

Presidential coattails: A closer look

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Abstract

This article takes a closer look at how presidential elections affect the fragmentation of the legislative party system. It reviews the theory and conventional empirical modelling strategy; identifies some drawbacks to this strategy and suggests solutions; and then conducts an empirical investigation of the implications of this critique by combining replication data from Golder (2006) with new data on the key variables measuring the presidential coattails. Fortuitously, the literature's findings about the shadow cast by presidential elections, usually known as the presidential coattails, are relatively robust. However, important differences emerge on the margins, such as regarding the effect of midterm elections. Moreover, this article demonstrates that subsequent presidential elections, like concurrent and preceding ones, cast shadows, too. It also demonstrates that the conventional modelling strategy underestimates the presidential coattails.

Keywords

Elections, global, governmental structure–presidential, measurement, party fragmentation

Introduction

The electoral system is not the only political institution that shapes the party system in legislative elections: the system of government, otherwise known as the regime type, also plays an important role. Particularly, many scholars have asked how presidentialism affects the fragmentation (size) of the legislative party system (e.g. Amorim Neto and Cox, 1997; Clark and Golder, 2006; Cox, 1997; Golder, 2006; Hicken, 2009; Hicken and Stoll, 2011, 2013; Jones, 1994, 1999; Mozaffar et al., 2003; Samuels, 2002, 2003; Shugart, 1995; Shugart and Carey, 1992).

Early scholarly work compared presidential and parliamentary regimes, finding that presidential regimes had smaller, less fragmented party systems (e.g. Lijphart, 1994). Most recent studies have taken a more nuanced approach (e.g. Amorim Neto and Cox, 1997; Cox, 1997; Golder, 2006; Hicken and Stoll, 2011, 2013). The effect of presidentialism, which has been called the presidential coattails, has been found to depend upon two variables: the presidential party system and the electoral cycle, i.e. the temporal proximity of presidential and legislative elections. Specifically, scholars have found that presidential elections held in temporal proximity to legislative elections reduce the fragmentation of the legislative party system when there are few presidential candidates (the deflationary effect), but increase it when there are many presidential candidates (the inflationary effect).

Yet the quantitative empirical evidence regarding the presidential coattails relies on some potentially problematic modelling choices, as Hicken and Stoll (2011, 2013) have pointed out in their recent work. For one, many studies treat all legislative and presidential elections held in the same year as concurrent. This fails to distinguish between truly simultaneous elections and those separated by anywhere from a few weeks to almost twelve months. For another, legislative elections in presidential regimes held at the presidential midterm are equated with legislative elections in pure parliamentary regimes. But surely actors face different incentive structures in these very different institutional settings. Last but not least, if presidential elections are not held concurrently with legislative elections, only presidential elections held prior to legislative elections are allowed to have coattails. This ignores the possibility that presidential elections held subsequent to legislative elections might have coattails, too. What are the implications of these modelling choices for the empirical findings about the presidential coattails?

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In this article, I attempt to answer this question. I first review the conventional modelling approach of the quantitative empirical literature. I then discuss the problematic aspects of this approach. For each of the three major problems identified, I then propose solutions. Finally, I undertake a sensitivity analysis using Golder's (2006) replication dataset, combined with original data on the independent variables that model the presidential coattails. Fortuitously, I find that the literature's overall conclusions about the coattails of presidential elections are robust to alternative modelling choices. The primary area in which sensitivity is found concerns the coattails effect when legislative elections are held at the presidential midterm. Moreover, I find that the conventional modelling strategy underestimates the presidential coattails. For example, presidential elections held subsequent to legislative elections in fact have larger coattails than preceding presidential elections do.

Modelling presidential coattails

Political scientists and constitutional engineers have long believed that elections for popularly elected national presidents cast a shadow over legislative elections. This shadow or 'coattails' takes the form of fewer legislative parties when there are few viable presidential candidates, and more legislative parties when there are many viable presidential candidates. Moreover, the more temporally proximate presidential elections are to a legislative election, the greater the coattails will be (e.g. Cox, 1997; Shugart, 1995). Given this hypothesis, the quantitative literature has empirically modelled the presidential coattails as an interaction between two variables: the fragmentation of the presidential party system and the temporal proximity of presidential and legislative elections. Below, I review each component of this approach.

Measuring presidential party system fragmentation

Following Amorim Neto and Cox (1997) and Cox (1997), scholars empirically exploring the presidential coattails have focused on the fragmentation of the national presidential race. This abstract concept has conventionally been operationalized as the effective number of (electoral) presidential candidates (Laakso and Taagepera, 1979): $\frac{1}{\sum_{i=1}^n v_i^2}$, where v_i is each presidential candidate's vote-share. Larger values of this measure indicate a larger number of presidential candidates, as weighed by their vote-shares. This still leaves the question of *which* presidential elections might have coattails, however. The conventional answer to this question is the presidential election held at the same time as (i.e. concurrently with) the legislative election, if there is one, or the most recent presidential election held prior to the legislative election, if there is not. For legislative

elections in non-presidential regimes, this variable takes the value of zero.

Measuring temporal proximity

The temporal proximity of presidential and legislative elections has been conceptualized as a continuum ranging from minimally to maximally proximate.¹ As alluded to above, the maximally proximate presidential election is one that is held concurrently with a legislative election. By way of contrast, when a legislative election is held at the presidential midterm, the presidential election is minimally proximate. Henceforth, the latter will be referred to as a midterm election. The most common way of operationalizing proximity was originally proposed by Amorim Neto and Cox (1997): $2 \left| \frac{L_t - P_{t-1}}{P_{t+1} - P_{t-1}} - \frac{1}{2} \right|$, where L_t is the date of the legislative election; P_{t-1} is the date of the previous presidential election; and P_{t+1} is the date of the subsequent presidential election. This measure ranges from zero, which indicates that the presidential election is minimally proximate (i.e. the legislative election is a midterm election), to 1, which indicates that the presidential election is maximally proximate (i.e. a concurrent election). As before, legislative elections in non-presidential regimes take the value zero.

