

The Timeline of Election Campaigns: A Comparative Perspective*

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Abstract:

Scholars are only beginning to understand the evolution of electoral sentiment over time. Clearly, much is known about people's vote choices and election outcomes. But how do preferences come into focus over the electoral cycle? Do they evolve in patterned ways? Does the evolution vary across countries? This paper begins to address these issues. To begin with, we consider differences in political institutions and how they might impact voter preferences over the course of the election cycle. We then outline an empirical analysis relating support for political parties in pre-election polls to their final vote. Our analysis relies on vote-intention polls from more than 23,500 polls in 41 countries since 1942, amounting to 245 discrete electoral cycles. Our preliminary analyses indicate that polls become increasingly informative about the vote over the election cycle, but that early polls contain substantial information about the final result. The degree to which this is true varies *some* across countries (and parties) in understandable ways given differences in political institutions.

* Prepared for presentation at the Annual Meeting of the Elections, Public Opinion and Parties subgroup of the Political Studies Association, Lancaster, UK, September 13-15, 2013.

Acknowledgements: special thanks to Robert Erikson, Michael Marsh, Francisco José Veiga, Johanna Laurin Gulled (Ipsos Public Affairs), Chris Hanretty, and Michael Thrasher for poll data. Thanks also to the Roper Center for Public Opinion Research, Australian Social Science Data Archive, Norwegian Social Science Data Services, Data Archiving and Networked Services in the Netherlands, Canadian Opinion Research Archive, GESIS/Leibniz Institute for the Social Sciences, and many others.

The study of voters and elections has shed considerable light on people's vote choices and election outcomes (see, for example, Abramson et al 2007; Campbell et al 1960; Budge and Farlie 1983; van der Eijk and Franklin 1996; Campbell and Garand 2000; Clarke, et al 2004; van der Brug et al 2007; for reviews, see Jacoby 2010; Heath 2010; and various other chapters in Dalton and Klingemann 2010). Yet electoral scholars are only beginning to understand the evolution of electoral sentiment over time. How does the outcome come into focus over the electoral cycle? Do voters' preferences evolve in a patterned way? What role does the election campaign play?

Answers to these questions are interesting unto themselves, but also important. The structure and dynamics of electoral preferences matter in representative democracies, after all. If preferences are highly structured and in place early on, then voters are less subject to influence during or even before the official election campaign. If preferences are not highly structured and emerge only late, by contrast, voters may be influenced by everything that happens between elections. These imply two very different models of electoral preferences: (1) where the “fundamentals” are in place early and events, including campaigns, have little role to play and (2) where everything that happens matters, so that the fundamentals actually evolve over time as a moving equilibrium. The models have roots in research on elections and voting, some of which reveals “minimal effects” of events (e.g., Berelson et al 1954; Lewis-Beck and Rice 1992; Finkel 1993) and others of which demonstrates substantial, lasting effects (e.g., Johnston et al 1992; Lodge et al 1995; Shaw 1999; Hillygus and Shields 2008).¹ Of course, it may be that both are at work, so that some effects last and others decay. Understanding the crystallization of preferences over time thus can reveal when (and how) cleavages come to matter on Election Day.

¹ An alternative view suggests that electoral competition moves voters towards the equilibrium set by the fundamentals (Gelman and King 1993; also see Rosenstone 1983; Lewis-Beck and Rice 1992; Campbell 2000; Stevenson and Vavreck 2000; Arceneaux 2005). Even from this perspective, campaigns and candidate messages still matter (especially see Vavreck 2009).

There is extensive research on the United States. From this work we have learned that over time polls become increasingly informative about election outcomes. It is true for presidential races (Erikson and Wlezien 2012). It also is true for Congressional elections, but there polls are more informative further out from Election Day (Erikson and Sigelman 1996; Bafumi et al 2010). A similar pattern is evident in the UK, though early polls may be even more informative there (Wlezien et al 2013). While suggestive, we do not know whether what we observe in the US and the UK holds in other countries. Is there a generalizable pattern to the evolution of electoral preferences over time? Or does the pattern vary across political context?

In this paper, we consider whether and how political institutions structure the evolution of electoral preferences in systematic ways. Institutions matter for electoral choice; they also should matter for the predictability of electoral choice and the evolution of voters' preferences. This is the subject of our investigation. First, we examine government institutions, focusing on differences between presidential and parliamentary systems. We expect that preferences in presidential elections come into focus later than in parliamentary elections, where parties tend to be more central; we also might observe similar differences between legislative elections in presidential and parliamentary systems. Second, we examine electoral institutions, particularly differences between proportional representation and single-member district plurality systems. We consider two possibilities: (1) that proportional representation leads to the early formation (and greater stability) of electoral preferences due to voters choosing between parties rather than candidates, and (2) that preferences are more volatile because of the greater number of parties.

To begin with, we consider the previous research and consider how differences in political institutions might impact voter preferences over the course of the election cycle. We then outline an empirical analysis relating support for political parties or candidates in pre-election polls to their final Election Day vote. Finally, we undertake analysis of more than 23,500 polls from 245 electoral cycles. The results reveal a general pattern: polls become increasingly informative about the vote over the election cycle, but that very early polls contain substantial information about the final result. They also reveal variation, that the evolution of preferences varies *some* across countries, reflecting differences in political institutions.

Polls and the Vote over the Election Timeline

Consider the timeline of elections (following Wlezien and Erikson 2002; Erikson and Wlezien 2012). We start the timeline immediately after the previous election. We end the timeline on Election Day. Many events occur over the timeline, some very prominent and others routine. We want to know whether these events have effects. Do we observe changes in preferences? We also want to know whether the effects last. Do they persist to affect the outcome on Election Day?

It is difficult to characterize the effects of events for at least two reasons. First, the effects of most events are small. Selected events, such as party nominating conventions in the US, do have large effects (Holbrook 1996; Shaw 1999; Erikson and Wlezien 2012). Candidate debates can too (also see Johnston, et al. 1992; Holbrook 1996; Shaw 1999; Blais et al 2003). These conventions and debates are exceptions, as most things that happen during campaigns tend to have relatively little influence. Consider a speech or candidate appearance. Even campaign managers expect fractional effects from such activities. The same is true of political advertisements. Second, the effects of events are hard to detect. The problem is that, for our investigation, we have to rely on polls, which contain survey error. This complicates finding big effects, such as those associated with candidate debates, and it makes finding the comparatively small effects of most events impossible (see Wlezien and Erikson 2001; Zaller 2002).² The effects, even small ones, do exist and can add up, so that their collective impact can matter on Election Day (Erikson and Wlezien 2012).

The question then is whether the shocks from events take the form of temporary “bounces” or permanent “bumps” (Erikson and Wlezien 2012). Simply put, do the effects decay or else last? If effects are bounces, they dissipate. In this scenario, preferences revert to an “equilibrium” that is set in each particular election year (also see Gelman and King 1993). The final result is the equilibrium plus the effects of any very late events that do not fully dissipate before Election Day. If effects are bumps, conversely, they last to affect the outcome. The election outcome is

² Analyses that rely on poll aggregates tend to understate campaign effects, however. That is, they register the net effect of many different activities, which can cancel out on a daily basis. Shifts in preferences on one day also might be largely reversed, at least in part, by shifts in the opposite direction the next.

the sum of all the bumps—mainly small in size—that happen during the cycle, keeping in mind that they can go in both directions and so cancel out. Of course, it may be that events produce both bounces and bumps: some effects may dissipate and others last, or a portion of effects may dissipate and the rest last. The bumps and not the bounces are what matter in the long run. They cumulate over time. Figure 1 illustrates the different types of effects—the bump, the bounce and the hybrid effect.

—Figure 1 about here—

There is evidence of permanent bumps from pre-election polls for US presidential elections (Erikson and Wlezien 2012). In these “trial heat” polls, survey organizations typically ask respondents which candidate they would vote for “if the election were held today.” The results of these polls tell us only a little about the persistence of specific events, recalling that it is difficult to even identify effects in the first place. They can tell us quite a lot about general patterns, however. We can assess how the results of such polls from different points of the election cycle match the final results. If polls are increasingly informative across the timeline, then we know that electoral preferences change and some of the change lasts to impact the outcome. If polls are equally well informative across the timeline, then either preferences do not change or else the change there is does not persist, i.e., the fundamentals remain unchanged.³

Scholars have found that, at the beginning of the election year in the US, some 300 days before the balloting, there is virtually no relationship between the results of presidential polls and the actual vote. At the end of the cycle, by contrast, polls virtually match the final result. In between, polls become more and more accurate. This is revealing about voter preferences. It tells us that they change over the election year and in meaningful ways: although much of the change that we observe is short-lived, and dissipates before Election Day, a *substantial portion carries forward to impact the final outcome*.⁴

³ Where the latter is true, we may see a late uptick in the correspondence between polls and the vote owing to short-term effects that do not fully decay before Election Day.

⁴ In the language of political psychologists, voters are, at least to some extent, “online processors”, updating their preferences based on new information about the parties and candidates (see Lodge et al 1995).

Polls and the vote in US Congressional elections exhibit a similar pattern (Erikson and Sigelman 1996; Bafumi, et al 2010). In the ‘generic’ ballot, survey organizations ask respondents which party’s candidate for Congress they would vote for in in their district. These measured preferences are more informative early in the election year. They also are less informative towards the end of the election cycle. Polls for parliamentary elections in the UK typically ask respondents which party they would vote ‘if the election were held tomorrow’. These are informative earlier still (Wlezien et al 2013), starting to come into focus years before Election Day.

This research offers certain lessons. First, polls in each case become more informative the closer the election. This is as we might expect, but it indicates that electoral preferences evolve over time in each country, and in both types of elections in the US. Second, there is a hint of difference between presidential and legislative elections, where polls for the former are less predictive of the voter early in the election cycle and more predictive at the end of the campaign. This also as we might expect given that presidential polls capture preferences for the two candidates and the parliamentary and congressional polls tap party support in the various legislative districts. Third, it also may be that early polls are more informative about UK parliamentary election outcomes than legislative elections in the US. This is suggestive about the effects of government institutions—that electoral preferences develop earlier in parliamentary systems. Whether the patterns are real and hold in other countries remains to be seen.

A Comparative Perspective on Polls and the Vote

It may be that electoral preferences evolve over the election cycle in a similar way across political systems, and that polls become increasingly informative about the final result in all countries. It also may be that the pattern differs. Countries differ in many ways, and there is reason to expect that some of the differences—particularly in relation to political institutions—matter for electoral preferences (also see Shugart and Carey 1992). We consider both government and electoral institutions. They structure the set of choices faced by voters, and this can influence the formation and stability of preferences across the timeline.

Government Institutions

The government structure can influence how and when electoral preferences form. Of special importance are the differences between presidential and parliamentary systems. There are two main differences: (1) between presidential and parliamentary elections and (2) between legislative elections in presidential and parliamentary systems.

