence change in government support (analysis not shown).

⁴¹ I use Bayes's rule to put some analytical rigour behind this assertion. Suppose the government's performance can be classified as either good or bad in each period, and the probability of success depends upon the ability of the government. As an example, let the probability of a good outcome be 70 per cent for a competent government, but only 30 per cent for an incompetent one. Assuming that an election announcement signals a bad outcome in the next period, I calculate that the electorate's belief about the competence of the government depends upon the number of successful periods prior to the election. Suppose initially the government has a 50 per cent probability of being competent. Having seen a single good outcome, the voters should revise their assessment of government competence to 70 per cent. Yet, given that an early election implies the next outcome is bad, the voters should, upon the announcement of the election, revise their assessment back to 50 per cent. After three successes, the voters put government competence at 92.7 per cent, which is revised down to 84.5 per cent upon seeing an election. This decline is only 8.2 per cent compared with 20 per cent when the election comes after only a single success. Although illustrative, this example is not an equilibrium analysis. See Smith, *Election Timing*, and Smith, 'Endogenous Election Timing in Majoritarian Parliamentary Systems', for a properly specified model.

Conservative support remained buoyant. Unfortunately for Wilson, his success had been much more ephemeral and, without long-term evidence to refute it, the electorate put Wilson's early 1970s' successes down to luck, or engineering, rather than competence. This suggests that the electorate should punish the government for cashing in on short-term successes and reward them for resisting such temptations.

To create a measure of relative timing, I construct measures of the short-term and long-term incentives to call elections by summing the predicted hazard rate from Model 3 over the 30 day period and the 183 day period prior to an election announcement. Model 3 is used because it assumes no advanced knowledge of economic events and hence reflects the incentives to call elections from the voters' informational standpoint. Rather than work with these variables directly, I construct a single variable by comparing the ratio of the short-term and long-term incentives.⁴² This variable, which I call the Ratio of Cumulative Hazards (month over half-year), is the cumulative hazard from the month prior to the election divided by the cumulative hazard from the five months preceding that:

$$\frac{\sum_{t-30}^t \hat{h}}{\sum_{t-183}^{t-31} \hat{h}}.$$

This variable ranges from a minimum of 0.136 in 1951 to a maximum value of 1.635 in 1970. When this variable is high it indicates that relative to the short-term incentives, there has been no long-term expectation of elections: the election is early relative to expectations. In contrast, when this variable is small, the government has shown patience and consistently rejected the temptation to 'cash in' over the last six months.

Models 7, 8 and 9 (Table 3) show that, consistent with predictions, voters punish leaders for cashing in on short-term successes but reward them for having resisted the temptations over the previous six months. While overall Model 7 is only significant at the 20 per cent level, in the presence of other controls these results become very robust, as demonstrated by Models 8 and 9. Models 7 through 9 offer support, at least as much as you are likely to get with fourteen observations, that voters punish leaders for trying to cash in on short-term success. Models 8 and 9 also help unpack which of the factors motivating leaders to call elections cause voters to reward or to punish leaders.

The actual physical length of time remaining in a parliament appears to have little significant impact on popular support. Similarly, though the presence of a new leader appears to have little effect, since there is only one leadership change in the data, this variable is more appropriately seen as a 1955 specific dummy. Voters appear to reward governments with only small majorities that are seeking re-election, perhaps seeing such governments as having legitimate needs to go to the nation.

The factor that appears to do most systematic harm to a leader's support is pre-announcement popularity. The more popular a leader is at the time of calling an election, the more his or her support is likely to decline. The straightforward interpretation of this result is, consistent with predictions, that voters punish governments attempting to cash in on short-term success. However, Model 9 suggests this straightforward interpretation is incomplete. As time runs out leaders become increasingly likely to call elections. Given this increase in the likelihood of elections, calling an election provides a much weaker signal of declining future performance. Voters regard popular leaders going to the polls late in their term as much less opportunistic than those trying to cash in on their

⁴² In combination the monthly and half-yearly cumulative hazards support the same substantive conclusion as analyses using their ratio.

popularity earlier. Therefore, the extent to which popularity declines is moderated by the amount of time remaining in the term. Model 9 contains terms for the interaction of voting intentions with the log of time remaining. Consistent with predictions, leaders trying to cash in on their popularity with an opportunistic early election lose support, as witnessed by the negative coefficient on the variable interacting popularity and time remaining. Although this coefficient is statistically insignificant, a joint hypothesis test on both the popularity and interaction variables is significant at the 1 per cent level.⁴³ The evidence in Table 3 supports the hypothesis that voters use the election timing signal to update their assessment of the government.