The empirical model

The hypothesis is that the presidential coattails are an interactive function of the temporal proximity of presidential elections, on the one hand, and the fragmentation of the presidential party system, on the other. Accordingly, scholars have estimated the following interaction model (see, for example, Golder, 2006):²

$$\begin{aligned} ENEP_i = & \beta_0 + \beta_1 Proximity_i + \beta_2 ENPRES_i \\ & + \beta_3 Proximity \times ENPRES_i + \beta_4 Ethnic_i \\ & + \beta_5 LogMagnitude_i \\ & + \beta_6 Ethnic \times LogMagnitude_i + \varepsilon_i \end{aligned} \quad (1)$$

In this equation, the dependent variable, 'ENEP', is the effective number of electoral parties in a legislative election. It is calculated in a similar manner to the effective number of presidential candidates, where the presidential candidates' vote-shares are replaced by the legislative parties' vote-shares. Of the independent variables, 'Proximity' is the temporal proximity of the presidential election, calculated as described above; 'ENPRES' is the effective number of presidential candidates, also calculated as described above; 'Ethnic' is the effective number of ethnic groups; and 'Log Magnitude' is the logged average district magnitude. Hence, this model also controls for an interaction between the ethnic heterogeneity of the country and the restrictiveness of its legislative electoral system.

Drawbacks and solutions

But are there drawbacks to this modelling strategy? In this section, I argue that there are. My first task is to identify these drawbacks. My second is to suggest solutions.

Calculating proximity with years as the unit

One criticism of the operationalization of temporal proximity developed by Amorim Neto and Cox (1997) is that it may result in legislative and presidential elections that are held in the same year, but not on the same day, being treated as concurrent. This is a function of which units are used in the formula: days (i.e. actual election dates) or years. Amorim Neto and Cox seem to use days.³ However, Golder (2006) explicitly uses years, and subsequent studies have followed suit (e.g. Hicken and Stoll, 2011).

This seemingly subtle matter has important substantive implications. When using days as the unit, only presidential and legislative elections held on exactly the same day are classified as concurrent. However, when years serve as the unit, all presidential and legislative elections held in the same calendar year are classified as concurrent. For example, this approach treats a presidential election in January as being held concurrently with a legislative election in December of the same year. But in actuality, eleven months, almost an entire year, separate these two elections. Is it really plausible to think that this presidential election's coattails are the same as the coattails of a presidential election held on the same day as the legislative election, *ceteris paribus*? By using years as the unit, this is what is assumed. This measurement strategy accordingly overestimates the temporal proximity of presidential elections held in the same year as, but not on the same day as, a legislative election. The observed effect of the presidential coattails is likely to be attenuated as a result. Note that this is not simply a technical concern: there are many real world examples of such presidential and legislative elections.⁴ More generally, information is lost by ignoring when elections occur within a given calendar year.

To avoid these problems, there is an obvious solution: use days (i.e. actual election dates) instead of years as the unit in the Amorim Neto and Cox (1997) formula for temporal proximity.

Equating midterm elections with elections in pure parliamentary regimes

Another criticism of the standard operationalization of temporal proximity concerns the treatment of midterm elections. One might argue that these elections are equated with legislative elections held in pure parliamentary regimes, i.e. regimes where there is not a popularly elected president, because both types of elections receive a value of zero on the temporal proximity variable.

Certainly, it seems plausible to object to this assumed equality.⁵ Presidential elections might still shape legislative electoral coordination when legislative elections are held at the presidential midterm. Golder (2006: 36) explicitly hypothesizes that this might be the case by distinguishing between what he calls the 'short' and the 'long' presidential coattails. The short coattails hypothesis, which has attracted the most attention, holds that only temporally proximate presidential elections shape legislative electoral coordination. The long coattails hypothesis, by way of contrast, holds that even non-temporally proximate presidential elections (i.e. when a legislative election is midterm) shape legislative electoral coordination. Hicken and Stoll (2010) more specifically hypothesize that there should be less electoral coordination in legislative elections when the regime is presidential *and* presidential elections are not temporally proximate enough to cast a shadow: the existence of the popularly elected president decreases the size of the legislative prize, which in turn decreases the incentives for strategic coordination in legislative elections.

One seemingly obvious solution to this problem is to exclude elections in pure parliamentary regimes from the analysis (e.g. Hicken and Stoll, 2011).⁶ However, if the core research question is the difference between parliamentary and presidential regimes, which it has been for most scholars, this is actually a non-solution for the reasons laid out by Hicken and Stoll (2013).⁷ To borrow the language of experimental designs, the experimental 'treatment' is the existence of presidential elections (simplifying for the sake of argument). Legislative elections in pure parliamentary regimes therefore serve as the control group to which the treatment group, legislative elections in presidential regimes, is compared—which means that pure parliamentary regimes must be included in the analysis.