First, and most notably, in presidential elections voters select an *individual* to represent the country whereas in parliamentary elections they select a *legislature*, which in turn produces a government. In presidential elections there is often greater uncertainty over the identity of the candidates, or at least over the full slate of candidates. Even to the extent the candidates are known, information about their attributes and policies often are not known until later still in the election cycle. By contrast, in parliamentary systems parties tend to dominate (Budge and Farlie 1983; Adams et al. 2005). This is important because dispositions towards parties, while not fixed, are more durable than those toward candidates. Even to the extent party leaders are important to voters in parliamentary systems, their identities typically are known well in advance, and much earlier than presidential candidates. As a result, we expect that voters' preferences crystallize earlier in the electoral cycle in parliamentary elections.⁵

Second, there also is reason to expect that the difference between legislative elections in parliamentary and presidential systems influences the formation of preferences. There are at least two reasons. To begin with, as discussed above, politics in parliamentary systems centers on parties, and this may be true even where single member districts are used (also see Cox 1997; Mair 1997). To the extent party dispositions matter more in parliamentary systems, preferences in legislative elections should crystallize earlier there by comparison with preferences in presidential systems.⁶ In addition, legislative elections in presidential systems can be influenced

⁵ That this would produce differences seems obvious when choosing among parties in proportional systems, but it should be true even where single member districts are used—while voter preferences for individual candidates may reflect a variety of considerations, when we aggregate across districts they should tend to cancel out.

⁶ Then again, elections are harder to anticipate in parliamentary systems, as most governments are able to select the time of the next election. Thus, we might expect more—not less—change

by presidential elections themselves, in the form of coattails (Ferejohn and Calvert 1984; Campbell and Sumners 1990; Golder 2006). As a result, electoral preferences in such systems may coalesce late in the election cycle.⁷

Electoral Institutions

Electoral systems also may have consequences for how preferences evolve. There are two main ways: (1) the general difference between proportional representation and single member districts, and (2) the specific differences in the number of political parties.

First, we might hypothesize that campaigns produce less change in preferences in systems where proportional representation is used as opposed to single member districts. The intuition is fairly straightforward: voters choose among parties and not candidates, and so preferences may tend to be more stable during campaigns. Of course this depends on the level of voter alignments with parties (van der Brug et al 2007).⁸ The basis for party alignments also is important (Clarke et al 2004). The stability of party coalitions is as well, as change in the coalition (or in the expected governing coalition) can cause voter preferences to change (Strøm 1997). Just as there are elements of instability in proportional systems, there are elements of stability in candidate-centered ones: parties matter there too and so does incumbency, which can seriously limit the effects of events (Abramowitz 1988, 1991; Cain et al 1984).⁹ It is not absolutely clear a priori that proportionality should produce more stability.

Second, we might even propose that proportionality actually leads to greater volatility in preferences. It is well known that electoral systems produce party systems, and the number of parties is one consequence (and indicator) of proportional election rules (Duverger 1954; also see

in these systems, as the official campaign there does not begin until the election is called. The element of surprise might help explain why there was more real change in preferences during the 2006 Canadian election, which was the result of a no confidence vote. The unfolding of events also appears to have mattered greatly (Clarke et al 2009).

⁷ Interestingly, the same may be true of electoral balancing effects in off-year elections, which come into focus late in the US (see Bafumi et al 2010).

⁸ Where party alignments are weak, after all, we expect more “undecideds,” later decision-making, and greater susceptibility to campaign effects (see Fournier et al. 2004).

⁹ The “personal vote” also can matter in proportional systems that use open lists (see Shugart et al 2005). The causal effect of incumbency is debatable (see Zaller 1998; Fenno 1978).

Cox 1997). This may have implications for the evolution of electoral preferences. In systems where there are fewer parties, voters face less choice, and this alone may make preferences more stable. In multi-party systems, by contrast, there is more choice and consequent scope for churn in voter preferences during the electoral cycle.

Data

Pollsters have sought to measure citizen's preferences for candidates or parties for almost three quarters of a century. While varying due to differences in context, most of these so-called trial-heat polls ask how citizens would vote "if the election were held today". Indeed, in advanced democracies, most elections today are characterized by regular and often daily polling of vote intentions. The growth in polling is such that it is not uncommon for election campaigns to see hundreds of polls conducted during the formal campaign. We have compiled what we believe is the most complete comparative dataset ever assembled of national polls of the vote intentions for presidential and legislative elections.¹⁰ The dataset consists of a total of 23,554 polls spanning the period from 1942 to 2013. The data cover a total of 245 elections (including 22 run-off elections) in 41 countries, 12 of which are pure presidential systems, 25 of which are parliamentary systems, and 4 of which are mixed, including a president and a parliament. In some parliamentary republics there are also direct elections for the head of state as well as for parliament. Thus we have data for presidential elections in 21 countries and legislative elections in 29 countries. Further details on sources of polling data are provided in Appendix A.

Wherever possible, our analyses use the published headline figure released by polling companies as their current estimate of vote intention for candidates or parties. In a few instances we use aggregates calculated from original survey data (these include a number of datasets from the Norwegian Social Science Data Services, a TNS-NIPO dataset from Data Archiving and Networked Services in the Netherlands, Forschungsgruppe Wahlen "Politbarometer" data from Germany, and poll data available from the Australian Social Science Data Archive).

¹⁰ In every poll in our dataset respondents were asked which candidate or party they would vote for; we ignore cross-national and within-country differences in question wording.

There are several important points to note about these data. Firstly, we are compelled to work with vote intention figures which do not reflect consistent sampling or weighting strategies by different polling organizations or even by the same organization over time. Older polls are more likely to use face-to-face and quota samples, for example, whereas recent polls may include internet panels. While we ideally would like to work with data generated using a consistent methodology, assembling a time series that takes into account differences in weighting and sampling practices would be impossible. We therefore use the headline figure vote intentions as the most consistent attainable time series of poll data—the numbers reflect the survey houses’ best estimates of voter preferences at each point in time. Where a survey house changes their sampling or weighting strategies, of course, our poll data will reflect this change.¹¹ The norm in the polling industry is to adjust vote intention polls excluding don’t knows and non-responses. However in a small number of cases non-responses are included in the headline figures and we recalculate them to ensure that all our poll data is standardized. These sorts of adjustment are the exception in our dataset, but have been implemented consistently.

Second, survey organizations sometimes report results for overlapping polling periods. This is quite understandable and tends to occur where survey houses operate tracking polls and report the moving averages, e.g., over three days. Respondents interviewed today would be included in poll results reported tomorrow and the day after and the day after that. Clearly, we do not want to count the same respondents on multiple days, and this overlap can be removed. For a hypothetical survey house operating a tracking poll and reporting a three-day moving average, we only use poll results for every third day. We also follow consistent coding rules in the date assigned to each poll. Fieldwork dates are available for most polls. Since most polls are conducted over multiple days, where possible we “date” each poll by the middle day of the

¹¹ These decision rules might seem innocuous. However, as noted in previous work, they have been shown to affect the reported headline figures, particularly in recent elections (Wlezien and Erikson 2001; Erikson, et al. 2004). For example, likely voter weighting can distort reported vote intentions prior to Election Day by exaggerating short-term trends in who is sufficiently “likely” to vote. Nevertheless, we often rely on results calculated from voter samples used in the headline figures as these often are the only figures we can reliably obtain. It is difficult and, in many cases, impossible to locate results for samples of voters according to current weightings from archived survey results.

period that the survey is in the field.¹² However, information on fieldwork dates is not available for all polls and in those cases we follow careful procedures to calibrate the date.¹³ For days when more than one poll result is recorded we pool the results together into a single poll of polls. We have readings for 64 days per election on average. During the later stages of the election cycle, we often have near day-to-day monitoring of vote intentions.¹⁴

Third, the length of election cycle itself can vary considerably. Some presidential elections involve a five- or six-year time interval (e.g., France, Mexico), as do some legislative elections (e.g., the UK), while run-off elections can span just a couple of weeks resulting in a very short election cycle. Because pollsters ask hypothetically about vote intentions for run-off elections we are able to extend our analysis beyond this period in some cases.¹⁵ Note that in some countries there are legal restrictions on publication of poll results on or prior to Election Day (for a review see Spangenberg 2003). This means that in a few cases we have missing data over the final days of the campaign. If anything, this means that our analysis likely understates the strength of the relationship between polls and the election outcome. Note also that exit polls are not included in our analysis.

¹² For surveys in the field for an even number of days, the fractional midpoint is rounded up to the following day.

¹³ The rules for poll dating followed the follow procedure, using the first possible option before moving onto the next when that possibility had been exhausted: (1) if both fieldwork dates available, the mid-point of the start and end dates is calculated, (2) if only one of the fieldwork dates is available, that date is used, (3) if only the date of publication of the poll in the media is available, that date is used, (4) if only information on the month or week of the poll is available, the mid-point of the corresponding month or week is used, (5) if only information on the month of the poll is available and is observed during the month of the election and is known to be in the run-up to the election, the first of the month is used as the start date and the final day before the election day is used as the end date (and if the poll asks about voting on “... next Monday [or other day]”, then start date is instead taken as seven days before the election).

¹⁴ It is important to note that polls on successive days are not truly independent. Although they do not share respondents, they do share overlapping *polling periods*. Thus polls on neighbouring days will capture a lot of the same things, which is of consequence for an analysis of dynamics.

¹⁵ This is not always possible given the unpredictability of the identity of the run-off candidates. A famous case was the shock result in the first round of France’s 2002 presidential election, where the far-right candidate Jean-Marie Le Pen won through to face the incumbent Jacques Chirac in the run-off after beating the expected challenger, Lionel Jospin, into third. While numerous trial heat polls had been asked about vote preferences for Chirac and Jospin, none had asked about Chirac and Le Pen.

For a variety of reasons, the volume and time span of this poll data varies considerably on a country-by-country basis. This is due to cross-national variation in the growth of the commercial polling industry, trends of democratization creating more elections to poll in more recent years, and the relative shortage of archival repositories of polling data. There also is variation in the availability of secondary collections of polling data, which are important sources in cases where archival repositories do not exist. As a result, we have large numbers of polls in some countries (such as the US, UK, Germany, Sweden, Norway, Portugal, France, the Netherlands, Canada, Australia, Spain and Ireland), and a smaller number in others (such as Serbia, Romania, Czech Republic, Slovakia, Slovenia and Malta).¹⁶ The N of polls for each country is reported in Table 1. On average we have 582 polls per country for approximately 5 elections per country, or about 116 polls per election cycle. Given the typical interval—721 days—between elections, we are missing polls on most dates and in many weeks. This makes it difficult to conduct standard time series analysis of the poll data to assess whether shocks to preferences persist.

—Table 1 about here—

The Methodology for Analysis

Recall that we are interested in whether and how electoral preferences evolve over the timeline. Are they in place early, well before the official campaign begins? Or do they come into focus over time? Does the pattern vary across institutional context? To answer these questions, we need a method for assessing the correspondence between polls at different points in time and the eventual vote.

