COATTAIL EFFECTS AND THE POLITICAL CONSEQUENCES OF ELECTORAL SYSTEMS*

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Abstract: In this paper we challenge the conventional wisdom about the political consequences of electoral systems. We show that the psychological effects of an electoral system manifest themselves in founding elections in those countries in which there are coattail effects running from the more important to the less important offices. The artificial deflationary pressures induced by coattail effects make the psychological effects of electoral systems in elections for less important offices increase coordination failures after the founding election. The empirical evidence comes from district-level data in legislative, regional and European elections in five countries.

Keywords: Coattail effects, disproportionality, electoral systems, psychological effects, wasted votes.

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Introduction

A basic and uncontroversial insight in electoral system scholarship is that the fragmentation of party systems decreases in a non-linear fashion immediately after the founding election (see Crisp et al. 2012). Once good information about the relative chances of potential competitors is available and it is possible to distinguish *ex ante* between winners and losers, elites and voters coordinate around viable parties. Other things being equal, the maximum dispersion of votes across parties is observed in the founding election as the psychological effects of an electoral system take at least two elections to manifest themselves (Taagepera and Shugart 1989, 65). In the long term, coordination failures are progressively reduced and then the strategic behavior of rational political actors generates an equilibrium relationship between party system sizes at the electoral and legislative levels (Best 2010).

In this paper, we challenge the conventional wisdom about the psychological effects of electoral systems by arguing that they do not work equally in all types of elections. When political authority is dispersed across several levels of government in a country, a coattail or contamination effect from the more important to the less important elections is expected. If the election for the most important office is held in temporal proximity to the founding election for less important offices and it uses a more restrictive electoral system, the latter will be affected by an artificial deflationary pressure on the number of parties. Some parties which are not viable in the election for the most important office will also be strategically abandoned in the founding election for the less important offices even when they are viable competitors there.

Four consequences of coattail effects for electoral system scholarship are explored in this paper. First, we show that the psychological effects of electoral systems are also possible in founding elections when there are coattail effects. Second, when parties and voters respond to the incentives provided by the electoral system for the less important offices after the founding election, the short-term consequence is an increase in the dispersion of votes across parties. Therefore, we expect coordination failures to be greater in the second election than in the founding election. Third, coordination across the first elections held in a new democracy does not take place in a non-linear logarithmic way, but there is an inverted U-shaped relationship. Fourth, the impact of
coattail effects is not constant across elections, and so the selection of a particular election to capture them makes a difference.

The impact of coattail effects on electoral coordination is shown using district-level data from five third-wave democracies with free and fair founding elections (Chile, El Salvador, Portugal, Sao Tome and Principe, and Spain). We focus on three different coattail effects running from presidential to legislative elections and from national to regional elections and supranational (European) elections. Virtually all the democracies in the world are subject to at least one of these coattail effects. According to Bormann and Golder (2013, 361), 133 of the 432 national elections held in democratic regimes from 2001 to 2010 (30.79 percent) were presidential; at the beginning of the 21st century some 95 percent of democracies elected subnational governments (World Bank 2000, 107); the EU enlarged to 28 member States in 2013; and the direct election of the national members of the Mercosur Parliament (PARLASUR) will take place in every Mercosur member before 2020.

Arguments
Contamination or coattail effects, particularly in presidential systems, have been extensively researched in recent decades (see Guinjoan 2014 for an overview). Presidential elections influence legislative fragmentation through a coattail effect where the fortunes of electoral parties are tied to the fate of their party's presidential candidate. As the presidency is the most important electoral prize, the effect of presidential elections has been found to depend on the interaction between three variables: the timing of elections, the number of presidential candidates and the permissiveness of the legislative electoral system. Presidential elections held in temporal proximity (prior or subsequent) to legislative elections reduce the fragmentation of the legislative party system when there are few presidential candidates and a permissive legislative electoral system (deflationary pressure), but increase it when there are many presidential candidates and a permissive legislative electoral system (inflationary pressure) (Stoll 2015).

