

# **Election Timing in Majoritarian Parliaments.** <sup>1</sup>

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## Abstract

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.

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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 Jenkins (1991, p367)

Her [Margaret Thatcher] 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 Lawson (1992, p264).

A decision on election-timing is a lonely one. Harold Wilson (1971 p. 201)

In many parliamentary systems the timing of the next election is at the discretion of the current government.<sup>2</sup> 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" (Newton 1993). Despite the apparent importance of this decision and the volume of editorials 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 paper addresses these questions.

Most parliamentary systems specify a maximum time between elections, five years in Britain for example<sup>3</sup>. Yet, leaders are not bound to wait five years and may call an election

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<sup>2</sup> 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 Wilson (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 Cox 1987 and cites within 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 (Barlin 1997).

<sup>3</sup> Prior to 1911 the British parliament's maximum lifespan was seven years. During both world wars parliaments were prolonged beyond this limit. Following the general election of December 1910 parliament first met on January 31<sup>st</sup> 1911. This first meeting starts the clock, and dissolution should occur prior to the end of the statutory limit. However, the parliament of 1911 did not dissolve until November 25<sup>th</sup> 1918, 14 days after the end of the first world war. Similarly, during world war two a series of parliamentary acts prolonged parliament, which first sat on November 26<sup>th</sup> 1935, and did not dissolve until June 16<sup>th</sup> 1945 (After victory in Europe but prior to victory in Japan).

whenever 'the time is right'. Although extant research into endogenous election timing is scarce, most studies have focused on the idea of 'political surfing' (Cargill and Hutchison 1991; Chowdhury 1993; Gallego 1998a,b; Inoguchi 1979, 1981; Ito 1990a, 1990b, Ito and Parks 1988; Palmer and Whiten 1995; Reid 1998; Saito 1999). In this view, leaders simply wait until conditions are advantageous and then go to the polls. Indeed, of the studies above, only Cargill and Hutchinson's (1991) analysis of Japan and Reid's (1998) study of Canada finds any evidence that politicians actively manipulate policy instruments in preparation for an upcoming election. 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 electoral result and that early elections are more than a simple conversion of popular support into vote share.<sup>4</sup> In May 1970 the governing British Labour party overtook 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. The Australian general election of 1998 also exhibited a similar theme.

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 paper proceeds as follows: I start by presenting the theoretical argument and explain the linkages between the

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<sup>4</sup> Of the 14 post WWII elections four have gone against the opinion poll leader, two in each direction.

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, and second, how the timing decision influences electoral support.

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 an immediate elections, they tip their hand as to what the information is. This signaling mechanism provides a link between the date of elections, electoral outcomes and future performance. Since I provide a formal model elsewhere (Smith 1996), 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 (see for example, Index of International Public Opinion 1982-83, p. 353). Suppose, consistent with the 'surfing' hypothesis, her popularity would ensure her victory if she 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 reelected in the future anyway. Yet, if she were less confident about her policies or her ability to effectively implement them then waiting jeopardized a second term in office, since policy failure would likely undermine her support. In short, the more confidence 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 reelected 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 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 reevaluate 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<sup>th</sup> May 1984, the last possible moment, but rather on 9<sup>th</sup> May 1983 announced elections for June 9<sup>th</sup> 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 then than in the autumn because inflation was due to rise

slightly in the second half of the year (Thatcher 1993, p288. See also Lawson 1992. p246)."

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% for the Conservatives. Yet, in June's general election they receive only 42.2% of the vote.<sup>5</sup> While the margin of error in the opinion data probably account 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 27.6 and an alliance between the Liberals and Social Democrats which together obtained 23 seats from a vote share of 25.4%. 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 policies which the country would never stomach, and suffering badly from the Social Democrats defection....(1992. p. 246)." In fact Lawson goes on to state that at the time he thought Labour was in such a poor position that the Conservative could have won anytime. However, also admits, that with hindsight, a "bird in the hand" is 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 (Duverger 1963; Lijphart

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<sup>5</sup> Approval of the government's record and satisfaction with Thatcher dropped much more modestly by 1% and 2% respectively over the same period. A MORI poll for the same time period gave the Conservatives a 46% vote share.

1994;Rae 1967; Riker 1982). However, had the opposition overcome their differences and presented a unified opposition the Tory reign looked much more assailable. Had the 1979 parliament continued towards its statutory termination (May 9<sup>th</sup> 1984), the impetuosity 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 May 9<sup>th</sup>, Parliament dissolved on May 13<sup>th</sup> and the general election was held on June 9<sup>th</sup>. 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, the 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 (Cited in Butler and Kavanagh 1997)”. However, since he announced the last practical day possible<sup>6</sup>, there was little surprise or advantage left to be gained. Although the analysis is not

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<sup>6</sup>By convention British elections occur on a Thursday, the most recent exception being Tuesday October 27<sup>th</sup> 1931.

presented here, 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.

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

Leader's 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 its decision to leave the ERM shortly after its surprise victory in the 1992 election, John Major's Conservative 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 office holding. Factors that affect 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 Atlee's Labour government managed to retain power although with a much reduced majority of only six (Butler 1952). The government was only able to push through its legislation in the house as a whole and the threat by the Tories of challenging every bill meant Labour MP's had to stay in the House until late most nights.<sup>7</sup> The result was exhaustion and many Labour MPs thought the cost of office was too high. In the end Atlee folded, calling an election he anticipated losing. As Roy Jenkins puts it "Considering the

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<sup>7</sup>This became particularly unpleasant when Tories backbenchers decided to challenge prayers. Since this issue could only be discussed following normal business and Labour could never be certain which nights the Tories would return to the house, Labour whips had to keep their MPs there every night (Butler 1952).