To systematically examine the relationship between the polls on different dates and the Election Day vote, we generate a series of daily equations predicting the vote share for different parties or candidates (j) in different elections (k) from vote intentions in the polls at date T in the campaign timeline:

¹⁶ In these cases, the preponderance of polls in the later period of the election cycle mean that cases where there are fewer polls do not tend to involve substantially greater interpolation between gaps in polling, as the daily values are only generated after the first poll.

$$VOTE_{jk} = a_T + b_T Poll_{jKT} + e_{jKT} \quad (1)$$

where T designates the number of days before Election Day. For instance, we can estimate an equation using polls from 365 days before elections, and then do the same using polls from 364 days in advance, and so on up to Election Day itself. Using the estimates from these equations, we can see whether and how preferences come into focus over time.

We are interested in the variance explained by the polls (R -squared) over the campaign timeline. This tells us how well the polls predict the vote at each point in time. If the R -squared increases over time, we know that polls become better predictors the closer the election. The improvement in predictability will reflect the variance of the shocks and the proportion that persists, bearing in mind that some changes may not last. Now, an increase in R -squareds would not necessarily mean that the polls themselves—instead of poll predictions—are increasingly accurate. For this, we need to examine the regression coefficient (b_i). It indicates the slope of the line relating the polls and the vote. If the coefficient increasingly approaches 1.0 as the R -squared increases over time, we know that the polls converge on the vote. In other words, preferences evolve.

To estimate daily equations, we need daily polls. We already have seen in the previous section that poll data are missing data on most dates for most elections. To deal with this issue, we interpolate from adjacent poll readings in each election cycle.¹⁷ This would not be acceptable in conventional time series analysis, as it would compromise the independence of observations. There are no such problems for our analysis, given that the methodology is explicitly cross-

¹⁷ Specifically, given poll readings on days $t - x$ and $t + y$, the estimate for a particular day t is generated using the following formula:

$$\hat{V}_t = [y * V_{t-x} + x * V_{t+y}] / (x + y).$$

For days in the timeline after the final poll before an election, we carry forward the numbers from the final poll. This has some consequence for the accuracy of poll predictions very close to Election Day, as we use polls from well before the end of the cycle in some cases. Because the frequency of polling increases as the election approaches, the number of interpolated values is greatest at the beginning of each election cycle. This reduces the variance when polls are sporadic, but does not affect the general level and trajectory of the estimated timeline regressions. If non-interpolated data were used, the results would be noisier and there would be a number of days in the electoral cycle on which values were not available.

sectional—interpolating actually permits a more fine-grained analysis. We thus are able include any election cycle from the moment the first poll is conducted in each election cycle in each country. The point when this happens varies across elections, of course. Figure 2 shows the number of elections and countries we have at each point in the timeline. We have polls in the field 900 days before Election Day in approximately only about 40% of our cases, though this actually may be surprisingly high. Two years in advance, we have polls in half of the cases. By the last year, polls are available at least 75% of the time, and the number grows fairly consistently throughout the year. The data thus permit an especially intensive analysis during this period.

—Figure 2 about here—

For our analysis, we also need data on the actual vote shares parties and candidates receive on Election Day. We rely on a wide range of official sources and election data resources—full details are reported in Appendix B. Official sources were preferred where possible (e.g., data published by the Ministry of Interior in France, Cyprus, Chile and Greece, the Ministry of Justice in Finland, and the Federal Returning Officer in Germany). Where official sources were not readily available, resources such as the Election Guide database of the International Foundation for Electoral Systems (www.electionguide.org) were used as an alternative or were used to cross-check the reliability of data obtained from unofficial sources (such as the websites of opinion pollsters and academic or amateur psephologists). Some of the older election data is taken from Nohlen and Stöver 2010.

Results

To begin the analysis, let us first consider the scatterplot between polls and the vote at various points of the election cycle and the actual vote. This is shown in Figure 3. The figure displays the poll share for all parties or candidates in all elections and countries. In the upper left-hand panel of the figure, using polls that are available 900 days before the election, fully two and a half years before an election, we see that there already is a discernible pattern. That is, the poll share and the vote share are positively related; indeed, the points cluster around a line of identity, though there also is a good amount of variation around it. As we turn to more current polls,

moving horizontally and then vertically through the figure, an even clearer pattern emerges; the poll share and final vote share line up. Simply, as we get closer to the election, the polls tell us a little more about the outcome. This is as one would expect if preferences change and a nontrivial portion lasts. But how much do preferences evolve?

—Figure 3 about here—

In Figure 4, we make a more fine-grained presentation. Here we display the cross-sectional R -squared (for up to 864 parties/candidates, 245 elections, and 41 countries) from regressing the vote division on the poll division for each date starting 900 days before the election. (The number of cases on each day is shown in Appendix Figure A1.) Specifically, to begin with, we estimate equation 1 from above for all elections pooled together. Recall that we are interested in the pattern of R -squared across the election timeline.

– Figures 4 and 5 about here –

The series of R -squareds in Figure 4 reveals that polls predict the final vote very well far in advance of an election. Fully two and a half years out, the party/candidate poll share accounts for over 75% of the variance in the party/candidate vote share on Election Day. Much as we could see from the panels in Figure 3, the R -squared increases quite steadily over the election timeline, which tells us that preferences are evolving, if only very slowly. Figure 5 zooms in on the final year of the election cycle. Here we can see that the R -squared reaches 0.9 four to five months before Election Day but continues to increase, particularly during the last month. Preferences evolve over the “long campaign” between elections but also during the short, intense official campaign in the weeks leading up to Election Day.¹⁸

¹⁸ Note that the same general pattern is observed if the analysis is restricted only to main parties or candidates receiving more than 20% of the vote. Removing smaller values from the analysis reduces the dispersion of the data and, mathematically, the proportion of variance in the vote explained by the polls. (In its simplest sense, polls and the vote vary less across parties and candidates and comparatively more across time.) Even here, very early polls are informative about the vote and preferences evolve gradually over the election cycle, with a late acceleration in the final month. This is shown in Appendix Figure C1.

As discussed above, the R -squared may not tell the full story of the relationship between polls and the vote. To complete this, we need to consult the regression coefficient (b) from equation 1. Figure 6 displays the estimated b through the last year of the election timeline. Here we observe a plot that is almost identical to what we saw in Figure 5—the numbers are virtually the same and they follow nearly the same pattern over time (Pearson’s correlation = 0.97, $p = 0.000$). Clearly, the R -squareds reveal a lot about the actual match between polls and the vote, and they form the focus of our remaining analyses.

—Figure 6 about here—

Thus far our analysis has examined pooled all elections into a single analysis, regardless of institutional context. We have hypothesized that institutions matter, however. Specifically, we posited that political institutions structure the formation of preferences in a number of possible ways. Let us first consider the effects of government structure. Recall that we expect that voters’ preferences crystallize earlier in the electoral cycle in parliamentary elections compared to presidential races. To test the hypothesis, we estimate separate equations relating poll and vote shares in the two types of elections. Figure 7 plots the resulting R -squareds over the final year of the election cycle. The patterns in the figure are consistent with our expectations. A year out, polls are much more informative in parliamentary elections, explaining almost 0.90 of the variance in the party vote share on Election Day. For presidential elections, the figure is just above 0.60. This substantial gap narrows over time, with preferences for presidential elections coming increasingly into focus, especially in the last 50 days. The two are virtually indistinguishable by Election Day. By that point in time, preferences in both types of elections are fully formed.

—Figure 7 about here—

We next turn to differences between legislative elections in parliamentary and presidential systems. There is reason to suppose that party matters more in the former and so that electoral preferences in the former also crystallize earlier than legislative elections in the latter. Figure 8 plots the R -squareds for regressions relating the polls and the legislative vote in the two systems.

The patterns in the figure indicate little difference in the evolution of preferences. While polls are slightly better predictors of the legislative vote in presidential systems, the differences are trivial.¹⁹ It seems that preferences for legislative elections evolve in much the same way regardless of the institutional context. The only real difference relating to government institutions is between presidential elections on the one hand and legislative elections on the other. This is highly intuitive.

—Figure 8 about here—

Let us now consider electoral institutions. Earlier, we posited that proportional and plurality systems might also influence how electoral preferences evolve over the timeline. There are two, contrasting expectations: (1) that preferences crystallize earlier in proportional systems because of the greater importance of party support, and (2) that preferences are less predictive in proportional systems because of the larger number of political parties. To begin with, we examine the general differences between the two systems. Figure 9 plots the *R*-squareds for regressions relating the polls and the legislative vote in proportional and single member district plurality systems. In the figure we can see that polls are slightly more predictive in plurality systems—there is a slight gap a year in advance of elections that narrows over time before widening again at the end of the cycle. The differences are very small, however, and difficult to credit. That said, the differences are more pronounced across the timeline when the regressions focus on parties that received a 20% or greater vote share—see footnote 18 and Appendix Figure C2. If nothing else, the results make clear that preferences do not come into focus earlier and more completely in proportional systems.

—Figure 9 about here—

Figure 10 provides evidence that preferences are consistently less informative in proportional systems. The figure plots the *R*-squareds from regressing vote shares on polls shares for those

¹⁹ Note that if the regressions are re-estimated excluding parties receiving a share of the vote of less than 20% -- see footnote 18 and Appendix Figure C1 -- then the results are essentially the same.

election cycles where the effective number of political parties (ENPP) is equal to less than three, between three and four, or greater than four.²⁰ Here the pattern is unmistakable. In election cycles with fewer parties (i.e. less than three), preferences are more stable and more predictive of the final result throughout the entire period. When the effective number of parties is in the range between three and four, the polls are slightly less informative about the eventual vote, although preferences evolve in parallel at a similar rate. The predictability of the polls is lower again in multiparty systems where there are four parties or more. A year out, the proportion of variance explained is almost 0.15 less than for systems with fewer than three parties. In fact, over the final 150 days of the election cycle preferences barely move at all – if anything becoming less predictive for a period from around 150 days out, before becoming more informative again over the final 50 days. This is consistent with the suggestion of greater instability in preferences in multiparty systems. Given that the number of political parties closely reflects electoral rules, the degree of proportionality—not just proportional representation per se—evidently does matter in the formation in the crystallization of electoral preferences.

—Figure 10 about here—

Discussion and Conclusion

Voter preferences evolve in a systematic way over the election timeline in a wide range of representative democracies. To be sure, there is structure to preferences well in advance of elections, indeed, years before voters actually vote. That is, early polls predict the vote, at least to some extent. They become increasingly informative over time, however. The evolution is not remarkable but it is real. That this pattern holds across countries is important and points towards a general tendency in the formation of electoral preferences. But the pattern is not precisely the same in all countries. Political institutions matter. They structure the evolution of preferences in important ways.

²⁰ The effective number of parties (ENP) is calculated, following Laakso and Taagepera (1979), as the sum of the squared fraction of votes (V) for each party i , divided by one. That is, $ENP_e = \frac{1}{\sum_{i=1}^n V_i^2}$.