As Hicken and Stoll (2011, 857) explain, the logic of coattail effects is as follows. Issues and parties that are in contention in a nationwide presidential race tend to migrate down the ballot and induce strategic behavior on the part of both candidates
and voters within the districts in legislative elections. Voters use the party of their presidential candidate as an information shortcut to help them decide their vote in legislative elections, while legislative candidates have a strong incentive to coordinate their own campaigns with their party's presidential candidate (Golder 2006, 35). However, when the legislative electoral system is as restrictive as the presidential race, there is no room for presidential coattails. Legislative electoral systems should have a greater carrying capacity than presidential electoral systems for coattail effects to be observed.

For existing studies, however, whether coattail effects take place in the early years of democracy or at later stages does not make any difference for legislative fragmentation. On the contrary, we argue that all else being equal coattail effects are more influential in the early stages of democratic development, particularly in founding elections, than at later stages due to the lack of information about the viability of actual and potential competitors in legislative elections.

In new democracies, when presidential elections are temporally proximate to legislative elections parties and voters pay much more attention to the presidential campaign, and in particular to the rules of the game for the selection of the president and to the candidates' chances of winning. As the race for the presidency can be understood as an election for a nationwide district with a single seat (Samuels 2002) – the simplest of all voting systems for voters– clearly known common expectations about who is and is not viable are available even in the first presidential election. Due to coattail effects going from the presidential to legislative elections, those legislative candidates whose party's presidential candidate is not seriously in the running for the presidency will be encouraged to form coalitions, withdraw, or even disband their parties. If they do not behave in this way before the election, they will be strategically abandoned by the voters.

If the electoral system employed in the legislative election is more permissive than that used in the presidential election (which is the most likely scenario, as presidents are selected using the most restrictive electoral system possible), there will be more viable competitors in the former than in the latter. As a result, coattail effects will lead to (some) candidates or parties in the legislative election being abandoned for
strategic reasons even though they are viable. In other words, deflationary pressures on the number of parties encourage unnecessary coordination, as the number of viable parties tends to be higher in legislative elections than in presidential ones.

This prediction has two important implications for electoral system scholarship. First, the psychological effects of electoral systems consist of anticipations, on the part of both elites and voters, of the workings of the mechanical factor and both groups' consequent behavior (Blais and Carty 1991, 92; see also Benoit 2001). In order to behave strategically, clearly known common expectations about parties' chances of winning seats in districts are crucial (Cox 1997). Accordingly, conventional wisdom argues that psychological effects are not possible in founding elections in districted electoral systems as they are dominated by considerable uncertainty regarding three essential elements in the functioning of any electoral system: the number of parties competing in the elections; vote shares for the different parties; and the consequences of the electoral rules (Andrews and Jackman 2005, 67; see also Gunther, 1989). Nevertheless, in the first legislative election in presidential regimes a psychological effect is already at work due to coattails if the legislative electoral system is more permissive than the presidential one and the presidential election is temporally proximate to the legislative election.

Second, electoral system scholarship also argues that parties and voters start to coordinate their actions in the second election. As time (elections) goes by, more information on parties and candidates and their electoral prospects in the election at hand, as well as on how the electoral system works, is available. Strategic non-entry and strategic voting are then possible and votes tend to concentrate around the viable parties: the number of wasted votes (Tavits and Annus 2006), SF ratios (Moser and Schneier 2009), and volatility (Mainwaring and Zoco 2007; Roberts and Wibbels 1999) become lower and strategic voting increases. Duch and Palmer (2002) and Crisp et al (2012, 152) summarize it in the following way: "inexperience-induced coordination failures are reduced over time, reaching stable levels after only a few exercises of the electoral systems". In sum, the psychological effects affect later coordination in a negative and non-linear way after the founding election.

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1 Founding elections are the first competitive multiparty election (O'Donnell and Schmitter 1986).
We argue, however, that in electoral systems subject to coattail effects the psychological effect works differently. After the founding election, parties and voters should realize that the carrying capacity of the electoral system is greater in legislative elections than in presidential ones. The artificial psychological effect induced by coattail effects in the founding election will weaken in the second election and so the number of parties entering the race and the dispersion of votes among them will increase. In other words, the number of players that can be at the table and the cards they hold is revealed after the second legislative election rather than after the founding election. Coordination will start after the second election and non-viable parties will be strategically abandoned as conventional wisdom argues. Conventional wisdom expects that the greatest dispersion of votes across parties (i.e., coordination failures) will be observed in the founding election, while our prediction is that it should be observed after the founding election. In the long run, equilibrium will be reached in both cases. In sum, for conventional wisdom electoral coordination follows a negative and logarithmic curve in the first series of elections; for us, it follows an inverted U-shaped curve.