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 (1991 p.88).” When holding office is worth little going to the electorate early has little down side. Hence as a prediction, 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.

The October 1974 general election shows this pattern. Harold Wilson regained power in the February 1974 election, forming a Labour government. However, the election had been extremely indecisive, to the point that initially following the results the incumbent Conservative leader Edward Heath had tried to gain support from minority parties for a coalition government. Given its minority status, the Labour government had problems proceeding with its legislative agenda and there was even talk that the Conservatives would challenge the queen’s speech (the opening of parliament when the queen reads a broad outline of the legislation that the government intends to pursue.) It was generally acknowledged that new elections were imminent (see Butler and Kavanagh 1975 for an account). Holding office under such circumstances offers few rewards. It was also viewed that the government needed a mandate for its policies.

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 (April 6<sup>th</sup> 1955) can be justified on a mandate basis. Similarly, Prime Minister Edward Heath primarily fought the February 1974 on the mandate issue of “who governs,” resulting from a conflict between the Conservative government and striking mine workers.

The theory assumes an information asymmetry, with governments having better expectations about future performance than the electorate. This informational advantage can be

conceptualized in a variety of forms. Here I consider only two: competence and foreknowledge.

**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 precisely future performance. The theory suggests a decline in future performance makes elections more likely. Consistent with this, earlier quotes by Thatcher and Lawson both pointed to impending inflation in the third quarter as motivation for a June election in 1983. In the opposite direction, it was widely predicted that James Callaghan would call an election in the fall of 1978. Indeed "[s]hortly after the 1977 party conference the Prime Minister [James Callaghan] told Tom McNally, his political secretary, to make arrangements for an election which might come at any time from spring 1978. .... It was generally assumed that there would be an autumn election. ... and it was expected that the economy would worsen at the turn

of the year. But by October the figures showed an annual advance of 6% in living standards, the largest for 20 years.” This quote from Butler and Kavanagh (1980 p.42-3) suggest the Callaghan’s foreknowledge of improving conditions postponed an appeal to the nation.

On the whole, it is leaders that 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. (Quoted in Butler 1955).”<sup>8</sup>

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 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 (Chappell and Peel 1979; Lacher 1982; Nordhaus1975; Reid 1998; Rogoff 1990; Rogoff and Sibert 1988; Tufte 1978). In this literature, leaders manipulate policy instruments to generate favorable 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 can not choose elections when

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<sup>8</sup> 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 (Quoted in Butler 1955).”

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 modeling 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 with 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 term 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. 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 from such manipulation. In the fixed term system 'rational expectations' actors know the government wants to stimulate the economy and so 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 government, it can not 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.<sup>9</sup>

Clearly, the relationship between the manipulation of policy instruments and the timing of elections needs greater consideration than space allows here. 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 to actively engineer a boom (manipulation). Fortunately, with respect to testing the arguments here, the source of future performance does not matter. The only relevant consideration is that governments have more accurate expectations about the future than the citizens.

### **Testing the timing of election and its electoral and economic consequences.**

The informational theory above proposes 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 governments private information. If leaders call early elections when they anticipate future decline in performance, then following an early election performance should indeed decline. If the voters utilize the information revealed via the timing decision then the incumbent’s support should also be influenced by the timing of elections.

The theory proposes a link between three types of data: timing, performance and electoral

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<sup>9</sup> 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 (1990) 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 do so hinders.

outcomes. Timing refers to exact day when an election is called.<sup>10</sup> Performance is how successful the government is, both subjectively and objectively. Public opinion data in terms of government approval, leader satisfaction and voting intentions provide a subjective gauge<sup>11</sup>. Economic data provide a more objective measure of the success of the government's policies in economic terms<sup>12</sup>. Since I am interested in how timing affects electoral support, I compare the incumbent's vote share with her pre-announcement support expressed as voting intentions. This provides a measure of change in popular support, however, as discussed above, the politicians care about gaining a working majority.<sup>13</sup>

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<sup>10</sup>The timing data were obtained primarily from Butler and Butler's (1994) *British Political Facts 1900-1994*. This source provided the session of parliaments, change in prime minister, by elections results, change of allegiance, election results and public opinion data. These data were supplemented by the Nuffield College series, *The British General Election of 19XX*. This series provides detailed accounts of the run up to each election from 1945 until the most recent election in 1997. In particular, I used this series to code the announcement date for each election. Keesing's Record of World Events provided the missing data on the opening of parliament in 1997.

<sup>11</sup> Gallup public opinion data are compiled for the years prior to 1994 in Butler and Butler 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 using MORI (Market & Opinion Research International Ltd.) data.

<sup>12</sup> I obtained Economic data on GDP, inflation, interest rates, and exchange rates from International Financial Statistics CD-ROM (International Monetary Fund, Washington DC). The unemployment data was compiled from a variety of sources. Unfortunately, I could not obtain consistent monthly data over the whole period. From Jan 1945 to June 1964 I used the ILO monthly data. This series becomes only yearly at this point. From Jan 1975 I used OECD's quarterly Labour Force Statistics. These data are quarterly from Oct 1975 onwards and monthly from Dec. 1980 onwards. All additional economic data are from the Office of National Statistics (ONS) data, which are available through the University of Essex data archive (<http://www.data-archive.ac.uk/>).