Preferences come into focus later in presidential elections than in parliamentary ones. A year out from Election Day, parliamentary elections are more predictable from the polls than are the outcome of presidential races. This presumably reflects the greater uncertainties involved in the assessment of presidential candidates, most fundamentally the fact that the identities of candidates often are not confirmed until the final months of the electoral cycle. In parliamentary systems, by contrast, parties seem to matter more. This is important because dispositions towards parties, while not fixed, are more durable than those toward candidates. That preferences are in place much later in presidential systems comes as little surprise. That there is no difference between legislative elections in presidential and parliamentary systems may surprise, however. This seems to confirm the importance of uncertainties involved in voters' assessments of candidates and the relative stability of party preferences.

Preferences in legislative elections come into focus less quickly and completely in highly proportional systems. We find limited evidence of general differences across systems—that proportional representation per se is what matters. We find stronger evidence that plurality systems render preferences more stable through reducing the number of choices available to voters. Significantly, we find that preferences are more predictable in systems where there are fewer political parties. These are in place earlier and remain more predictive of the final result throughout the final year of the electoral cycle. In multi-party systems with more than four parties electoral preferences hardly improve at all over the final 150 days of the election cycle. At the end of the cycle, there is a clear difference in the predictability of electoral preferences relating to the number of political parties—the greater the choice on offer, the greater the instability in electoral preferences over the election cycle.

Does the election campaign matter? We have shown that preferences are often in place far in advance of Election Day and that they evolve slowly over time. This is especially true in parliamentary systems where the campaign may play less of an important role in conveying new information to voters. This is not to say that the election campaign does not matter. However, it is clear that the “long campaign” between elections matters most of all.

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Table 1. Poll Data in 41 Countries, 1942-2013

Country	System	Election	Rule	N of Polls	N of Elections	First poll	Last election
Australia	Parliamentary	Legislative (1 st Pref)	SMDP	1,500	27	1943	2010
		Legislative (2 nd Pref)	SMDP	837	7	1993	2010
Bulgaria	Parliamentary	Legislative	PR	28	2	2009	2013
Canada	Parliamentary	Legislative	SMDP	1,779	22	1942	2011
Croatia	Parliamentary	Legislative	PR	75	1	2008	2011
		Presidential	Majority	41	1 (1)	2009	2010
Czech Republic	Parliamentary	Presidential	Majority	9	1 (1)	2012	2012
Finland	Parliamentary	Legislative	PR	16	1	2010	2011
Finland	Parliamentary	Presidential	Majority	49	2 (2)	2006	2012
Germany	Parliamentary	Legislative	PR	3,244	9	1977	2009
Greece	Parliamentary	Legislative	PR	166	4	2007	2012
Iceland	Parliamentary	Legislative	PR	64	2	2009	2012
		Presidential	Plurality	9	1	2012	2012
Ireland	Parliamentary	Legislative	PR	488	11	1974	2011
Italy	Parliamentary	Legislative	PR	323	1	2012	2013
Japan	Parliamentary	Legislative	PR	198	5	1998	2012
Malta	Parliamentary	Legislative	SMDP	5	1	2012	2013
Netherlands	Parliamentary	Legislative	PR	1,518	13	1964	2012
New Zealand	Parliamentary	Legislative	PR	413	3	2002	2013
Norway	Parliamentary	Legislative	PR	1,000	12	1964	2009
Poland	Parliamentary	Legislative	PR	139	1	2010	2011
		Presidential	Majority	34	1 (1)	2011	2011
Serbia	Parliamentary	Legislative	PR	20	1	2008	2012
Slovakia	Parliamentary	Legislative	PR	13	2	2010	2012
Slovenia	Parliamentary	Presidential	Majority	19	1 (1)	2012	2012
Spain	Parliamentary	Legislative	PR	880	5	1994	2011
Sweden	Parliamentary	Legislative	PR	945	3	2000	2010
Switzerland	Parliamentary	Legislative	PR	12	1	2010	2011
Turkey	Parliamentary	Legislative	PR	40	1	2010	2011
U.K.	Parliamentary	Legislative	SMDP	3,293	18	1943	2010
Argentina	Presidential	Presidential	Majority	52	2 (1)	2006	2011
Brazil	Presidential	Presidential	Majority	240	3 (3)	2002	2010
Chile	Presidential	Presidential	Majority	90	1 (1)	2008	2010
Colombia	Presidential	Presidential	Majority	41	1 (1)	2010	2010
Cyprus	Presidential	Presidential	Majority	52	2 (2)	2007	2013
Ecuador	Presidential	Presidential	Majority	44	1	2010	2013
Mexico	Presidential	Presidential	Plurality	243	2	2005	2012
Peru	Presidential	Presidential	Majority	189	2 (2)	2006	2011
Philippines	Presidential	Presidential	Plurality	22	1	2010	2010
South Korea	Presidential	Legislative	PR	15	1	2011	2012
		Presidential	Plurality	30	1	2012	2012
U.S.	Presidential	Legislative	SMDP	1,962	36	1942	2012
		Presidential	Electoral College	1,971	16	1952	2012
Venezuela	Presidential	Presidential	Plurality	60	3	2006	2013
Austria	Semi-Presidential	Legislative	PR	267	1	2006	2013
		Presidential	Majority	13	2	2010	2010
France	Semi-Presidential	Presidential	Majority	520	6 (6)	1965	2012
Portugal	Semi-Presidential	Legislative	PR	529	7	1986	2011
		Presidential	Majority	33	1	2010	2011
Romania	Semi-Presidential	Legislative	PR	24	2	2008	2012

Note: run-off elections in parentheses.

Figure 1. Types of Campaign Effects

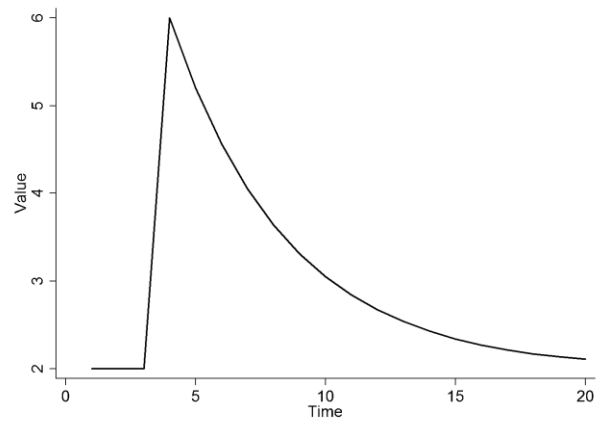


Figure 1a: A Bounce

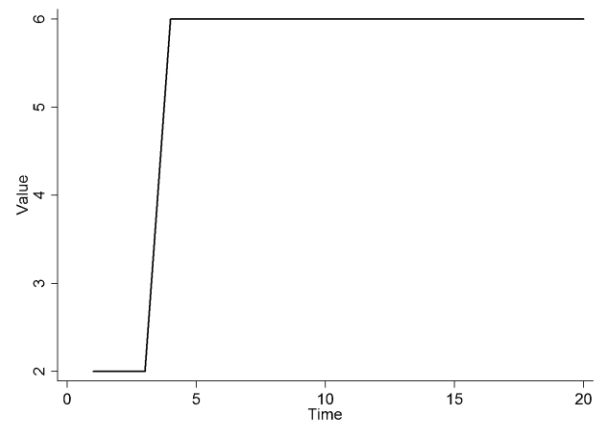


Figure 1b: A Bump

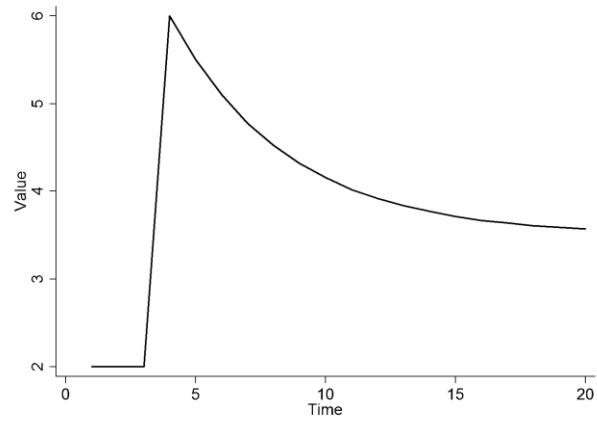


Figure 1c: A Compound Effect

Figure 2. Number of Elections & Countries for which there are Poll Data, by Date of the Election Cycle

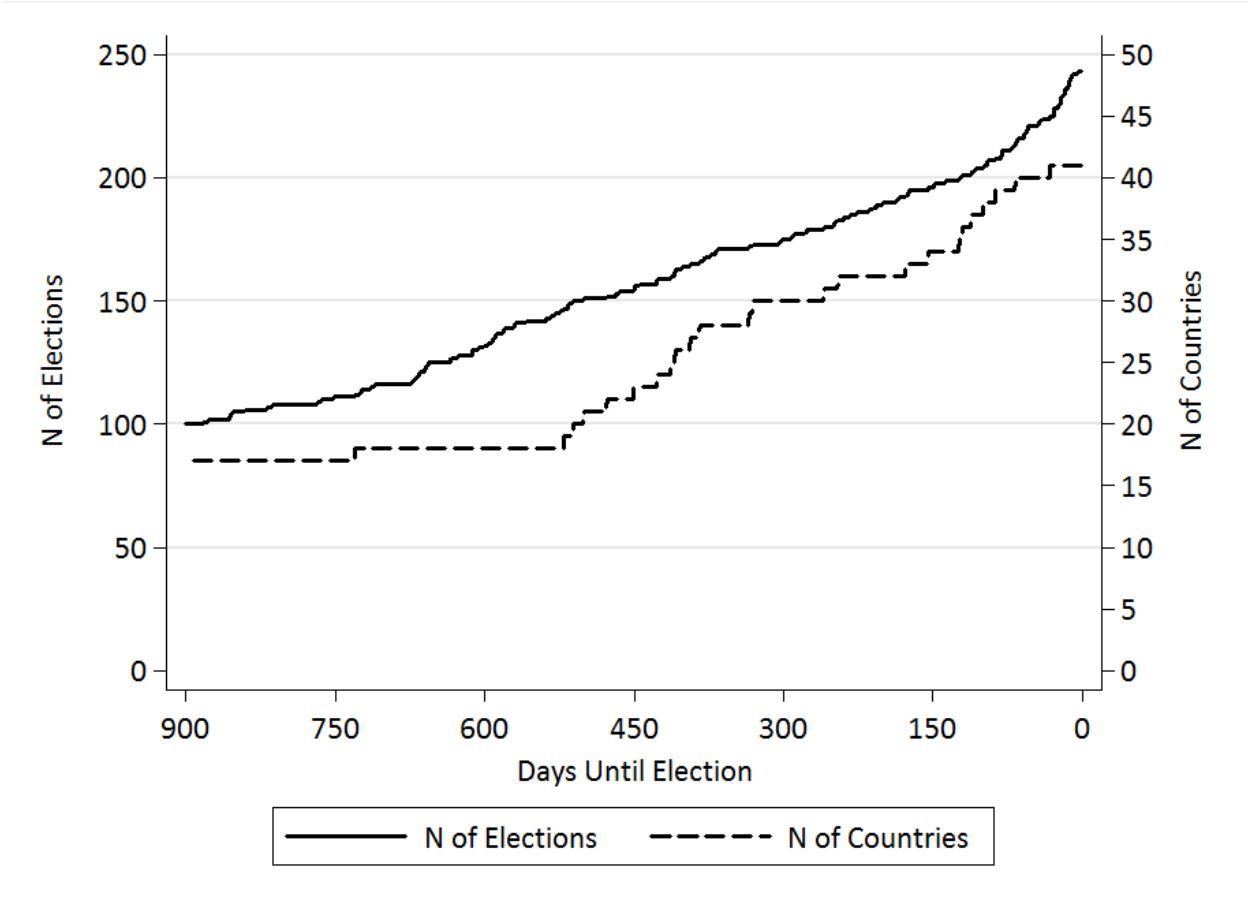


Figure 3. Scatterplot of Party Vote Share by Party Poll Share for Selected Days of the Election Cycle—Pooling all Elections