A better solution is to fully exploit the interaction model. While it may seem that the testing of hypotheses about the long presidential coattails is precluded by the conventional operationalization of temporal proximity, this is actually not the case. In Equation 1, β_2 represents the estimated effect of the effective number of presidential candidates when temporal proximity is equal to zero. Given the variable operationalizations described above, there is one way in which temporal proximity can be equal to zero when the effective number of presidential candidates is non-zero: if the legislative election is a midterm election. The empirical support for the 'long coattails' hypothesis is accordingly given by the substantive and statistical significance of this coefficient. Both Golder's (2006) and Hicken and Stoll's (2010) hypothesis is that it will be positively signed. Conversely, the marginal effect of temporally proximate presidential elections, the partial derivative of Equation 1 with respect to temporal proximity, allows for the testing of the 'short coattails' hypothesis (Golder 2006: 38).⁸ This marginal effect is hypothesized to be negatively signed if there are few presidential candidates and positively signed

if there are many. Hence, one ‘solution’ to this problem is simply to test for the significance of the marginal effect of temporal proximity (the short coattails) *as well as* for the significance of the coefficient on the effective number of presidential candidates (the long coattails).

Another solution is to increment the value of temporal proximity calculated using the Amorim Neto and Cox (1997) formula. For example, consider adding 1. For legislative elections in presidential regimes, proximity will then range between 1 (midterm elections) and 2 (concurrent elections) instead of between zero and 1. By continuing to code legislative elections in pure parliamentary regimes as zero, a clear distinction is made between the two types of elections. The drawback to this approach, though, is the strong assumption it makes regarding the difference between parliamentary regimes and midterm elections.

Only allowing concurrent or preceding presidential elections to cast a shadow

Last but not least, there is the issue of *which* presidential election should be able to cast a shadow over a legislative election. This issue has obvious implications for the measurement of both key independent variables: it determines for which presidential race the effective number of presidential candidates is calculated and which dates are used to calculate the temporal proximity.

If a presidential election is held concurrently with a legislative election, it is the natural candidate to have coattails. But if there is not a concurrent presidential election, why are preceding and not subsequent presidential elections allowed to have coattails? One good argument for only allowing preceding presidential elections to cast a shadow is to ensure that the arrow of causality runs from the presidential to the legislative election. This is the likely reason for the focus on preceding presidential elections to date.⁹ Yet the same endogeneity issue plagues concurrent elections, if less severely. For both concurrent and subsequent presidential elections, it is the prominence of the presidential race that leads it to cast a shadow over the legislative race, instead of the other way round. With the presidency ‘nearly always the most important prize in a presidential regime’ (Golder, 2006: 35), the presidential campaign draws attention from the national media, legislative candidates, other political elites, and – of course – voters.¹⁰ In the same way that voters use a preceding presidential campaign as an information shortcut to guide their choice of legislative candidates, the anticipation of which leads legislative candidates to engage in strategic entry and exit, so too may actors behave strategically in response to a presidential campaign that is ongoing at the time of a legislative election.¹¹ This is particularly likely when, as is usually the case, the subsequent presidential election follows closely on the heels of the legislative election.

Many examples can be provided that bolster the case for allowing subsequent presidential elections to have coattails. Consider, for one, the March 2002 Colombian legislative election, calculating proximity using days instead of years. In May of that same year, i.e. three months later, a presidential election was held. The closest preceding presidential election, however, was in June of 1998 – almost four years earlier. Here, the subsequent presidential election seems more likely to have coattails than the preceding one.¹² Now consider the October 1995 legislative election in Portugal. The closest preceding presidential election was in January 1991, whereas the closest subsequent presidential election was in January 1996. Which of these presidential elections is more likely to cast a shadow over the legislative race – the one almost five years earlier, or the upcoming (three months hence) one, for which campaigning should already have been well underway? The answer seems clear, yet regardless of whether days or years are used to calculate proximity in this case, the conventional approach would consider only the 1991 presidential election to have coattails in the 1995 legislative election.

Accordingly, I hypothesize that presidential elections held subsequent and prior to a legislative election should have similar coattails, *ceteris paribus*, with one caveat discussed below. In fact, all else being equal, if a subsequent presidential election is more temporally proximate to a legislative election than a preceding presidential election is, it is the more likely one to have coattails. This suggests that if there is not a concurrent presidential election, it is the temporally closest preceding or subsequent presidential election that should be allowed to have coattails.¹³ The caveat to this hypothesis, though, is that the preceding presidential election should be privileged. This means two things: first, if the legislative election is a midterm election, it is the preceding presidential election that should cast a shadow; second, if the subsequent presidential election is more than two years from the legislative election, even if it is temporally closest to the legislative election, it is again the preceding election that should cast a shadow. Behind this caveat are the endogeneity issues discussed above, as well as the empirical reality that presidential campaigns usually do not begin more than two years in advance of a presidential election. Like measuring proximity in years instead of in days, ignoring more temporally proximate subsequent presidential elections in favour of less temporally proximate preceding presidential elections is likely to underestimate the shadow cast by presidential elections.

Empirically testing this hypothesis requires only straightforward modifications to existing variable operationalizations. To calculate the temporal proximity between a legislative election and subsequent presidential election, the numerator in the Amorim Neto and Cox (1997) formula is replaced with $P_{t+1} - L_t$. The effective number of presidential candidates is then simply calculated for the subsequent presidential election.¹⁴

Table 1. Coefficient estimates and robust (country-clustered) standard errors in parentheses for Models 1—7, replications of Golder's (2006) model of presidential coattails using new measures of temporal proximity and the effective number of presidential candidates (ENPRES). The dependent variable is the effective number of electoral parties in a legislative election. Significance codes are for two-sided tests, all calculated prior to rounding to two significant digits: 0.01***, 0.05**, 0.10*.