<sup>13</sup> I modified the seat share according to bye election results. These data are from Butler and Butler (1994), the Nuffield College series on *The British General Election of 19xx*, and the British parliament's official website (<http://www.parliament.uk/>). It is common for by elections

## **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. Our objective is to estimate the probability of an election being called on each day. It is worthwhile specifying the precise structure of the data. Each parliament starts with its first sitting, which is time zero. The parliament continues until either the prime minister goes to the monarch and asks for permission to dissolve parliament and hold new elections, or five years have expired, in which case presumably the monarch automatically dissolves parliament. Statistically, analyzing such data falls under the domain of duration analysis, often also called hazard analysis. The objective is to estimate the probability that the parliament ends on each particular day conditional on it not have previously terminated, the hazard rate (Kalbfleisch and Prentice 1980, Greene 1993, chapter 22).

I examine British parliaments since 1945, a sample of 15 parliaments or approximately 19,000 days.<sup>14</sup> The events I am interested in are the days on which the prime minister announces

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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 home sick, would have prevented labour's defeat in the 1979 no confidence vote (March 28<sup>th</sup> 1979). See Baron (1998), Huber (1996) and Lupia and Strom (1995) for discussions of election timing and coalition dynamics. I also coded for change in allegiance using data from Butler and Butler (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 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 24 Labour MP in 1968 these changes are small in magnitude.

<sup>14</sup> I could extend my analysis back to the beginning of the century, which provides 11 additional parliaments. Unfortunately, it is unclear that this really increases the degrees of freedom to work with. Firstly, there are data restriction. Public opinion is practically unheard of until after 1945. Economic data is also less prevalent. Second, the maximum length of parliament is seven years prior to 1911, and two parliaments ignored the statutory limit during wars. Third, there is extreme volatility in the two party system with the Labour party displacing the Liberals. The 'Irish' question also produces a realignment of the parties. These factors combined to make

elections. In hazard analysis this is referred to as the failure event.<sup>15</sup> The objective of the analysis is to determine the extent to which various factors influence the hazard rate at which elections are called.

Hazard analysis presents an interesting problem in terms of model specification. In addition to the usual problem of which independent variables to include there is the additional complication of specifying the function form of the hazard. Hence a variety of estimators have arisen, some non-parametric, some parametric and some which specify the functional form only up to some unknown underlying hazard rate. This latter class is typically referred to as semi-parametric models. In what follows I present parametric models, however with the following proviso. Cox's proportionate hazard model, a semi parametric technique, gives similar results and non-parametric models such as the Kaplan-Meier estimator give results that are indicative of those I present. Unfortunately, the limited sample size prevents the effective use of non-parametric models.<sup>16</sup>

Table 1 provides a definition of the variables presented in this paper. With respect to the appropriate form of the hazard model, I estimated a variety of standard parametric specifications

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coalition and national governments prevalent. Given the additional control variables and ambiguity of coding decision for this period, it is unclear that adding these 11 additional parliaments really increases the available information.

<sup>15</sup> Since Tony Blair, the current British prime minister, has yet to call an election, we do not know when the current parliament will terminate. This lack of information is referred to as censoring. All we know is that up until today an election has not been called. The issue of censoring is particularly relevant for the parliament that terminated in 1979. On March 28<sup>th</sup> 1979 the Labour government lost a no confidence motion by a single vote. This *de facto* meant James Callaghan, the prime minister, was forced on the following day to ask the queen to dissolve parliament. For the analysis presented I code the 1979 announcement as censored by the previous day's lost confidence vote, however coding March 29<sup>th</sup> as a failure event makes little difference in the analysis.

<sup>16</sup> I used STATA (version 6) throughout.



(exponential, weibull, lognormal, loglogistic, gompertz and gamma<sup>17</sup>). In addition to a variety of residual based tests<sup>18</sup> used to examine the appropriateness of model specification, 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.<sup>19</sup> 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 modeled, I take a pragmatic approach and include variables until the expiration of the term in the analysis (years to go). Comparisons of AIC and measures of fit (from residuals) found that either weibull parameterization with the inclusion of years to go and years to go squared 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)<sup>2</sup> squared variables in the vector of covariates, and second, 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  $\lambda=e^{X\beta}$ ,  $X$  being the vector of covariates. The inherent non-linearity in this specification make direct interpretation of the coefficients difficult. However, Figures 1 and 2 graphically show the predicted hazard rates. Figure 1 compares the predictions for model 7 across all parliaments, while Figure 2 compares the hazard rates predicted by models 7 and 8 for two parliaments. As we

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<sup>17</sup> I experienced considerable difficulty in getting the gamma specification to converge.

<sup>18</sup> See Therneau *et.al.*, 1990; Cox and Snell 1968; Fleming and Harrington, 1991.

<sup>19</sup>  $AIC=-2(\loglikelihood)+2(c+p+1)$ , 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.

would suspect the hazard rises rapidly as the end of the term approaches.

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 and governments without firm majorities are more likely to go to the nation early<sup>20</sup>. 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 Prime ministers' and opposition leaders' approval, and approval of government and opposition parties also support the conclusion that it is popular government that call elections. However, in the presence voting intentions data these variables tend to wash out; Prime ministers' decisions are driven more by likely electoral consequences than by the popularity of themselves or their party.