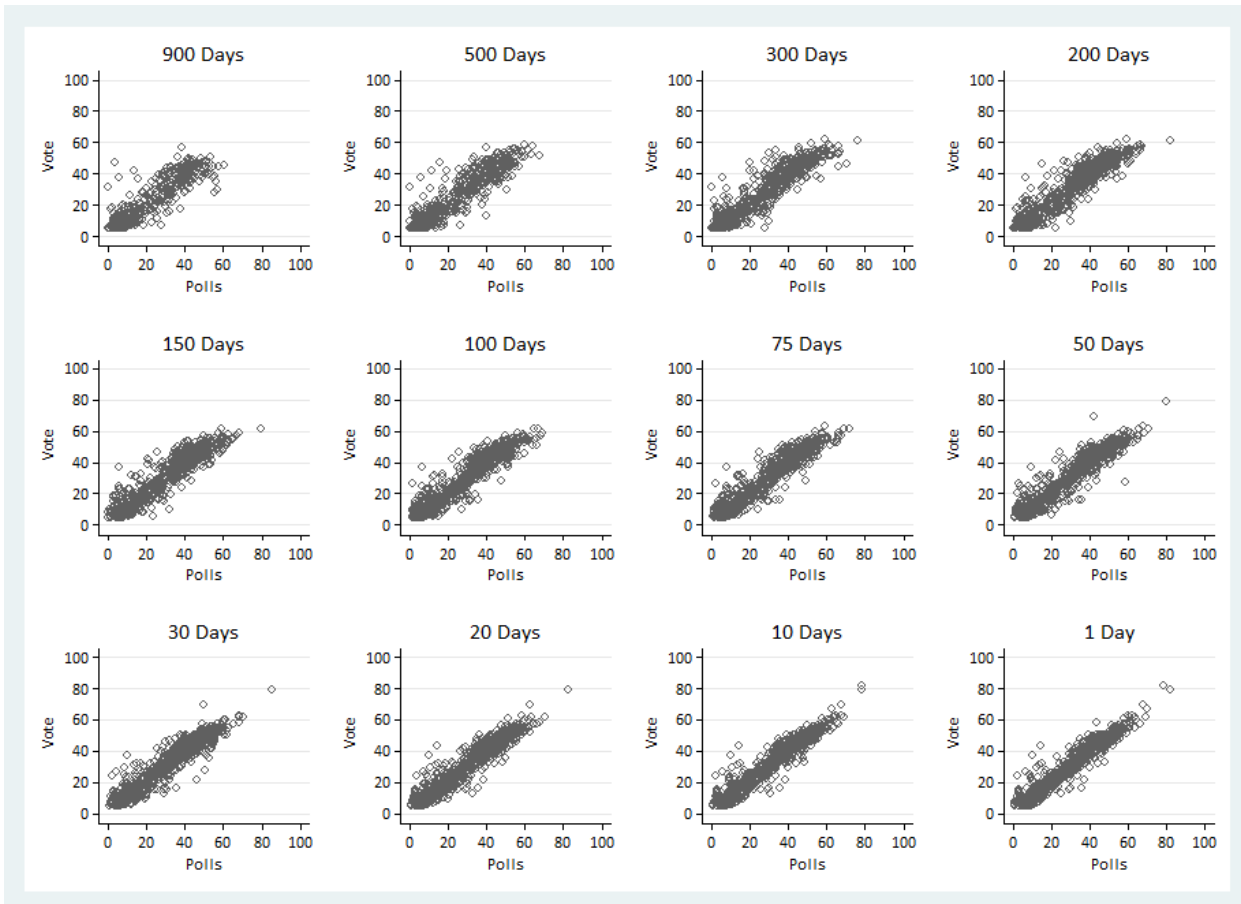


Figure 4. Adjusted R -Squared Predicting the Party Vote Share from the Poll Share, By Date in Election Cycle—Pooling all Elections

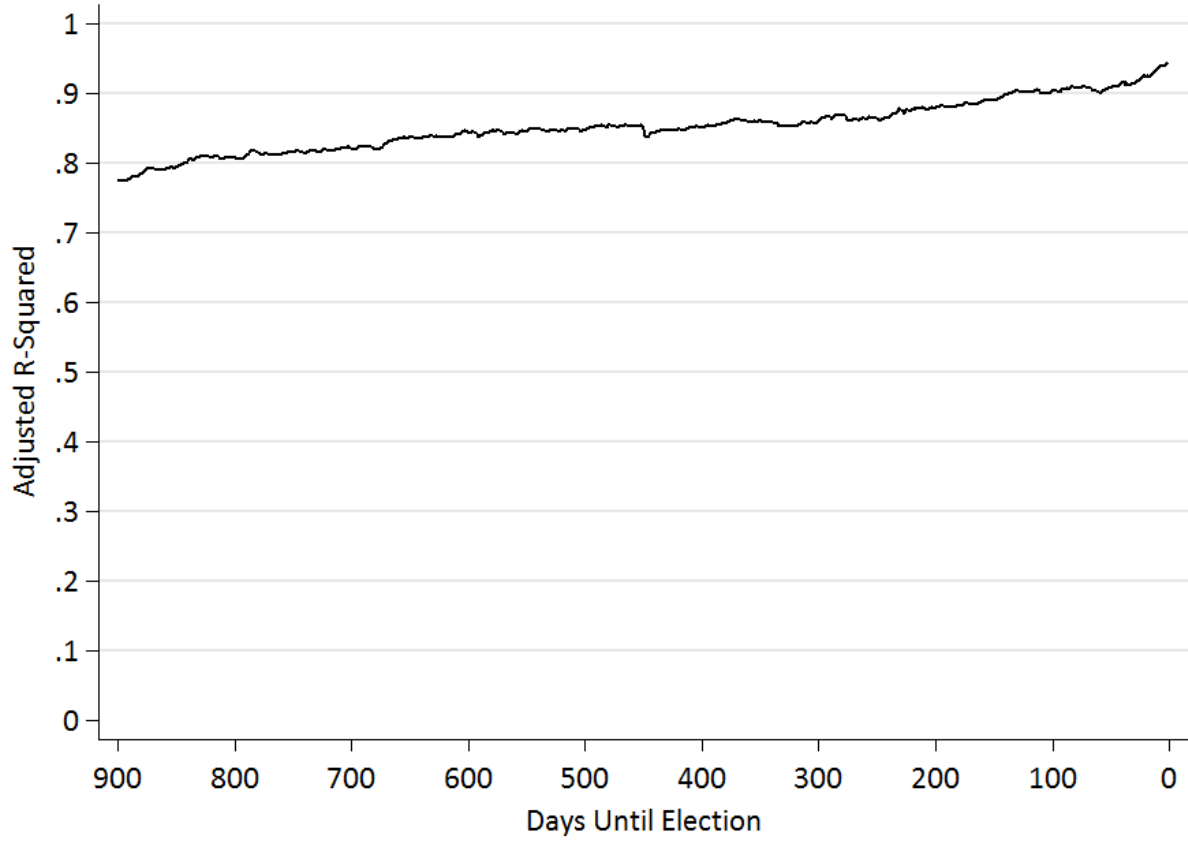


Figure 5. Adjusted *R*-Squareds for the Last 350 Days of the Election Cycle—
Pooling all Elections

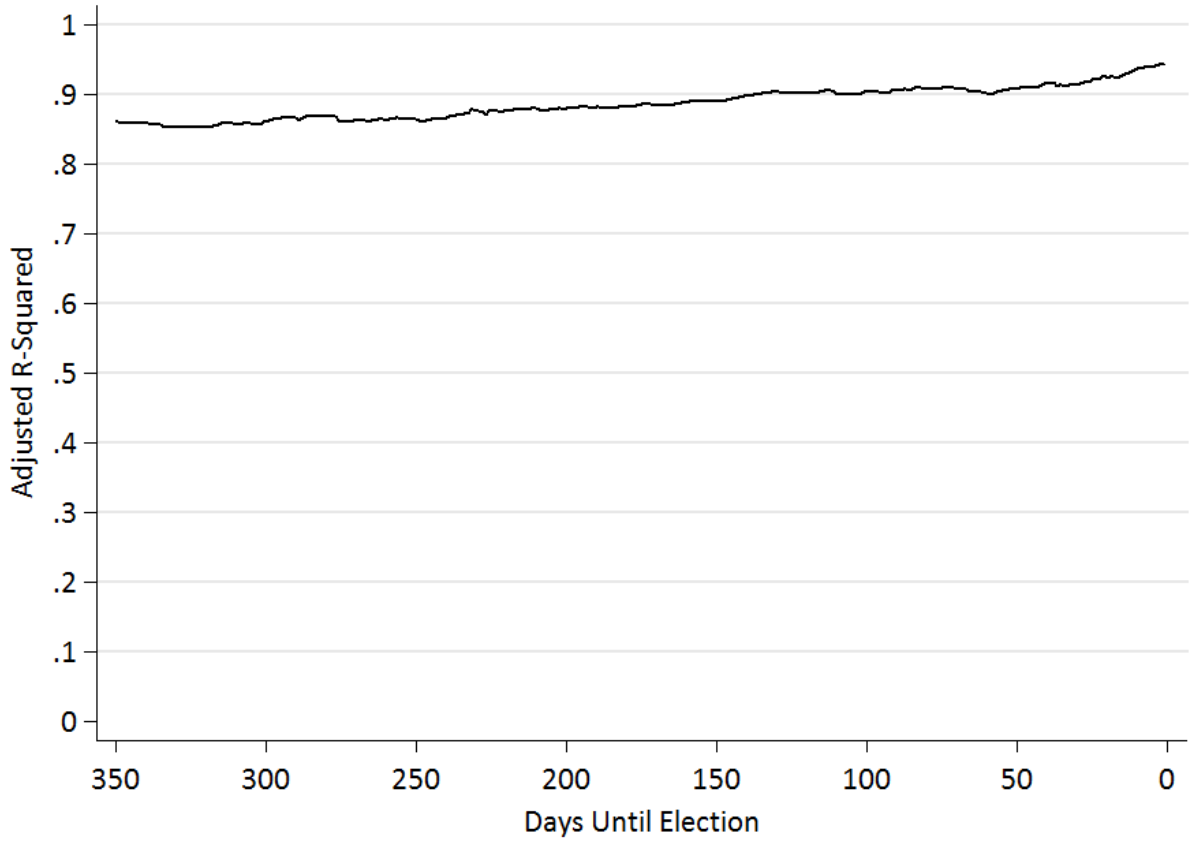


Figure 6. Regression Coefficient Predicting the Party Vote Share from the Party Poll Share for the Last 350 Days of the Election Cycle—Pooling all Elections