Model	1	2	3	4	5	6	7
Measure of proximity	Original	Days	Days, proximity incremented	Days, temporally closest	Days, proximity incremented, temporally closest	Days, preceding only	Days, subsequent only
Measure of ENPRES	Original	Original	Original	Temporally closest	Temporally closest	Preceding only	Subsequent only
Proximity	-3.4*** (0.57)	-3.6*** (0.59)	-1.6*** (0.33)	-3.6*** (0.58)	-1.7*** (0.34)	-3.5*** (1.2)	-4.2*** (1.5)
ENPRES	0.33* (0.17)	0.32* (0.18)	0.48* (0.29)	0.32* (0.18)	0.46 (0.30)	0.18 (0.18)	0.64** (0.26)
Proximity × ENPRES	0.81*** (0.24)	0.88*** (0.25)	0.31* (0.17)	0.90*** (0.25)	0.33* (0.17)	1.0** (0.45)	0.71 (0.67)
Ethnic groups	0.13 (0.12)	0.13 (0.12)	0.12 (0.12)	0.13 (0.12)	0.12 (0.12)	0.11 (0.14)	0.13 (0.14)
Log magnitude	0.44** (0.19)	0.44** (0.20)	0.43** (0.19)	0.45** (0.19)	0.43** (0.19)	0.46** (0.21)	0.39* (0.22)
Ethnic groups × Log magnitude	0.0035 (0.10)	0.0059 (0.11)	0.0067 (0.11)	0.0013 (0.10)	0.00028 (0.10)	-0.0031 (0.12)	0.015 (0.13)
Constant	3.1*** (0.33)	3.1*** (0.33)	3.2*** (0.33)	3.1*** (0.33)	3.2*** (0.33)	3.1*** (0.35)	3.2*** (0.36)
R ²	0.24	0.25	0.26	0.25	0.26	0.18	0.20
Root MSE	1.7	1.7	1.7	1.7	1.7	1.6	1.6
N	603	603	603	603	603	433	416

Results from a sensitivity analysis: How robust are the findings about the coattails of presidential elections?

So are the literature's findings about the presidential coattails sensitive to these different ways of modelling them? In this section of the article, I explore the issue, providing the most rigorous empirical estimates of the presidential coattails to date.

To do so, I conduct an empirical analysis using Golder's (2006) replication dataset.¹⁵ The cases are all minimally democratic legislative elections from 1946 through 2000, a total of 603 elections in 84 countries, such as Albania and the United States.¹⁶ Data are taken directly from Golder for the dependent variable (the effective number of electoral parties in a legislative election) and the control variables (the effective number of ethnic groups and the logged average lower tier district magnitude). For all legislative elections in presidential regimes, which are those that possess a popularly elected chief executive (president),¹⁷ I compile original data for the key independent variables measuring the presidential coattails (the temporal proximity and the effective number of presidential candidates), given the obvious need to go beyond the conventional measures of these variables appearing in Golder's replication dataset. This is done by drawing upon a variety of secondary (e.g.

Golder, 2005) and primary sources. These new measures are discussed in more detail below.

To assess the presidential coattails, I then use these data to estimate Equation 1. Estimation is by OLS with robust (country-clustered) standard errors. Table 1 presents the results from the seven versions of this model estimated, each of which varies the modelling of the presidential coattails in some way.

The first of these models (Model 1) is a strict replication of Golder (2006: 39). This model is estimated to show that the same conclusions are drawn using my original data. The variables of temporal proximity and the effective number of presidential candidates are calculated as Golder calculated them, as is standard, with only one minor a priori departure: an adjustment for interruptions in the normal presidential electoral cycle.¹⁸ Accordingly, only the data effectively differ. In other words, in Model 1, it is the concurrent (if there is one) or preceding (if there is not) presidential election that is allowed to cast a shadow, and temporal proximity is calculated using the Amorim Neto and Cox (1997) formula with years as the unit of analysis. Table 1 shows that the results are very similar to Golder's (2006: 39) pooled analysis of his entire sample.

The second of these models (Model 2) employs a different operationalization of temporal proximity. In this model, days (i.e. actual election dates) serve as the unit for

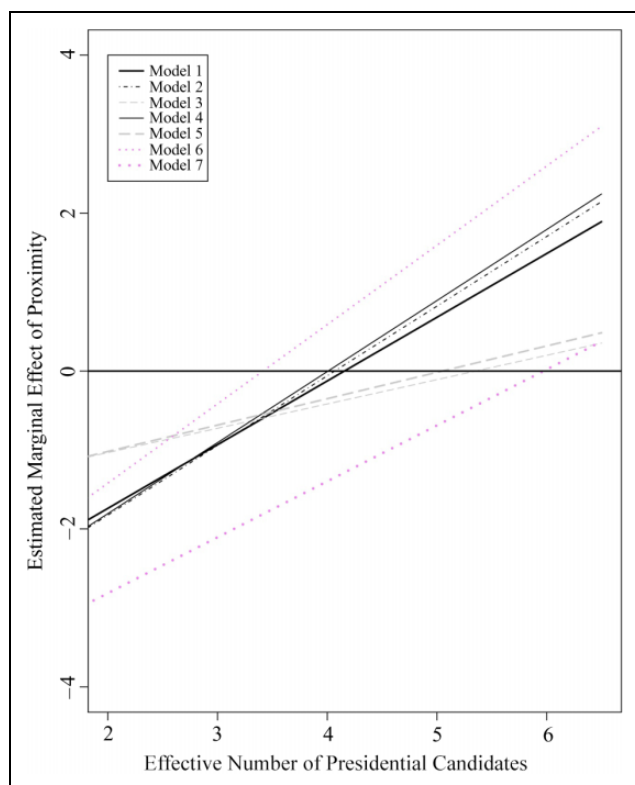


Figure 1. The estimated marginal effect of proximity from Models 1 to 7, all shown for the observed range of the effective number of presidential candidates.