The psychological effect of legislative electoral systems in presidential regimes, however, is not always affected by coattail effects. When the carrying capacity of the presidential and legislative electoral systems is similar (and this happens in practice when there are only two viable competitors and also legislative district races) or when in the first legislative electoral cycle no presidential elections are held, there will not be an artificial induced psychological effect. In the first case, it is because parties and voters are also perfectly adjusting their behavior to the incentives provided by the legislative electoral system; in the second case, it is because learning about the incentives provided by the legislative electoral system will take place before the first presidential election. Thus, the conventional wisdom about the psychological effects of electoral systems will hold when any of these conditions are observed.

Although the above discussion has focused on presidential systems, our prediction about psychological effects in the founding legislative election and its slope across elections can be extended to all coattail effects when there are multiple levels of government. This is what Guinjoan (2014) calls the vertical dimension of contamination effects. Coattail effects running from lower-chamber elections to regional and supranational (European) elections are expected to generate the same outcomes as in
presidential systems. European and regional elections provide *prima facie* evidence of contamination effects in multi-level systems of governance. Voters sort out elections according to the perceived political importance of the office(s) to be filled. Reif and Schmitt (1980) introduced the concept of second-order elections to indicate the difference between the first-order national elections and second-order regional and European elections. Second-order election models hinge on the transfer hypothesis: voters transfer evaluations from the national level to the regional and European levels (Rohrchnieder and Clark 2008) or, in other words, information from the national level informs voters’ decisions at the regional and supranational levels (Hix and Marsh 2007). Therefore, if voters use regional and European elections to express their approval or disapproval of incumbent national governments (Rosema 2007), then the national arena contaminates the sub-national and supranational arenas.²

**Data and methods**

The purpose of our empirical analysis is to show the extent to which the psychological effects of electoral systems are affected by vertical coattail effects. More specifically, we focus on coattail effects running from presidential to legislative elections, from national to regional elections, and from national to European elections. As our argument is about how parties and voters adapt to the incentives provided by electoral rules, the empirical analysis focuses on the first four elections under democracy. Existing research shows that learning does not continue indefinitely. Relying on data from 183 lower house elections in twenty-one countries, Crisp et al (2012, 151-2) find evidence of a very steep learning curve: the first couple of elections show strong evidence of coordination issues, which subside quickly until the fifth election, when coordination becomes indistinguishable from that in more experienced settings. Similarly, Dawisha and Deets (2006) and Tavits and Annus (2006) observe learning across maximums of three and five elections under new rules.

We select democracies which meet five criteria: (1) the founding election is fair and free – in order to observe learning starting from the election when the psychological effects of electoral systems are supposedly inexistent and political actors behave non-strategically (i.e., there is a *tabula rasa*, to use Bielasiak's (2002) words); (2) district-

² There is evidence, however, of ‘reverse-coattail’ effects in regional elections (Gélineau and Remmer 2005).
level election results, including complete information about seat allocation, are available; (3) the district structure does not change across the first four elections; (4) there is no fused vote, i.e., voters cast different votes for the presidency and the legislature elections; and (5) political authority is dispersed across several levels of government, so different scenarios of the vertical dimension of coattail effects can examined.

From the Global Elections Database (CLE) Dataset (Brancatti, 2015), the Constituency Level Election Archive (CLEA) (Kollman et al, 2014), http://www.electionresources.org, and the respective National Electoral Commissions, we obtain data for only two presidential regimes, Chile and, El Salvador, and two semi-presidential regimes, Portugal and Sao Tome and Principe. This explains why we decide to study different coattail effects with a few cases rather than a single coattail effect with many cases. Additionally, we focus on how coordination in regional elections in Portugal and Spain and in European elections in Portugal is affected by coattail effects. As will be shown in detail, in this sample of countries there is considerable variation in the variables affecting coattail effects: the temporal proximity of elections, the degree of fragmentation of party systems, and the gap in the powers of the offices open to election.