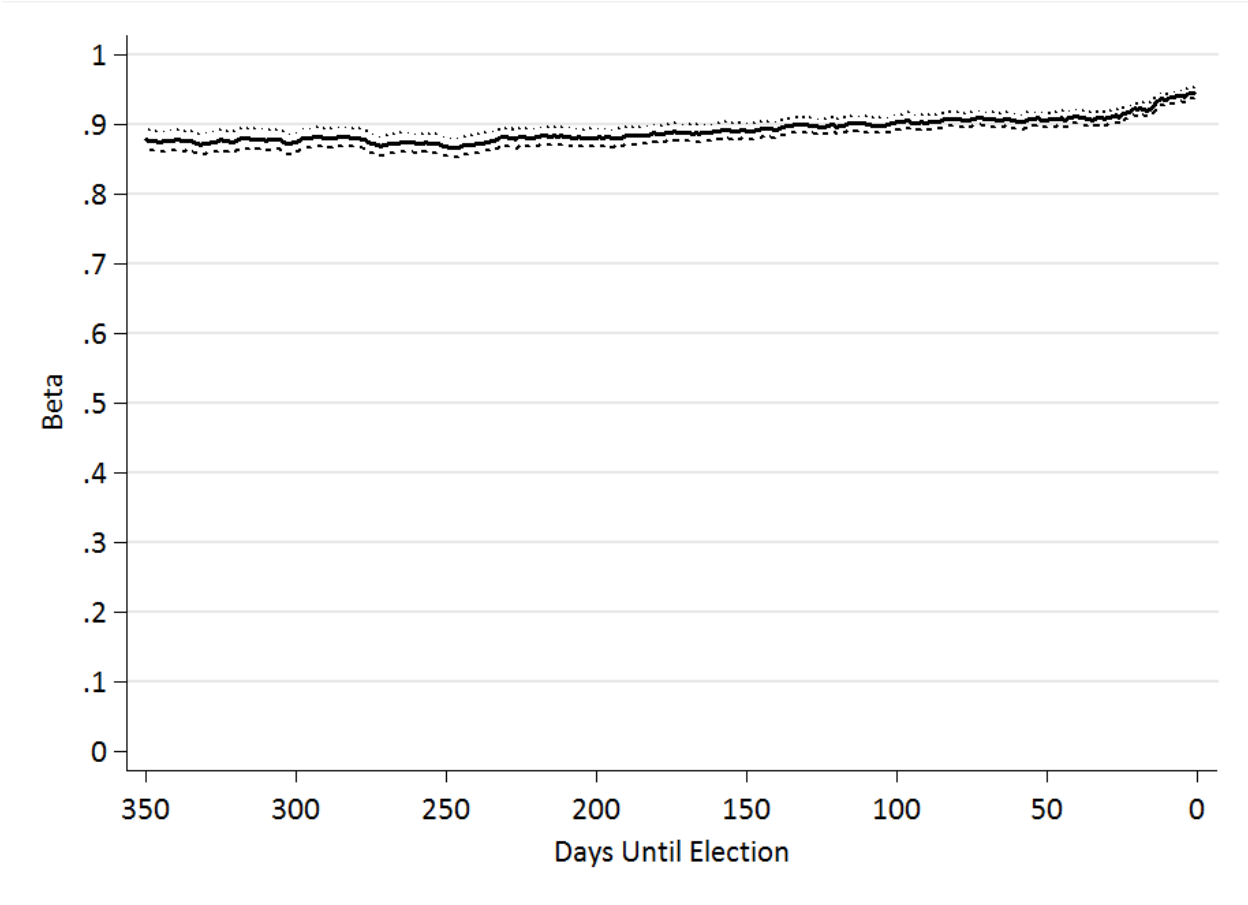


Figure 7. Adjusted *R*-Squareds for Presidential and Parliamentary Elections Taken Separately

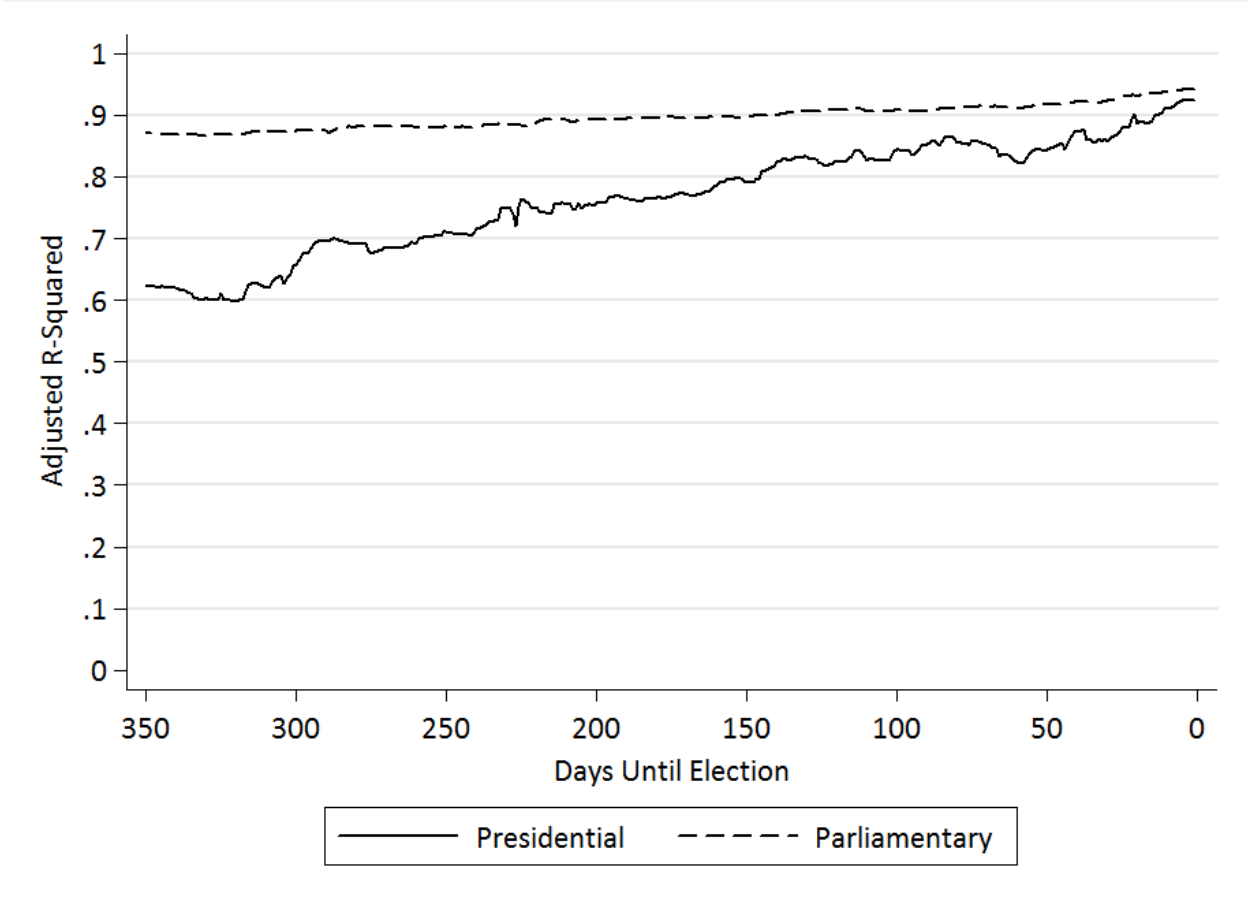


Figure 8. Adjusted *R*-Squareds for Legislative Elections in Presidential and Parliamentary Systems

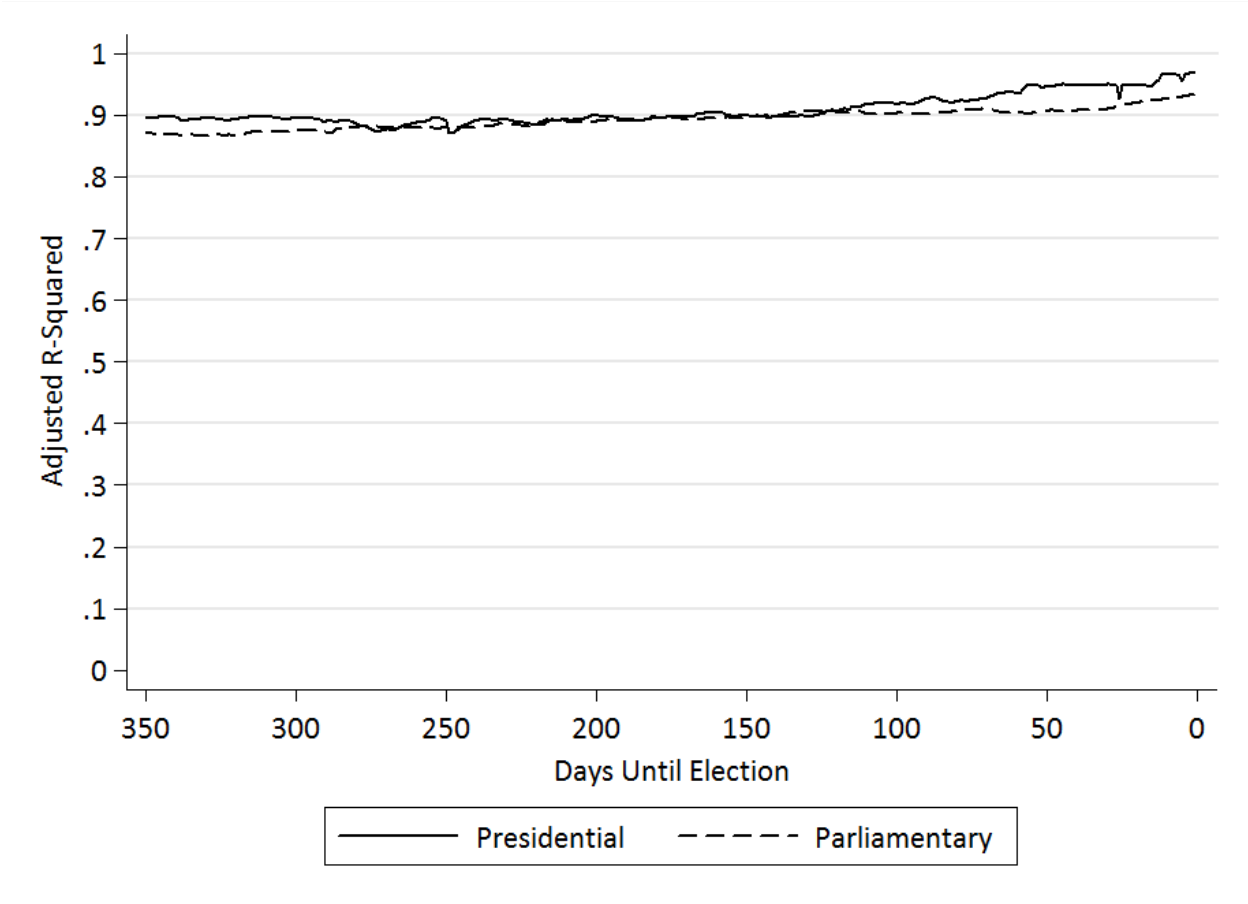


Figure 9. Adjusted *R*-Squareds for Legislative Elections in Proportional and Plurality Systems