Model 2 (Table 2) includes the variable new leader, a dummy variable that indicates whether the incumbent party has replaced the prime minister within the last 100 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 searching for an electoral mandate after taking over from Churchill. However, Macmillan's replacement of Eden, his subsequent replacement by Douglas-Home, Callaghan's succession following Wilson's resignation and Major's deposition of Thatcher all occur without spurring parliamentary dissolution. The analysis does not find strong statistical support for the hypothesis that a new prime minister promotes dissolution. While model 2 indicates the presence of a new leader makes the announcement of elections 6.8 times more likely, this effect is only just significant at the 10% level in a one tailed test. Indeed, across a broader range of model specifications than those shown here, the effect of new leadership was often insignificant. Similarly, while the coefficient on the party variable indicates

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<sup>20</sup> Majority size was the only variable that ever violated tests of the proportionality assumption in the Cox proportionate hazard model. The null hypothesis was only rejected in a few model specifications and then only in some, and not all, of the tests.

Conservatives are only 44% as likely to call an election as Labour, this effect is statistically insignificant, a theme maintained across a wide range of model specifications.

As Model 3 (Table 2) shows contemporary economic conditions have little impact on the timing of elections. It is perhaps not surprising that these objective measures of government performance have little impact once controlling for public opinion. Voters presumably include economic factors in their assessment of the government and the voters can interpret this performance 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. Immediate economic conditions do not significantly effect the decision to call elections. Model 4 assesses the effect of changes in economic conditions. Neither changes in the growth nor unemployment level over the previous six month have a significant effect, a result that holds for a wide variety of lags. However, elections appear to be preceded by periods of increased inflation. As model 4 shows a 1% increase in the inflation rate relative to six months earlier makes elections approximately 1.6 times more likely than if inflation had remained constant.

**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. Table 3 presents weibull hazard analyses including covariates reflecting the economic change that will occur after the election. For example, the variable  $\Delta\text{Growth}$  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 data has little effect, these future changes show a statistically significant effect in altering the probability of an election. In particular, a decline in

the future rate of growth<sup>21</sup>, or an increase in either the future unemployment or inflation rate make elections more likely.

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 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. Indeed many have pointed to the announcement of disappointing trade figures a few days before the 1970 election as the reason for Wilson's ouster. A consistent theme in accounts of time-tabling elections is the care leaders take to avoid particular days such as holidays or the announcement of important economic statistics. On a more practical basis, much of the economic data are quarterly, and unfortunately between 1964 and 1974 the unemployment data is yearly. Given this, it is inappropriate to look at less than a quarter lead time, which for the purposes of calculation I define as 91 days.

Consistent with predictions, models 5, 6 and 7 (Table 3) show future economic decline makes elections more likely. In particular, decline in the future growth rate or an increase in the future inflation or unemployment rate triggers early elections. Before discussing the substantive implications, I discuss the robustness and general trends in these findings. I checked the

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<sup>21</sup> The growth rate reported is from the ONS series ABMI, (annualized growth rate in GDP measured at constant prices and seasonally adjusted.). Other measure of GDP taken from the IMF given the same results. However, in nominal prices (ONS series YBEU) the coefficient is reversed unless inflation is controlled for.

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 in each variable in isolation, in pairs and in conjunction with other combinations of variables. Since it is impractical to report all these analyses, Table 3 reports models chosen on the basis of AIC. Rather than regurgitate the significance levels reported in table 3, I summarize robustness in terms of these wider analyses (available upon request). 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.<sup>22</sup> While some of these variables produced consistent patterns, they did not reject the null hypothesis (coefficient of zero) in sufficient specifications to warrant inclusion.

The results in Table 3 support the prediction that when a leader anticipates a downturn in performance it triggers elections. Yet, this result can not distinguish the nature of the informational asymmetry. The political business cycle literature suggests knowledge of impending decline exists because of the government's own manipulation of policy instruments. The strength of future inflation coupled with an increase in inflation prior to elections might cause us to suspect manipulation since it is easier to manufacture boom in the nominal rather than real terms. On the other hand, policy instruments such as exchange and interest rates can not be systematically linked to election timing. From the theoretical perspective advanced here, all

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<sup>22</sup> The interests rate (treasury bill, deposit rate, government short and long term bond rates) and exchange rate (US\$/sterling) are from the IMF. The balance of payments (KTNC, and HBOP) and consumptive expenditure (NMRY) are from ONS.

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 on concrete evidence one way or the other for political business cycles (Alesina and Roubini. 1992; Balke 1991; Carlsen 1999; Clark et. al 1998. Heckelman and Berument 1998; Schultz 1995).

### **Electoral support and the timing of elections.**

Figure 2 shows the extent to which future economic change influences the likelihood of elections. In particular, for parliaments ending in 1970 and 1979, Figure 2 graphs the predicted hazard rate for model 7 (thin line) and model 8 (thick line). These models differ in their informational assumption. I will refer to model 7 as the informed model, since it assumes the government has foreknowledge of future economic performance; while in model 8 - the uninformed model - the government does not. While for much of the graphs these predicted hazards are indistinguishable, at certain points the predictions drastically differ. For example, while in the spring of 1970 both predicted hazard rate increase, the jump in the predicted hazard for model 7 far exceeds that for model 8. The downturn in economic conditions during the following summer and fall suggest elections are far more likely than if only contemporary economic variables are known. On May 18<sup>th</sup> Wilson announced a snap election. In contrast, in the fall of 1978 an election was much anticipated. Figure 2 suggests why this expectation was not realized. While the predicted hazard rate for both models rise in the fall of 1978, the increase is larger for the uninformed model. The government's anticipated improvement in the economy suggested waiting was better than was generally thought.