We use two conventional measures of electoral coordination as our dependent variable to show the robustness of our findings: the percentage of wasted votes (i.e., the votes for parties that do not get any seat) and the level of electoral disproportionality
according to the Gallagher index, both at the district-level.\textsuperscript{3} The use of district-level rather than national data is crucial because seats are allocated at the level of districts and this is where coordination occurs.

To capture coordination, or the learning process, a series of dummy variables are included to compare the races that take place after the founding election. More specifically, a simple model including a set of dummies for the second, third and fourth elections in a new democracy is run and the corresponding coefficients are recorded. For instance, \textit{election2} is coded 1 for districts in the second election, 0 otherwise and so on. The founding election is the reference category. The model is as follows:

\[ Y_{it} = \beta_1 + \beta_2\text{election2}_{it} + \beta_3\text{election3}_{it} + \beta_4\text{election4}_{it} + \varepsilon_{it} \] (1)

Because of the short time span of the sample (our time dimension, \( T \), is equal to 4), we do not use methods for standard time-series cross-section (TSCS) data. Although this is an empirical rule, Beck (2001, 274) does not recommend using TSCS methods when \( T \) is lower than 10, while for Beck and Katz (2011, 332) the minimum \( T \) should be 15. The temporal dimension must be large enough for averaging over time to make sense, which is clearly not our case. Therefore, we estimate a least squares dummy variable regression (i.e., a pooled OLS including a set of N-1 dummy variables which identify the districts in every country). As all the districts in the countries selected are included in the analysis, individual fixed effects are better than random effects (Hsiao 1986). The individual (district) fixed effects added to (1) account for different degrees of permissiveness of districts and different demand for parties (i.e., cleavages) across districts. Finally, in the OLS regressions we allow for dependence of correlations among the percentages of wasted votes and the levels of disproportionality across elections for districts. The standard errors are clustered by electoral district to account for the non-independence in the data structure. Our data therefore consist of clusters made on different occasions (elections) for the same district.\textsuperscript{4}

\textsuperscript{3} Least squares measures of disproportionality between the distribution of votes (\( V \)) and seats (\( S \)):

\[ \text{LSq} = \sqrt{\frac{1}{2} \sum_{i=1}^{n} (V_i - S_i)^2} \]

\textsuperscript{4} We do not control for the temporal proximity of elections or the number of candidates in the more important election as there is perfect multicollinearity with the election dummies (with the exception of Chile). In the appendix we estimate our model (1) for our sample of presidential and semi-presidential...
Due to the small number of observations (districts) in our countries (only seven in Sao Tome and Principe in every election, for instance), data from El Salvador, Sao Tome and Principe, Portugal, and Spain have been pooled when analyzing coattail effects in legislative and regional elections.

**Results**

*Testing the conventional wisdom when there are no coattail effects*

In our first empirical analysis we use data at the district level from the first four lower house elections in Spain to test whether the psychological effect affects coordination as electoral system scholarship predicts. As there are no coattail effects we should find that both the percentage of wasted votes and the level of disproportionality at the district level decrease after the founding election in a non-linear fashion. Elections in Spain are held following the D’Hondt formula with closed lists in fifty-two districts of size between one and thirty-two seats in the first three elections and thirty-three in the 1986 election. There is a three percent threshold at the district level.

As expected, Figure 1 shows that both the greatest percentage of wasted votes and the greatest level of disproportionality are in the founding election and then they drop. The average percentage of wasted votes cast at the district level in 1977 was 23.57, but it dropped to 20.74 in 1979, to 18.17 in 1982, and then reached stable levels. A very similar trend is observed when using disproportionality as the measure of coordination. Table 1 shows that all the coefficients on the election dummies are negative and, with the exception of the second election when using disproportionality as the dependent variable, statistically significant. Interestingly, the most pronounced coordination is observed in the first two elections: the difference between the coefficients on the founding and second elections is greater than that between the coefficients on the second and third elections and that between those on the third and fourth. In sum, the conventional wisdom is clearly supported by the empirical evidence from lower house elections in Spain.