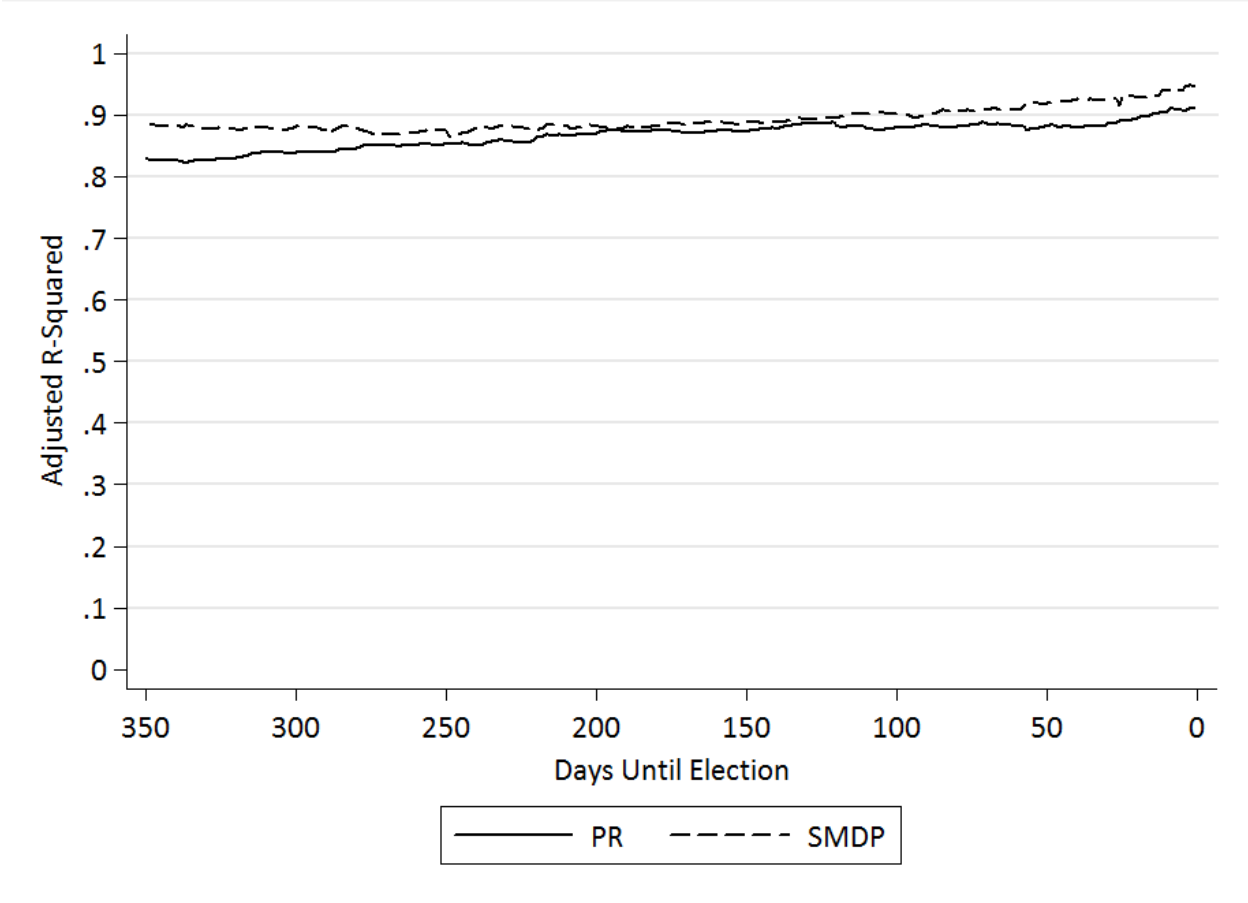
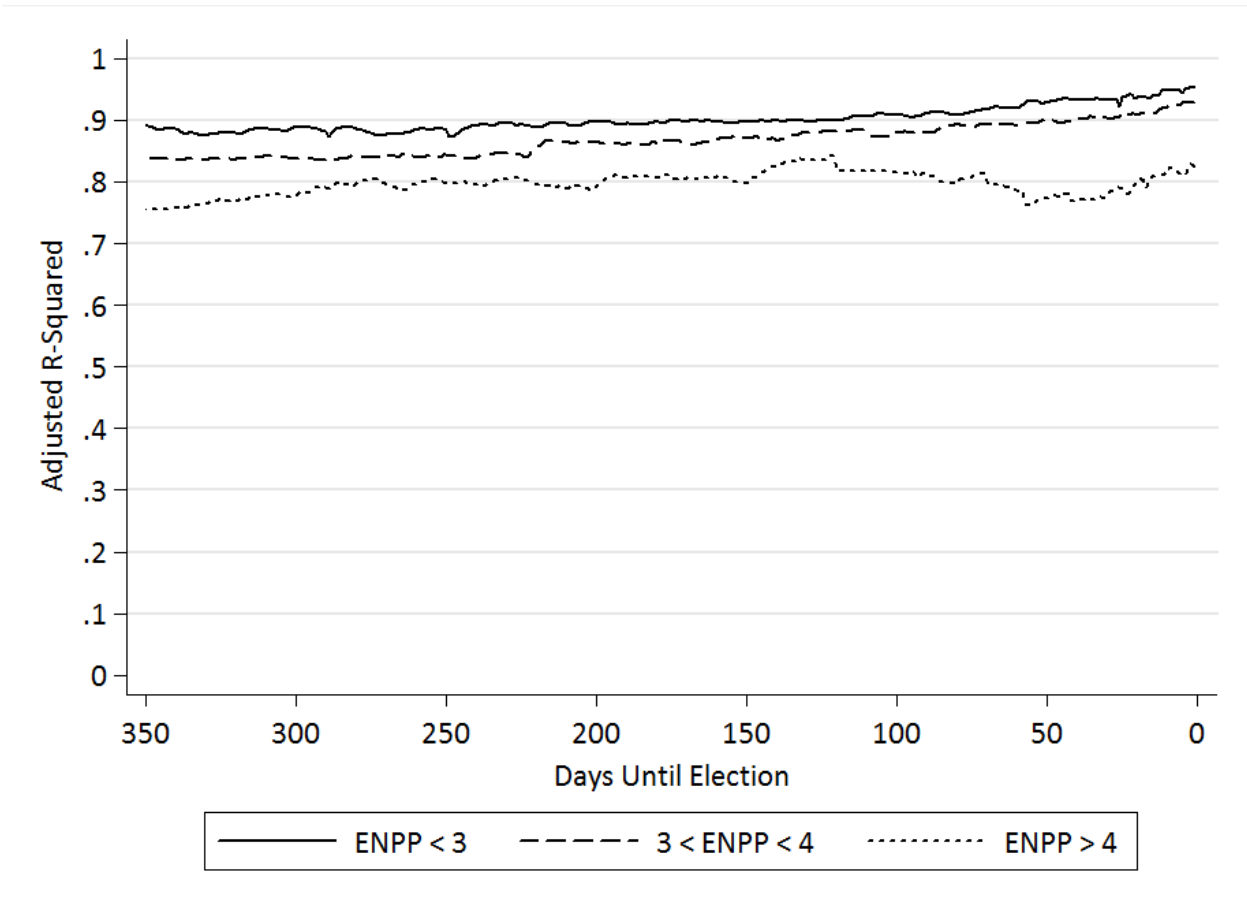


Figure 10. Adjusted *R*-Squareds across the Effective Number of Political Parties



APPENDIX A

Sources of Poll Data

In this appendix we summarize details of some of the poll data collected for this project. More than 24,000 polls were compiled from a large number of sources, with additional cross-checks and triangulation conducted in the case of inconsistencies or missing data.²¹ Further details regarding the data are reported below. Wherever possible, polls obtained from secondary poll aggregators were cross-checked and triangulated against other available sources, including the original cross-tabs or media reports. Our largest country datasets were either collected from archival survey repositories. These included the Roper Center for Public Opinion Research's *iPoll* databank, the Norwegian Social Science Data Archive, the Australian Social Science Data Archive, the Netherlands' Data Archiving and Networked Services, Canadian Opinion Research Archive, and the GESIS/Leibniz Institute for the Social Sciences), or were kindly shared with us by other scholars or pollsters. The sources of poll data for our largest poll collections are listed below.

United States: presidential trial-heat polls are from Erikson and Wlezien (2012). Congressional poll data consist of 1,997 polls from Bafumi et al. (2010), further supplemented with data from the Roper Center for Public Opinion Research's *iPoll* databank.

United Kingdom: dataset of national surveys where respondents were asked about which party they would vote "if the election were held tomorrow" from Wlezien et al. (2012), including data from Michael Thrasher, Mark Pack, Ipsos-MORI, YouGov, ICM Research Ltd, Gallup Political and Economic Index.

Portugal: poll data kindly provided by Francisco José Veiga (see Veiga and Veiga 2004).

Australia: historical data from the Australian Social Science Data Archive; additional data from Newspoll (www.newspoll.com.au) and Roy Morgan Research (<http://www.roymorgan.com/>).

²¹ We are grateful for the painstaking work of a team of research assistants in compiling and checking the poll data: Krytyna Litton, Darren Miller, Tom Loughran, and Palmira Paya.

Ireland: poll data via Michael Marsh's Irish Opinion Poll Archive.

(http://www.tcd.ie/Political_Science/IOPA/)

Germany: Forschungsgruppe Wahlen "Politbarometer" data from GESIS/Leibniz Institute for the Social Sciences; additional poll data from the *Wahlrecht.de* website (<http://www.wahlrecht.de/>).

Netherlands: the dataset "NIPO weeksurveys 1962-2000: NIWI/Steinmetz Archive study number P1654" from Data Archiving and Networked Services (DANS).

Sweden: all companies' poll data from Johanna Laurin Gulled, Ipsos Public Affairs.

Italy: all companies' poll data from Chris Hanretty.