Figure 2 illustrates how I propose to test the theory's hypotheses with regard to how election timing affects the electoral outcome. The theory predicts that elections called early relative to expectations signal a decline in future performance, and hence it is in these cases that we expect the greatest decline in the government's support. The greatest problem with testing this hypothesis is that it is not simply the timing of elections per se but rather how this timing compares to expectations. Unfortunately, I do not have systematic data on peoples'

expectations.<sup>23</sup> The predicted hazards in Figure 2 suggest the 1970 election was ‘out of the blue’. Throughout the life of the parliament the estimates suggest the possibility of an election was remote, until spring 1970. At this point the predicted hazard in the uninformed model rose but only to around 0.01. From this commonly observed (uninformed) perspective an election was still unlikely and, hence, it acted as a strong signal of demise. Wilson’s support collapsed.

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.<sup>24</sup> Figure 3 show these variables plotted against the earliness of elections. While the change in government support can be large, the figure shows that it is not earliness of elections per se that effects support but rather it is the earliness of elections relative to expectations. Figure 4 graphs the change in government support against the difference in predicted hazard rates between the informed and uninformed models (7 and 8, respectively). The pattern is clear. When the likelihood of an election is much higher in the informed model than the uninformed model, when the economy is about to decline, the incumbent’s support declines when elections are announced. The electorate uses the signal of an unanticipated election to make inferences about future economic performance and reassesses the government’s performance in light of this information.

Next I present a series of OLS regressions to explain the 2 party change in support for the government following the announcement of an election (Table 4). I use the 2 party version of the variable for consistency with 2 party comparisons in earlier tables. In the multiparty version of

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<sup>23</sup> I am in the process of using counting stories relating to electoral speculation in *The Times* from 1945 as an alternative measure of expectations.

<sup>24</sup> If, for example, the Conservatives were in power then Chg. in two party support =  $100\% * (\text{con\_vote}/(\text{con\_vote}+\text{lab\_vote})) - (\text{vi\_con}/(\text{vi\_con}+\text{vi\_lab}))$ , where con\_vote is the Conservatives %age vote share and vi\_con is the pre-announcement %age voting intentions for the Conservatives.

change in support the results are slightly stronger than those reported here. I create a series of measures to assess the earliness of elections relative to expectations. Model 9 is an OLS regression of the difference between the predicted hazard rate in the informed (7) and the uninformed (8) models, i.e the best fit line in Figure 4. The spirit of the analysis is to ask how unexpected was the election given known factors relative to the likelihood of an election given 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. 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. 1990; see STATA manual version 6 Vol. 3 p. 453 for computational techniques). As such these residuals provide a measure of earliness relative to expectations. The difference between the Martingale residuals (model 10) show that it is earliness relative to expectation rather than actual earliness that accounts for changes in electoral supports. Similar results occur for other residual specifications.

While models 9 and 10 and Figure 4 support the hypothesis they do not allow contemporaneous prediction since they require foreknowledge. A comparison of the 1970 and 1997 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 radically 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 lead the Labour opposition in the opinion polls for much of the previous 6 months, often by double digits. Although 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.<sup>25</sup>

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<sup>25</sup> I use Bayes rule to put some analytical rigor 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



Her 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 1970's 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.

I construct measures of the short term incentives to call an election by summing the predicted hazard rate over the 30 days period prior to an election announcement. I label this variable the monthly cumulative hazard. Large values for this variable indicate voting intention, the size of the government's majority and the length of time left, all combine to make an election likely. To assess the extent to which the government has resisted the temptation to call an early election, I calculate the half year cumulative hazard: the predicted hazard rate summed over the 183 days prior to an election announcement. If the government had long term popularity then this later variable takes a large value. Models 11 and 12 (Table 4) shows that consistent with predictions, voters punish leaders for cashing in on short term successes but rewards them for having resisted the temptations over the previous six months. While overall model 11 is only significant at the 25% level, in the presence of other controls these results become very robust, as demonstrated by models 12 and 13. Comparable analyses calculated using model 7 (the informed model), instead of model 8, produce even stronger results with t-statistics approximately double

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probability of a good outcome be 70% for a competent government, but only 30% for an incompetent one. Assuming that an election announcement signals a bad outcome in the next period, I calculate 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% probability of being competent. Having seen a single good outcome, the voters should revise their assessment of government competence to 70%. 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%. After three successes, the voters put government competence at 92.7%, which is revised down to 84.5% upon seeing an election. This decline is only 8.2% compared with 20% when the election comes after only a single success. Although illustrative, this example is not an equilibrium analysis. See Smith (1996) for a properly specified model.

those of variables constructed from model 8.