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regimes, but replace the election dummies with the temporal proximity (in days, Stoll, 2015) between the more and the less important election. Portugal is not included as no presidential election was held during the first legislative electoral cycle. As can be seen, temporal proximity is not important at all. In Chile, for instance, the coefficient on the election dummies remains unchanged, while temporal proximity has an erratic sign and is very far from being statistically significant.
Figure 1: Wasted Votes and disproportionality in national elections in Spain

![Graph showing Wasted Votes and Disproportionality over time in Spain]

Table 1: Coordination in national elections in Spain

<table>
<thead>
<tr>
<th>Variables</th>
<th>Spain</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Election (ref. founding election)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>-2.81**</td>
<td>-1.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.41)</td>
<td>(0.96)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td>-5.39***</td>
<td>-1.67*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.27)</td>
<td>(0.92)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourth</td>
<td>-3.77***</td>
<td>-2.47***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.28)</td>
<td>(0.94)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>30.15***</td>
<td>18.46***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.84)</td>
<td>(0.59)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>208</td>
<td>208</td>
<td></td>
<td></td>
</tr>
<tr>
<td># Clusters</td>
<td>52</td>
<td>52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.76</td>
<td>0.79</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Estimation is by ordinary least squares. Standard errors in parentheses. The models include district fixed effects (not shown).

*p<0.1; **p<0.05; ***p<0.01.

Coattail effects in presidential and semi-presidential regimes

We select legislative elections in El Salvador and Sao Tome and Principe to see how the psychological effect of electoral systems is affected by coattail effects in presidential and semi-presidential regimes. The analysis for El Salvador starts in 1994, the first fair and free election after the end of the 12-year civil war in 1992, when the Farabundo Martí National Liberation Front ran the election (http://www.systemicpeace.org/polity/ElSalvador2010.pdf). For legislative elections, El Salvador employs a List PR system. Most of the seats (sixty-four out of eighty-four) are elected in fourteen districts using the Hare with highest average remainders formula and
closed lists without a legal threshold. District magnitude ranges between 3 and 25 and the average is 4.57. The two electoral tiers are not linked. We focus on the lower tier districts. Presidential and legislative elections were held simultaneously only once, in 1994. In the 1994 election, the effective number of presidential candidates was 3.01, and in 1999 and 2004 it was 2.75 and 2.16 respectively. The effective number of electoral parties in legislative elections is substantially greater: 3.48 in 1994, 3.95 in 1997, 3.68 in 2000 and 4.09 in 2003.

In Sao Tome and Principe, legislative elections are held following the D’Hondt formula with closed lists in seven districts of between five and thirteen seats. The average district magnitude is 7.86. The founding legislative election was held on 20 January 1991 and the first presidential election a month later, on 3 March 1991. As Stoll (2015) shows, presidential elections held subsequent to and prior to a legislative election have similar coattail effects; the relevant thing is temporal proximity. Legislative and presidential elections have never been simultaneous in Sao Tome and Principe. The powers of the presidency are important: the president can dissolve parliament, has broad emergency and decree powers, discretionary appointment powers and a central role in forming the government. According to Gómez Fortes and Magalhaes (2005), the president in Sao and Principe is the most powerful in their sample of twenty countries using a semi-presidential regime.

As can be seen from Figure 2, in both El Salvador and Sao Tome and Principe the percentages of wasted votes and the levels of disproportionality are greater in the second elections than in the founding ones. In other words, the immediate psychological effect of the legislative electoral system increases the dispersion of votes across parties instead of reducing it. However, already in the third election in both countries coordination issues subside or at least stabilize.
Coattail effects in regional elections

To test how national elections affect coordination in regional elections, we select two countries, Portugal and Spain, in which democratization and decentralization took place at the same time (or almost). National elections are always held before (or at least never later than) regional elections in a transition to democracy. The hypothetical coattail effect running from national to regional elections should be stronger the more time elapses between the founding national election and the first regional election. The coattail effect is expected to be weaker when voters and parties lack information about the parties' chances of winning in both the national and regional elections than when the rules of the game have already been learned in national elections but not in regional elections (see Gallego et al., 2012). With the selection of these two countries, we are therefore playing in favor of the null hypothesis of no coattail effects running from the national to the regional elections.