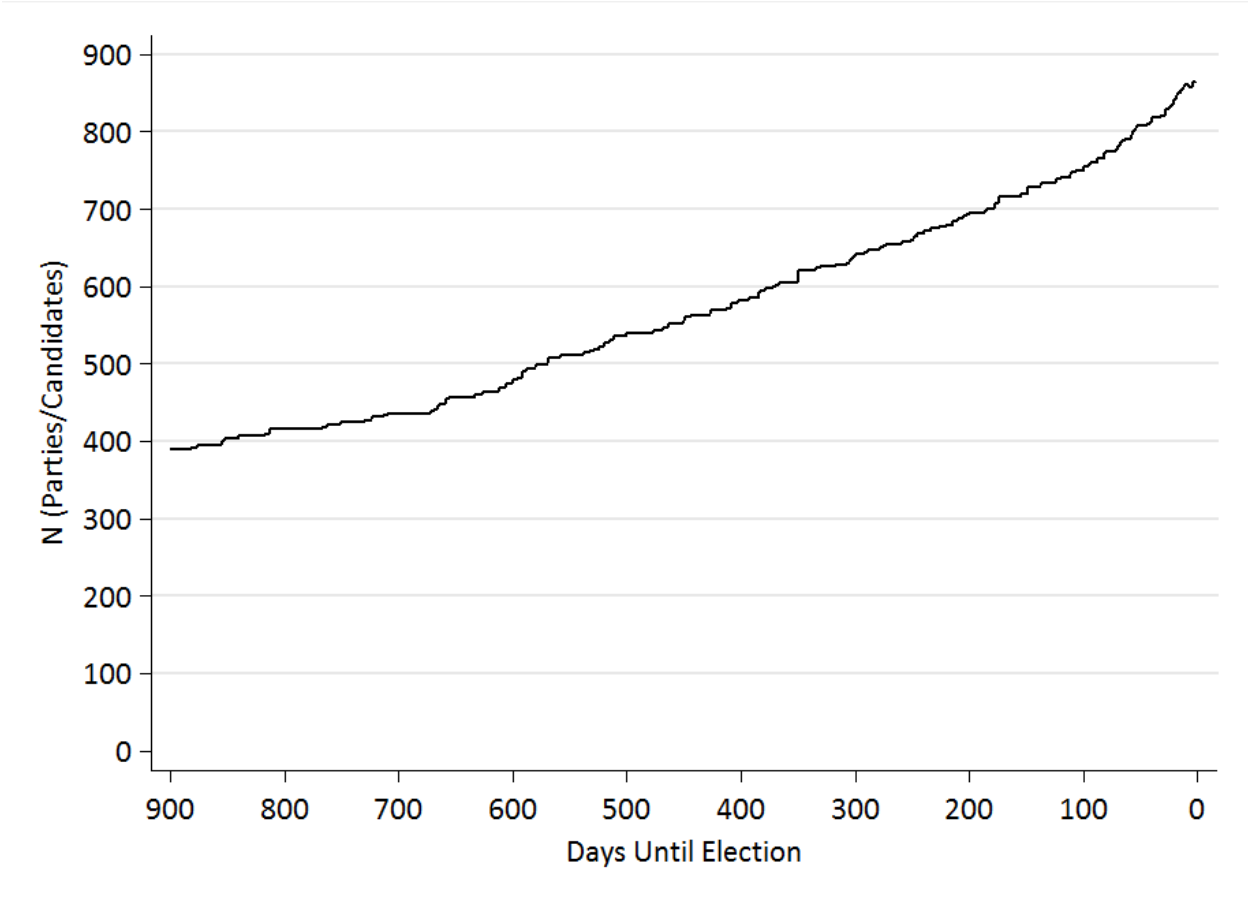
Norway: the following datasets from Norwegian Social Science Data Services -- "Respons Analyse AS, 2005-2012" (MMA0067), "ACNielsen, 1987-1994" (MMA0455), "Opinion, 1988-2003" (MMA0585), "Synovate (MMI), 1987-1998" (MMA0802), "TNS Gallup AS, 1964-2010" (MMA0952), "Opinion, 2007-2010" (MMA1119).

Canada: monthly Gallup reports (1942-2000); data via the Canadian Opinion Research Archive.

France: historical poll data from the publication Gallup Organization (1976) *The Gallup International Public Opinion Polls: France, 1939, 1944-1975*; contemporary poll data from TNS-Sofres (<http://www.tns-sofres.com>) and from other sources.

Spain: data from El Centro de Investigaciones Sociológicas (CIS) (<http://www.cis.es/>) and other sources.

Figure A1. Number of Parties & Candidates for which there are Poll Data, by Date of the Election Cycle



APPENDIX B

General Resources of Election Data

The European Election Database of the Norwegian Social Science Data Services (NSD)

http://www.nsd.uib.no/european_election_database/

ElectionGuide, International Foundation for Electoral Systems

<http://www.electionguide.org/>

Political Database of the Americas: Electoral Systems and Data

<http://pdba.georgetown.edu/elecdata/arg/arg.html>

Election Resources

<http://electionresources.org/>

Nohlen, Dieter, and Philip Stöver. 2010 *Elections in Europe: A data handbook*. Baden-Baden: Nomos Verlagsgesellschaft.

Country-Specific Resources of Election Data

Australian Politics and Elections Database at the University of Western Australia,

<http://elections.uwa.edu.au/>

Bundesministerium für Inneres, Austria,

http://www.bmi.gv.at/cms/BMI_wahlen/nationalrat/start.aspx

Federal Elections in Brazil, Brazil

http://electionresources.org/br/index_en.html

Bularian Parliament, Bulgaria

<http://www.parliament.bg/bg/electionassembly>

Elections Canada, Canada

<http://www.elections.ca/home.aspx>

Parliament of Canada, Canada

<http://www.parl.gc.ca/parlinfo/compilations/electionsandridings/ResultsParty.aspx>

Ministerio del Interior, Republica de Chile

<http://historico.servei.cl/>

Ministry of Interior, Cyprus

<http://www.ekloges.gov.cy/>

Consejo Nacional Electoral (National Electoral Council), Republic of Ecuador

<http://resultados.cne.gob.ec/>

Ministry of Justice, Finland

<http://www.vaalit.fi/>

Ministry of Interior, France

<http://www.interieur.gouv.fr/Elections/Les-resultats>

Der Bundeswahlleiter (the Federal Returning Officer), Germany

<http://www.bundeswahlleiter.de/en/index.html>

Ministry of the Interior, Greece

<http://ekloges.ypes.gr/>

Statistics Iceland

<http://www.statice.is/Statistics/Elections/>

Ministry of the Interior, Italy

<http://elezioni.interno.it/>

Ministry of Internal Affairs and Communications, Japan

http://www.soumu.go.jp/senkyo/senkyo_s/data/shugiin44/index.html

Government of Malta

<http://www.gov.mt/en/Government/Government%20of%20Malta/Election%20Results/Pages/Elections-DOI-site.aspx>

Instituto Federal Electoral, Mexico

<http://www.ife.org.mx/portal/site/ifev2>

Statistics Norway, Norway

http://www.ssb.no/a/english/kortnavn/stortingsvalg_en/tab-2009-10-15-02-en.html

Electoral Commission, New Zealand

<http://www.electionresults.govt.nz/>

National Office of Electoral Processes, Peru

<http://www.onpe.gob.pe/inicio.php>

Commission on Elections, Republic of the Philippines

<http://www.comelec.gov.ph/>

Comissão Nacional de Eleições, Portugal

http://eleicoes.cne.pt/sel_eleicoes.cfm?m=raster

Ministry of the Interior, Spain

<http://www.infoelectoral.mir.es/min/>

Election Authority, Sweden

http://www.val.se/in_english/previous_elections/index.html

Federal Office of Statistics, Switzerland

<http://www.bfs.admin.ch/>

National Electoral Council, Venezuela

http://www.cne.gob.ve/web/estadisticas/index_resultados_elecciones.php

Rallings, C. and Thrasher, M. (2007) *British Electoral Facts, 1832–2006, seventh edition*. Aldershot: Ashgate.

Rallings, C. and Thrasher, M. (2010) *Election 2010: The Official Results*. London: Biteback publishing.

APPENDIX C

Figure C1. Adjusted R -Squared Predicting the Party Vote Share from the Poll Share, By Date of the Election Cycle—Excluding Parties that Receive less than 20% of the Vote

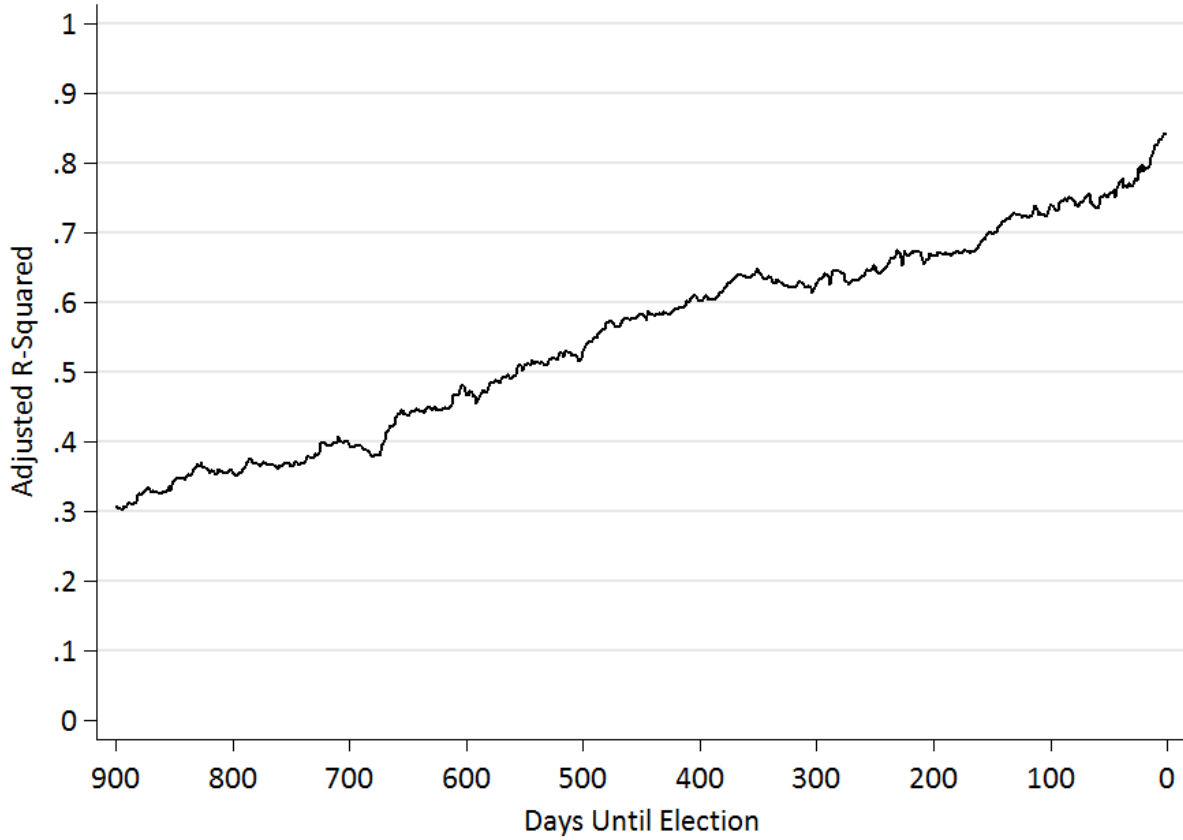


Figure C2. Adjusted *R*-Squared for Legislative Elections in Proportional and Plurality Systems, By Date of the Election Cycle—Excluding Parties that Receive less than 20% of the Vote