Models 11 through 13 offers support, at least as much as you are likely to get with 13 observations, that voters punish leaders for trying to cash in on short term success. Models 12 and 13 also help unpack which of the factors that motivate 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 leader support. Similarly, the presence of a new leader appears to have little effect, however, since there is only one leadership change in the data, this variable is more appropriately seen as a 1955 specific dummy. Voters appear to rewards governments with only small majorities that are seeking reelection, perhaps seeing such governments 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 greater her support is likely to decline. The straightforward interpretation of this result is, consistent with predictions, voters punish governments attempting to cash in on short term success. However model 13 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 popularity earlier. Therefore, the extend to which leaders' popularity prior to announcement declines is moderated by the amount of time remaining in the term. Model 13 contains terms for the interaction of voting intentions with the log of time remaining. Consistent with predictions it is not popularity itself that results in a decline in government support, but rather leaders trying to cash in on their popularity with an opportunistic early election.

Unfortunately this effect is compounded by a measurement problem in using public

opinion assessments of support.<sup>26</sup> Since leaders are most likely to call elections when extremely popular, expressions of their popularity at announcements are likely to be biased upwards, meaning their electoral support is likely to decline to its true underlying level. As advanced in note 26, this upwards bias is greatest in early elections. Given this problem, the support model 13 provides needs to be regarded with moderation. However, overall the results shown in Table 4 are supportive of hypothesis that the voters use early elections as a signal of the government's private information and moderate their support accordingly.

## **Conclusion**

I present an informational theory of endogenous election timing in which leaders have private information about likely future outcomes. When leaders anticipate a less rosy future they are tempted to call an early election to censor the voters' opportunity to observe this decline. The analyses shown in Table 3, suggest future economic performance does indeed influence the timing of elections. Since leaders use their knowledge of the future when deciding whether to call elections, the announcement of an election provides a signal of the government's future expectations. All else being equal, the earlier elections are called, relative to expectations, the stronger the signal of future decline and hence the less robust support for the incumbent becomes. Analyses of leader support, Table 4, show leaders who try to opportunistically cash in on recent success see their support erode.

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<sup>26</sup> 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 are 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 opportunistically call an early election suggests such a bias exists for early elections.

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**Table 1: Definition of Variables.**

Variable	Definition
Years to go	Number of days remaining until the statutory five year limit divided by 365.
Voting intentions (2 party)	Public opinion data: voting intentions for the incumbent party minus the voting intentions for the major opposition party.
Gov. Majority (2 party)	Government's seat share minus the seat share of the major opposition party
New Leader	Dummy variable coded 1 if the prime minister has changed within the last 100 days within the same parliament.
Party	Conservative = 1; Labour = 0
Growth Rate	Annualize %age change in Gross Domestic Product (constant currency)
Unemployment Rate	Unemployment as a percentage of the workforce.
Inflation Rate	Inflation, measured as the annualized %age change in the consumer price index.
$\Delta$ Growth Rate over <i>next</i> half year (other economic variables are defined in an analogous manner)	Growth rate in 183 days minus the current growth rate: $Growth_{t+183} - Growth_t$
$\Delta$ Growth Rate over <i>previous</i> half year (other economic variables are defined in an analogous manner)	Growth rate today minus the growth rate 183 days before: $Growth_t - Growth_{t-183}$
Monthly Cumulative Hazard (Half yearly Cumulative Hazard analogously defined.	The predicted hazard rate summed over the preceding 30 days: $\sum_{t-30}^t \hat{h}$

**Table 2: Hazard analysis of the duration of British parliaments, 1945-1999.**

Weibull Parametric Regression: 15 parliaments with 13 failures. Coefficients reported as proportionate hazards (standard errors reported in parentheses are adjusted for clustering on parliaments).

Variables	Model 1	Model2	Model 3	Model 4
Voting intentions (2 party)	1.132** (.0328)	1.136** (.0422)	1.165** (0.0602)	1.200** (.0653)
Gov. Majority (2 party)	0.977** (0.0086)	.9780** (.0081)	.9811** (.0080)	.9799** (.0081)
New Leader		6.842* (8.653)	4.696* (5.6277)	10.10** (11.89)
Party		.4378 (.2977)	.4776 (.2826)	.4633 (.3314)
Growth Rate (GDP)			.9109 (.1041)	
Unemployment Rate			.9010 (.1050)	
Inflation Rate			1.032 (.0932)	
$\Delta$ Growth Rate over <i>previous</i> half year				1.060 (.0730)
$\Delta$ Unemployment Rate over <i>previous</i> half year				.8369 (.4971)
$\Delta$ Inflation Rate over <i>previous</i> half year				1.638** (.2775)
Years to go	0.0699** (.0077)	.0044** (.0055)	.0070** (0.0080)	.0225** (.0275)
(Years to go) <sup>2</sup>	4.0726** (1.5497)	4.4211** (1.500)	3.795** (1.200)	3.158** (1.528)
p, ancillary parameter	6.9964** (3.0423)	7.103** (2.813)	6.717** (2.669)	7.702** (2.5116)
LogLikelihood	8.2294**	8.248**	11.386**	15.511**
Observations	19455	19455	17812	17629
AIC <sup>‡</sup>	-1.2945	-1.1879	2.817	-5.555

<sup>‡</sup> AIC calculated on a comparable sample of 17447 observations.

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

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



**Table 3: The Effect of Future Economic Change on the duration of British parliaments, 1945-1999.**

Weibull Parametric Regression: 15 parliaments with 13 failures. Coefficients reported as proportionate hazards (standard errors reported in parentheses are adjusted for clustering on parliaments).