calculating the temporal proximity using the Amorim Neto and Cox (1997) formula. An examination of Table 1 reveals that these results are similar to the results obtained using the more conventional years as the unit (Model 1). To elaborate, the estimated coefficients all have the same signs, are of similar magnitudes, and have similar statistical significances. The only minor differences of note are that in Model 2 the magnitudes of β_1 (the coefficient on the proximity main effect term) and β_3 (the coefficient on the interaction term) are slightly larger. This suggests that as hypothesized, using years as the unit of analysis, and hence conflating truly concurrent presidential elections with non-concurrent presidential elections held in the same year, underestimates the magnitude of the presidential coattails.

The third model (Model 3) continues to use days to calculate the temporal proximity, given the clear advantages of this measurement strategy, but now additionally increments the value by 1. This allows the measure of proximity to discriminate between legislative elections in pure parliamentary regimes and midterm elections. The third column of Table 1 presents these results. Two observations jump out. First, the magnitudes of the coefficients on the terms involving proximity (β_1 and β_3) seem very different. This results in an estimated marginal effect of proximity (the ‘short coattails’) that is roughly half of the size of that from

Model 2. Figure 1, which graphs the estimated marginal effects of temporally proximate presidential elections over the observed range of the effective number of presidential candidates for each model, illustrates.¹⁹

However, there is a simple explanation for this: the range of the measure has changed. The coefficients and marginal effects have been halved, but the range of proximity has doubled, which makes for similar predictions. Second, the magnitude of β_2 also differs in a seemingly non-trivial way. In Model 2, β_2 is the ‘long coattails’ of presidentialism. But in Model 3 the coefficient no longer has this interpretation: the effective number of candidates cannot be non-zero when proximity is zero. This makes this coefficient hard to interpret.

A better way to see how the two models differ regarding their findings about the short and long presidential coattails is to calculate the predicted effective number of electoral parties in legislative elections for each model. These predictions can be made for different values of proximity and the effective number of presidential candidates, holding the effective number of ethnic groups and the logged average lower tier legislative district magnitude constant at their means.²⁰ For each of the seven models estimated, Table 2 specifically presents predictions for pure parliamentary regimes (proximity = 0.0/0.0);²¹ presidential regimes with midterm legislative elections (proximity = 0.0/1.0); presidential regimes with legislative elections one quarter of the way into the presidential term (proximity = 0.5/1.5);²² and presidential regimes with concurrent legislative elections (proximity = 1.0/2.0).

For the presidential regimes, two types of presidential party systems are considered: presidential elections with few presidential candidates (the effective number of presidential candidates equal to 2), and presidential elections with many presidential candidates (the effective number of presidential candidates equal to 6).²³

From this table, one can see that the models make similar predictions for pure parliamentary regimes: the effective number of electoral parties equal to about four. The real story concerns the predicted effect of presidentialism. Perhaps not surprisingly, Model 2 and Model 3’s findings regarding the long presidential coattails diverge in important ways. With few presidential candidates, Model 2 finds an *inflationary* effect, consistent with the hypothesis of Hicken and Stoll (2010), whereas Model 3 finds no effect at all. With many presidential candidates, both find an inflationary effect, although there is some difference in its estimated magnitude. Accordingly, the empirical findings regarding the long coattails of presidential elections do depend on how the operationalization of temporal proximity treats midterm elections. But what about more temporally proximate presidential elections? In this case, the short coattails combine with the long coattails to produce the overall presidential coattails. As the table shows, with few presidential candidates, the deflationary effect of

Table 2. The predicted number of electoral parties in legislative elections from Models 1 to 7 for a pure parliamentary regime and for presidential regimes with presidential elections of varying temporal proximity. For the presidential regimes, predictions are made for two presidential party systems: one with few presidential candidates (effective number of presidential candidates = 2), and one with many (effective number of presidential candidates = 6). The effective number of ethnic groups and the average lower tier legislative district magnitude are held at their means. The two values of proximity listed refer to the non-incremented (original) and incremented versions of the measure, respectively.

Model	1		2		3		4		5		6		7	
	2	6	2	6	2	6	2	6	2	6	2	6	2	6
Effective number of presidential candidates	2	6	2	6	2	6	2	6	2	6	2	6	2	6
Pure parliamentary regime (proximity = 0.0/0.0)	4.0	4.0	4.0	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Midterm election (proximity = 0.0/1.0)	4.7	6.0	4.7	6.0	4.0	7.2	4.6	5.9	3.9	7.1	4.4	5.1	5.3	7.9
Election at ¼ of presidential term (proximity = 0.5/1.5)	3.8	6.7	3.8	6.8	3.5	7.3	3.7	6.8	3.4	7.3	3.7	6.4	3.9	7.9
Concurrent presidential election (proximity = 1.0/2.0)	2.9	7.5	2.8	7.7	3.0	7.4	2.8	7.7	2.9	7.5	3.0	7.7	2.5	7.9

concurrent presidential elections is clearly observed in that the effective number of electoral parties in legislative elections is predicted to drop to approximately three. Conversely, with many presidential candidates, the inflationary effect of concurrent presidential elections leads to a predicted jump in the effective number of electoral parties to seven and a half. A similar story holds for the less proximate legislative elections held one-quarter of the way into the presidential term, although the magnitudes of the deflationary and inflationary effects are attenuated, as hypothesized. Hence, leaving aside minor disagreements about the magnitudes of these effects (a difference of about 0.50 in the effective number of electoral parties), the empirical findings regarding the short coattails of presidential elections are not sensitive to the treatment of midterm elections.