The Timing of Elections and Subsequent Economic Performance

Although I do not present the results here due to space constraints, post-electoral economic performance is also strongly related to relative election timing.⁴⁴ In particular, regression results show that the earlier an election is relative to expectations (as measured by the *Ratio of Cumulative Hazards*), the greater the decline in economic growth and the greater the increase in inflation and unemployment rates after an election.

This result is important in distinguishing between rival theories. Although the hazard analysis in Model 4 shows that elections precede economic downturns, political business cycle theories might argue this is simply a result of policy manipulation harming the economy; whereas I argue that elections are called in anticipation of worsening conditions. The result that the relative timing of elections and subsequent economic decline are related helps to establish the direction of causality. If PBC theorists are correct and the only causal pathway is that elections affect economic conditions, then subsequent economic performance should be unrelated to the relative timing of elections. Although unreported here, the analysis suggests relative timing and performance are strongly related. By rejecting the null hypothesis that timing considerations have no impact on post-electoral economic performance, I reject PBCs' being the only factor that accounts for a relationship between elections and economic output.

CONCLUSION

The theory of endogenous election timing presented here suggests novel relationships between election timing, economic performance and electoral outcomes. Given the

⁴³ Unfortunately, some care must be taken with this interpretation. The dependent variable is vote share minus voting intentions. The earlier hazard analysis shows that high voting intentions make elections likely. Yet, voting intentions only give a gauge of underlying support, they are not definitive measures. Since it is high popularity that triggers elections, we might suspect that voting intentions just prior to an election announcement, on average, overstate the true underlying support for the government. As such, 'simple regression to the mean' suggests declines in electoral support. If voting intentions always had the same effect on the timing decision then this would be of little consequence since the regression to the mean effect would, on average, be constant and as such appear in the intercept. Regrettably, this assumption is not valid. As an example, John Major in both 1992 and 1997 effectively ran out the clock, calling elections at the last moment. By the end of the term he had no room to manoeuvre and accepted conditions as they were. When Major announced elections there is little reason to assume there is positive measurement error in his underlying support as expressed by voting intentions. Yet, thinking of leaders as needing a high threshold to call an early election opportunistically suggests such a bias exists for early elections.

⁴⁴ These results can be seen at <http://homepages.nyu.edu/~as183/>. For a detailed consideration of this topic, see Smith, *Election Timing*, chap. 4.

assumption that leaders have better estimates of future performance than voters, the timing of elections signals leaders' foreknowledge. The more confident leaders are of their ability to perform in the future, the weaker their incentive to announce early elections. It is leaders who anticipate a future downturn who pre-empt the decline by calling early elections. The timing of elections provides an indication of future performance. When elections are widely anticipated, the announcement of elections provides only a weak signal and government support remains robust. However, when elections are announced out of the blue, such as in 1970 in Britain, the act of calling an election provides a strong signal of decline and government popularity wanes.

This article tests the theory using three sets of analyses. First, using hazard analysis, I show that future economic performance significantly affects the probability of leaders announcing elections. Leaders are more likely to call elections when future economic performance will decline. Secondly, the timing of elections, relative to expectations, influences government support. Governments, such as Wilson's 1970 Labour government, that gain a rapid boost in popularity and then attempt to cash in on this success lose some of their support. In contrast, governments that forgo the opportunity to cash in their current popularity see their support remain buoyant when they do eventually announce elections.

Thirdly, although the link between future economic decline and election timing is demonstrated by the first set of analyses, alternative explanations exist for this result. For example, political business cycle theories suggest pre-electoral manipulation of the economy leads to decline following elections. Such arguments suggest that rather than elections being called in response to decline, the elections cause the decline. If the latter causal mechanism was solely responsible for post-electoral decline then the extent of any post-electoral decline would be independent of the timing of the election. Empirically this is not so; post-electoral economic performance is related to the timing of elections. This supports the theory's predictions that the prospect of economic decline triggers elections.

Overall this article tests deductively derived predictions about the relationships between the timing of elections, economic performance and electoral outcomes. While much has been written on these relationships, this article examines specific and novel predictions. For example, to my knowledge, the influence of the timing decision on the government's support is an entirely new and previously untested hypothesis. Overall support for the theory must be moderated by the limited number of observations. This said, the ability of election timing arguments to account for a wide variety of phenomena suggests election timing is an important determinant of political economy that warrants further study.