Variables	Model 5	Model 6	Model 7	Model 8
Voting intentions (2 party)	1.246** (.0889)	1.244** (.0778)	1.265 (.0855)	1.193** (.0629)
Gov. Majority (2 party)	.9796** (.0095)	.9784** (.01008)	.9776** (.009)	.9781** (.0076)
New Leader			13.574** (16.369)	8.468** (8.969)
Party			.3387** (.2184)	.4851 (.3211)
$\Delta$ Growth Rate over <i>next</i> half year	.9654 (.0278)	.9340** (.0361)	.9357** (.0343)	
$\Delta$ Unemployment Rate over <i>next</i> half year	2.786* (2.004)	2.737* (1.832)	3.385** (2.455)	
$\Delta$ Inflation Rate over <i>next</i> half year	1.296** (.1825)			
$\Delta$ Inflation Rate over <i>next</i> quarter		1.715** (.5118)	1.842** (.6477)	
$\Delta$ Inflation Rate over <i>previous</i> half year	1.625** (.2924)	1.570** (.2829)	1.540** (.3068)	1.544** (.2339)
Years to go	0.275** (.0289)	.0269** (.0280)	.0154** (.0184)	.0183** (.0201)
(Years to go) <sup>2</sup>	3.935** (2.925)	3.487** (2.1037)	4.736** (3.672)	3.239** (1.239)
p, ancillary parameter	10.448** (5.773)	9.326** (4.285)	11.667** (5.988)	7.345** (2.359)
LogLikelihood	16.297	16.672	19.10	14.890
Observations	17629	17629	17629	18238
AIC <sup>‡</sup>	-8.594	-9.345	-10.204	-7.780

<sup>‡</sup> AIC calculated on a comparable sample of 17447 observations.

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

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

**Table 4: How the timing of elections affects government support.**

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 two party change in government support equals  $100\% * (\text{con\_vote}/(\text{con\_vote}+\text{lab\_vote}))-(\text{vi\_con}/(\text{vi\_con}+\text{vi\_lab}))$ , where con\_vote is the Conservatives %age vote share and vi\_con is the pre-announcement %age voting intentions for the Conservatives. All independent variables calculated for the day of the election announcement.

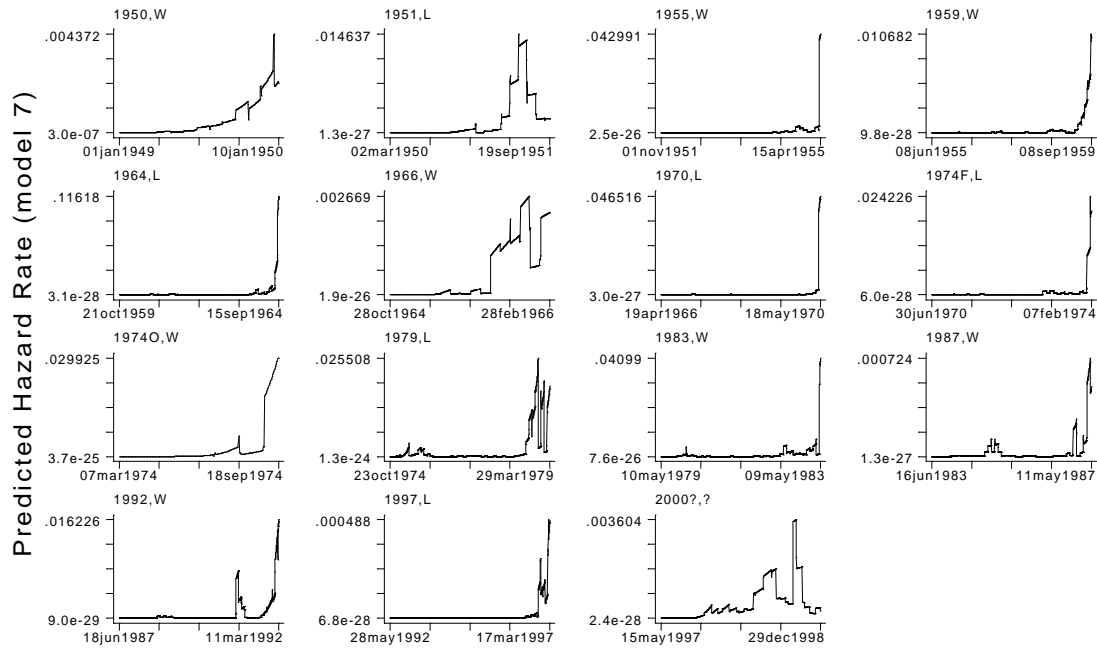
OLS regression with standard errors in parentheses.

Variables	Model 9	Model 10	Model 11	Model 12	Model 13
Difference in Predicted Hazard Rates between models 7 and 8	-144.3** (67.52)				
Difference Martingale Residuals between models 7 and 8		147.68** (71.65)			
Years to go		.0816 (.5885)		.9808 (.7162)	3.306* (2.086)
Monthly Cumulative Hazard (model 8)			-23.35* (13.137)	-28.69** (8.243)	-24.238** (9.005)
Half Yearly Cumulative Hazard (model 8)			15.115* (8.508)	18.273** (5.265)	14.547** (5.807)
Voting intentions (2 party)				-0.253** (.0509)	-.0034 (.1193)
ln(Years to go +1)*(two party voting intentions+50)					-.2268** (.1198)
Gov. Majority (2 party)				.0310** (.0125)	
New Leader				-0.731 (1.814)	
Party				2.571* (1.407)	
Constant	2.108 (.9884)	2.001 (1.320)	-0.915** (1.382)	-6.169** (2.598)	4.130 (2.245)
Observations (1979 and current parliaments are censored)	13	13	13	13	13
F-test (Prob. in parentheses)	F(1,11)=4.57 (0.05)	F(2,10)=2.12 (0.17)	F(2,10)=1.58 (0.25)	F(7,5)=6.07 (0.03)	F(5,7)=6.48 (0.014)
R-squared	.293	.298	0.240	0.895	0.822