Models 4 and 5 are estimated in the same way as Models 2 and 3, respectively, except that they allow subsequent presidential elections to have coattails. That is, if there is not a concurrent presidential election, either the preceding or subsequent presidential election is treated as capable of casting a shadow, depending on which one is more temporally proximate. Employing this alternative approach affects the operationalization of both temporal proximity and the effective number of presidential candidates, as discussed earlier. Accordingly, to the extent that the results from Model 4 resemble those of Model 2, and the results from Model 5 resemble those of Model 3, the empirical results are not sensitive to whether subsequent presidential elections are allowed to have coattails.

When not incrementing proximity but allowing subsequent presidential elections to have coattails (Model 4), I obtain very similar results. The same is largely true when incrementing proximity (Model 5). One minor difference in the latter case is that the coefficient on the effective number of presidential candidates (β_2) narrowly falls short of obtaining conventional levels of statistical significance. Another is that in both cases, the coefficients on at least one

of the terms involving proximity are slightly larger. Figure 1 and Table 2 illustrate the overall similarities. In Figure 1, the estimated marginal effect lines for each set of models are remarkably similar, but a little bit steeper for the subsequent presidential elections models (Models 4 and 5). Furthermore, when contrasting the predictions for the two sets of models in Table 2, the only real difference is that with few presidential candidates, midterm elections are predicted to slightly decrease the effective number of electoral parties in Model 5 instead of having no effect in Model 3 – a very minimal deflationary effect. Proximate presidential elections are also predicted to have a more deflationary effect when allowing subsequent presidential elections to cast a shadow; however, these differences are minor (a difference of 0.10 in the effective number of parties). In sum, a slightly larger effect of presidential elections is found once subsequent presidential elections are allowed to cast a shadow. This suggests that subsequent presidential elections generally have coattails similar to, if somewhat larger than, preceding presidential elections, as hypothesized.

Finally, Models 6 and 7 attempt to isolate the shadows of preceding and subsequent presidential elections, respectively. This is done by comparing a subset of the ‘treatment’ legislative elections in presidential regimes to the ‘control’ legislative elections in non-presidential regimes. In Model 6, legislative elections in non-presidential regimes are compared to legislative elections in presidential regimes where the temporally closest presidential election was the preceding one; in Model 7, by way of contrast, the comparison is to legislative elections in presidential regimes where the temporally closest presidential election was the subsequent one. Legislative elections held at the presidential midterm and legislative elections held concurrently with a presidential election are excluded from the analysis.²⁴ The non-incremented version of temporal proximity calculated using days serves as the measure of proximity. To the

extent that the results from these two models are similar, preceding and subsequent presidential elections do indeed cast similar shadows.

Table 1 shows that the signs of the coefficients are the same in the two models. But while the substantive magnitudes are in the same ballpark, there are important differences. With respect to the long coattails, subsequent elections are much more inflationary. In Table 1, this can be seen by comparing the estimated coefficients on the effective number of presidential candidates main effect term (β_2) for the two models. The coefficient is statistically significant only in the subsequent elections model, and it is three times the magnitude of that in the preceding elections model (about 0.60 versus 0.20).

With respect to the short coattails, the most direct comparison of the models comes from calculating the marginal effects of proximity. The larger coefficient on the interaction term (β_3) in Model 6 means that the fragmentation of the presidential party system is predicted to have a larger effect in preceding elections, as shown by the steeper line for this model in Figure 1. However, the larger coefficient on the proximity main effect term (β_1) in Model 7 means that subsequent elections are predicted to have a larger deflationary effect when the presidential race is consolidated, as shown by the line's much more negative intercept. To illustrate, consider two legislative elections, one held one-quarter and one held three-quarters of the way into the presidential term. With a four-year presidential term, the temporal proximity is 0.5 in both cases.²⁵ But for the first of these legislative elections, the temporally closest presidential election precedes it; for the second of these legislative elections, the temporally closest presidential election follows it. Say that the effective number of presidential candidates equals two, i.e. that there is a two-way race in the presidential contest. In this situation, the preceding presidential election is predicted to cast a short deflationary shadow of 0.75, meaning that the effective number of electoral parties is predicted to decrease by about three-quarters relative to a non-presidential regime. The subsequent presidential election is conversely predicted to cast a much larger short deflationary shadow of 1.4. Now say that the presidential race is extremely fragmented, with the effective number of presidential candidates equal to six. In this situation, the preceding presidential election is predicted to cast a short inflationary shadow of 1.3, while the subsequent presidential election is for all intents and purposes predicted to cast none.

The overall effects of these two types of presidential elections, which take into account both the short and long coattails, are shown in Table 2. When presidential elections are not temporally proximate to legislative elections, subsequent presidential elections are predicted to lead to a larger effective number of electoral parties in the legislative race than preceding presidential elections. Conversely, when presidential elections are temporally proximate, subsequent presidential elections are predicted to lead to fewer parties

in the legislative race than preceding presidential elections if the presidential party system is consolidated, while leading to only slightly more parties in the legislative race if the presidential party system is fragmented.