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

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

Figure 1: Predicted Hazard Rates for each Parliament (Model 7)



### Hazard Analysis of the Announcement of Elections

Figure 2: Comparison of Predicted Hazard Rates for Models 7 and 8 for the 1966-1970 and the 1974-1979 Parliaments.

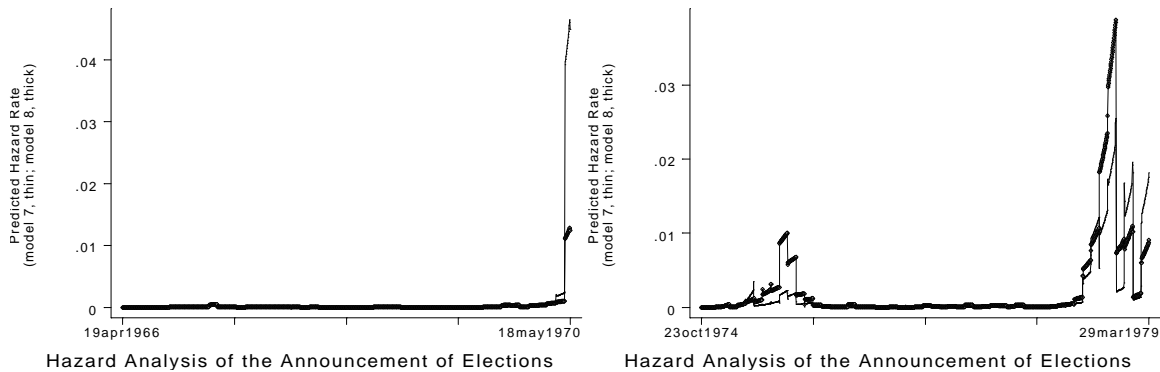


Figure 3: Change in Government Support between Announcement and Election  
(Change in 2 Party Support represented by triangles)

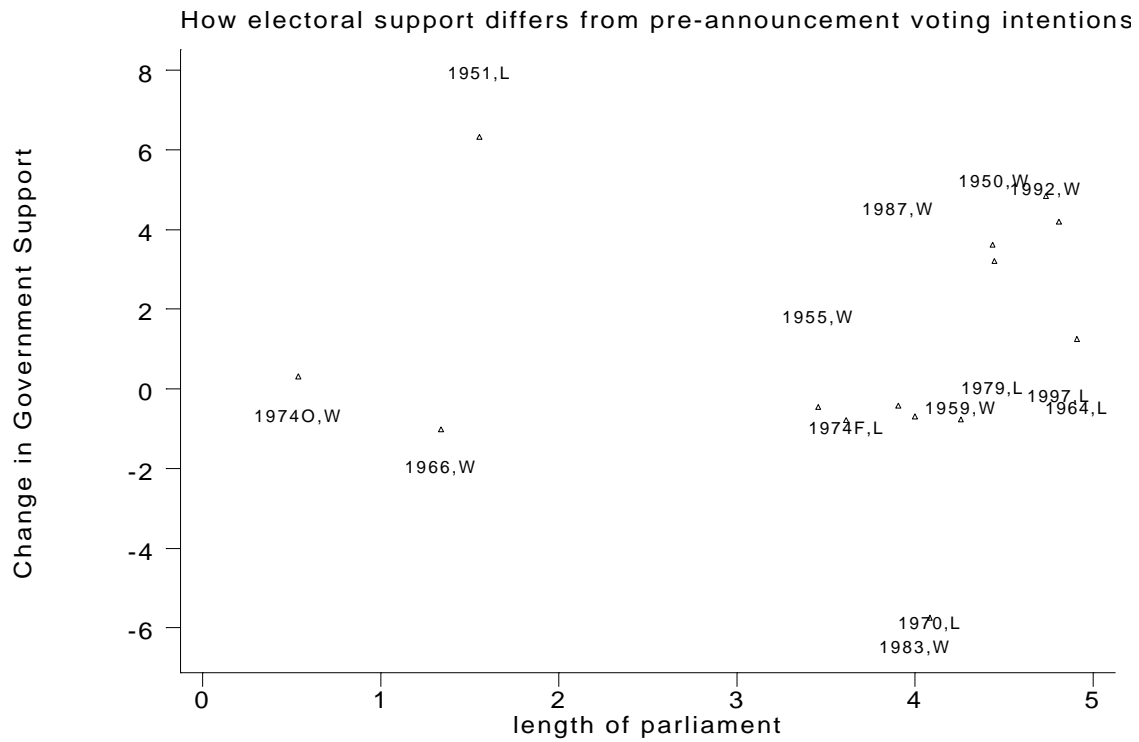


Figure 4: Change in Government Support and the Difference between Predicted Hazard Rates in Models 7 and 8 (Change in 2 Party Support represented by triangles).