These findings about the short coattails of the two types of presidential elections likely reflect both the greater uncertainty of the outcome of and the greater prominence of subsequent presidential elections. Regarding the uncertainty of the outcome, the presidential election results are obviously not yet known, with the uncertainty increasing as the proximity of the subsequent presidential election decreases.²⁶ Yet the effect of this uncertainty will depend on the fragmentation of the presidential race. If the presidential party system is consolidated, uncertainty will matter less because actors know which candidates to strategically coordinate around: the two front-runners. If the presidential party system is fragmented, however, voters, legislative candidates and other political elites may not have a good sense of which presidential candidate to back. This prohibits the dynamics of the presidential race from travelling down the ticket and leaves subsequent presidential elections without much of a short inflationary shadow. Regarding the greater prominence, at the time of a legislative election, an upcoming presidential election is still attracting significant attention from all actors, whereas a presidential election that has already happened rapidly fades from the limelight.²⁷ Hence, subsequent presidential elections have a greater short deflationary shadow. And the greater prominence of subsequent presidential elections can also explain their more inflationary long shadows: the more prominent the presidential election, the smaller the size of the legislative prize, à la Hicken and Stoll (2010).

Conclusion

To understand why the number of political parties in legislative elections varies across both space and time, scholars have increasingly looked beyond the legislative electoral system. Legislative elections do not happen in a vacuum: they are affected by elections for different levels of government, such as supra-national legislative bodies (e.g. the European Parliament), and different institutional actors, such as popularly elected presidents. This article addresses the latter, contributing to the long-running debate about how the system of government, and particularly the existence of a popularly elected president, affects the fragmentation (size) of the legislative party system. In this article, I have explored the sensitivity of existing empirical findings about this effect, which is usually called the presidential coattails.

My findings diverge from existing studies in important ways. For one, I presented evidence that presidential elections held subsequent to a legislative election have coattails. This stands in contrast to the literature to date,

which has focused on concurrent or preceding presidential elections. In fact, I found that presidential elections with few presidential candidates held subsequent to a legislative election cast a larger deflationary shadow over the legislative party system than similar presidential elections held prior to a legislative election. For another, turning from the short to the long coattails of presidentialism, I found some evidence that the shadow cast by presidential elections not held in temporal proximity to legislative elections, i.e. when legislative elections are held at the presidential midterm, depends upon how the variables are measured. This sensitivity included whether presidentialism has a deflationary or an inflationary effect, as well as what the magnitude of the inflationary effect is. Moreover, I presented evidence that calculating the temporal proximity of presidential and legislative elections using years instead of days as the unit, as is common, underestimates the presidential coattails.

Yet overall, my finding is that the conclusions drawn about the presidential coattails seem robust to a variety of different modelling choices. Calculating the temporal proximity of presidential and legislative elections using days instead of years; allowing subsequent presidential elections to cast a shadow; and even treating midterm elections differently from pure parliamentary elections, measurement strategies that all seem preferable, do not alter the basic empirical findings. Specifically, the evidence generally suggests that when presidential elections are not temporally proximate to legislative elections, the legislative party system will be more fragmented, as both Golder (2006) and Hicken and Stoll (2010) predict. Furthermore, the evidence suggests that when presidential elections are temporally proximate to legislative elections and there are few presidential candidates, a deflationary shadow will be cast, reducing the fragmentation of the legislative party system; by way of contrast, when presidential elections are temporally proximate to legislative elections and there are many presidential candidates, either an inflationary shadow will be cast, increasing the fragmentation of the legislative party system, or there will be no shadow.

Accordingly, if presidentialism is to be used to discourage the fragmentation of the legislative party system, the electoral cycle must be such that presidential elections are held in temporal proximity to legislative elections, and the presidential electoral system must be such that the presidential party system itself is not fragmented. These reassuring findings are good news for scholars concerned with the effect of political institutions such as the regime type, and particularly for constitutional engineers.

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Notes

1. A less common alternative operationalization is a simple dummy variable for concurrent presidential elections (see, for example, Hicken and Stoll, 2011). I focus on the interval scale measure, however, because it is the most commonly employed and because it seems sensible to allow non-concurrent presidential elections still to cast a shadow.
2. In a departure from this conventional model, Hicken and Stoll (2013) add an additional conditioning variable: the size of the presidential prize. Because even their baseline is the model represented by Equation 1, however, it is this simpler model that is the focus here.
3. I say ‘seem’ because in the text of their seminal article, Amorim Neto and Cox (1997: 158–159) use the term ‘date’. This implies days as the unit, but they never spell this out.
4. An example is the 1971 Austrian legislative election, held six months after the 1971 Austrian presidential election. More generally, of the 118 legislative elections coded by Golder (2006) as having been held concurrently with a presidential election, 22 or approximately 20 percent of these elections were in actuality held in the same year as but not on the same day of the presidential election – a non-trivial proportion.
5. Amorim Neto and Cox (1997: 159) report that they included an additional parameter to test whether midterm elections differed from elections occurring in parliamentary regimes, and that this test did not reveal a significant difference. However, they do not disclose exactly what form their test took. And, as argued below, no additional parameters are in fact necessary.
6. Similarly, one might eliminate midterm elections from the analysis (e.g. Hicken and Stoll, 2013). But comparable problems emerge that make the alternative solutions discussed below preferable.
7. If the research question is instead about the effect of the presidential coattails in presidential regimes, it is appropriate to eliminate elections in parliamentary regimes from the analysis. To empirically investigate this research question, a version of Model 4 (described below) was estimated while confining the sample to the 254 legislative elections in presidential regimes. These results are presented in the supplemental article. The findings are broadly similar but less substantively and

statistically significant (see also Hicken and Stoll, 2011). This is not surprising given the greatly reduced sample size, as well as the fact that the comparison is now between the similar presidential regime elections.

8. Using the notation from Equation 1, the marginal effect of proximity is equal to $\beta_1 + \beta_3 \times ENPRES$. The standard error of this marginal effect is then derived using the well-known rule for calculating the sums of random variables.
9. However, because of the conventional approach of treating presidential and legislative elections held in the same year as concurrent, as discussed above, some of the presidential elections coded as concurrent by scholars such as Golder (2006) have actually followed the legislative election. Hence, under the radar, subsequent presidential elections have been allowed to cast a shadow.
10. To borrow terminology from the European politics literature, the argument is that, to some extent, presidential elections may be viewed as first-order elections and legislative elections as second-order elections (e.g. van der Eijk and Franklin, 1996).
11. See, for example, Goldey's (1983) account of how the upcoming December 1980 presidential election in Portugal influenced electoral coordination in the October 1980 legislative election. Of course, some examples may be found where the arrow has run in the other direction; however, most qualitative historical accounts suggest that the arrow usually runs in the direction posited by the literature – from the presidential to the legislative.
12. For example, in their comparison of the 2002 and 2006 congressional elections in Colombia, Pachón and Shugart (2010) initially draw upon the conventional wisdom to argue that the subsequent (by 11 weeks) presidential elections should not exert an effect on legislative electoral coordination. However, they then consider the possibility that these presidential elections might in fact have coattails. They ultimately reject this possibility, but for reasons specific to these elections.
13. To illustrate the magnitude of the problem, in Golder's (2006) dataset, of the 151 legislative elections in presidential regimes where there was not a concurrent presidential election, the temporally closest presidential election was the preceding in 84 of these elections and the subsequent (within two years) in 67 of them.
14. Some slippage is unavoidable between the actual election results and the presidential race at the time of the legislative election, although the close temporal proximity of many subsequent presidential elections is a mitigating factor. Any such slippage can be viewed as random measurement error, which results in a downward bias in the regression coefficients. Hence, the long coattail of subsequent presidential elections is probably even larger than that reported here. Future work might instead attempt to use polling data at the time of the legislative election. However, these data are unlikely to be available for many countries or for earlier periods of time.
15. Until very recently, Golder's (2006) replication dataset was the most extensive set of minimally democratic legislative elections used to quantitatively test hypotheses about the presidential coattails. As such, it has served as the benchmark against which subsequent studies have been measured, which is why it is used here.
16. The supplemental article lists the countries and elections included in the analysis. Golder (2006) defines minimally democratic using the well-known criteria developed by Alvarez et al. (1996). This sample of cases includes both old, consolidated democracies and new, unconsolidated democracies. While there are good reasons to believe that political institutions and hence presidential elections might not have the same effects in both types of countries (e.g. Moser, 1999), Golder and other scholars (e.g. Hicken and Stoll, 2011) have found similar presidential coattails.
17. To elaborate, this includes presidents in parliamentary, semi-presidential and true presidential regimes. I take this approach because, with the recent exception of Hicken and Stoll (2013), it has been the approach of all empirical studies of the presidential coattails to date. Hicken and Stoll, however, present evidence that both very weak presidents (such as the Irish) and very powerful presidents (such as the post-1994 Argentinian) lack the standard presidential coattails. Eliminating elections in such regimes from the analysis does not alter the substantive conclusions presented here. In fact, not surprisingly (given Hicken and Stoll's findings), it yields even larger presidential coattails. See the supplemental article for more details.
18. An example is the March 1973 Chilean legislative election. I note that there are also a few cases where I disagree with Golder (2005, 2006) about whether a regime should be considered presidential at the time of a legislative election. Examples are the 1996 and 1999 Israeli elections and the 1948 Finnish election. The supplemental article provides more details.
19. Confidence intervals are not shown around the estimated marginal effects in the figure for reasons of space. Yet it can be reported that, using a two-sided test, the inflationary effect is never statistically significant in any of the models. Conversely, the deflationary effect is statistically significant when the effective number of presidential candidates is less than approximately three. The exception is Model 6, where it is only statistically significant for approximately two candidates.
20. The mean effective number of ethnic groups is 1.8. The mean logged average district magnitude is 1.5, which translates to an average magnitude of 4.5.
21. These two numbers represent the corresponding values of the non-incremented and incremented versions of proximity, respectively.
22. To illustrate, for a legislative election held in 2005 when the preceding presidential election was held in 2004 and the presidential term is four years, the proximity score is 0.5.
23. For this sample of cases, two is the typical minimum value of the effective number of presidential candidates for contested presidential elections, and six is the maximum observed value.
24. Because of this, proximity technically takes values falling between zero and 1, exclusive. However, values very close to both zero and 1 are observed. This is why Table 2 contains

predictions for these extreme values, which yield the upper and lower bounds of the presidential coattails, and why the models provide empirical information about both the short and long presidential coattails.

25. This is close to the observed mean value of proximity for both types of elections: the observed mean is 0.38 for preceding presidential elections and 0.58 for subsequent presidential elections.
26. An example is the entry of new presidential candidates. Most countries require presidential candidates to qualify for the ballot at least one to two months in advance of the election, so the closer the proximity of the two elections, the less of a chance there is for a new presidential candidate to enter the race and up-end it subsequent to the legislative election.
27. For example, in the United States, between 30 and 50 percent of the newshole was devoted to the 2008 presidential election (the campaign itself, the results and the transition) from January to November of 2008, with a peak in October. However, by December, this percentage had fallen to less than 15 (Pew, 2009).

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