In Portugal there are two potential coattail effects going from presidential and legislative elections to regional elections in Açores and Madeira. Regarding presidential powers, the 1982 constitutional revision was important as it curtailed the head of state’s
powers (Neto and Lobo, 2009). Given the President’s role between 1976 and 1982, both for constitutional and political reasons we would expect presidential elections to be at least as important as legislative ones in accounting for coattail effects in regional elections. After 1982 this is no longer the case, with the legislative assuming a clearly more relevant role. However, both the presidential and the legislative electoral systems are more restrictive than the regional electoral system in Açores and Madeira. In the first four legislative elections, five or six seats were elected in each of the two regions, but there was a minimum of forty-one seats in Madeira and forty-three in Açores in the regional elections. National and regional elections in Portugal are held using the d’Hondt formula with closed party lists and no electoral threshold. Regional elections have always been held separately from presidential and legislative elections.

In Spain, the first national election was held in 1977, and regional elections started in 1980 in Catalonia and the Basque Country, 1981 in Galicia, 1982 in Andalusia, and 1983 in the remaining thirteen regions. Regional elections are held following the D'Hondt formula with closed lists, as are the national elections. The most relevant feature is that the electoral system is more permissive in regional than in lower chamber elections in all the regions with the exception of Madrid (Lago 2004).

Contrary to what conventional wisdom predicts and supporting our argument, Figure 3 shows that both the percentage of wasted votes and the level of disproportionality in Portugal and Spain increase in the second election in comparison with the founding election. In the third election, the two variables reach stable levels and in the fourth one both drop.

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5 While thirteen regions follow a fixed and common electoral calendar, in the other four the decision to call an election is in the hands of the respective Prime Minister. To save space, in the X axis in Figure 3 we put the timing of the elections of the former group.

6 The region of Madrid is excluded from the analysis. In Andalusia, some regional elections are held at the same time as national elections. When we run our analysis with a dummy variable capturing the coincidence of elections, the results are the same. The results are available upon request.
Figure 3: Wasted Votes and disproportionality in regional elections in Portugal and Spain

A pooled data analysis

In Table 2 observations (districts) from El Salvador, Sao Tome and Principe, Portugal, and Spain have been pooled and our model (1) has been estimated. The coefficients on the second and third election dummies are positive for the two dependent variables (i.e., coordination failures increase in comparison with the founding election), while the coefficient on the fourth election is negative in both cases. When accounting for the amount of wasted votes, the three election dummies are statistically significant at the .1 or .05 levels, but only the second election dummy (at the .05 level) when explaining the degree of disproportionality. Interestingly, the difference between the coefficients on the founding and second elections is greater than that between the coefficients on the second and third elections. In other words, coordination failures increase above all from the founding to the second election, reach more or less stable levels in the third election and are reduced in the four elections. Our argument is then strongly supported and the conventional wisdom is challenged.
Table 2: Coordination and coattail effects (pooled data)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Wasted Votes</th>
<th>Disproportionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Election (ref. founding election)</td>
<td>1.26*</td>
<td>1.52**</td>
</tr>
<tr>
<td>Second</td>
<td>(0.75)</td>
<td>(0.78)</td>
</tr>
<tr>
<td>Third</td>
<td>1.43**</td>
<td>1.03</td>
</tr>
<tr>
<td></td>
<td>(0.72)</td>
<td>(0.65)</td>
</tr>
<tr>
<td>Fourth</td>
<td>-1.21*</td>
<td>-1.29</td>
</tr>
<tr>
<td></td>
<td>(0.73)</td>
<td>(0.57)</td>
</tr>
<tr>
<td>Constant</td>
<td>5.58***</td>
<td>3.26***</td>
</tr>
<tr>
<td></td>
<td>(0.45)</td>
<td>(0.41)</td>
</tr>
<tr>
<td>Observations</td>
<td>416</td>
<td>416</td>
</tr>
<tr>
<td># Clusters</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.80</td>
<td>0.85</td>
</tr>
</tbody>
</table>

Estimation is by ordinary least squares. Standard errors in parentheses.
The models include district fixed effects (not shown).
*p<0.1; **p<0.05; ***p<0.01.

Coattail effects in European elections

Portugal fits the ideal conditions for testing the existence of a coattail effect running from national to European elections. National elections in Portugal are held using the d’Hondt formula with closed party lists and no electoral threshold. Ignoring the two two-member districts for voters abroad, the MPs in the three national elections on which we focus, 1987, 1991 and 2004, were elected in twenty districts with magnitudes ranging from 3 (Portalegre) to 56, 50 and 48 (Lisbon) seats respectively. The average district magnitude is about 11.3. Portugal is the EU country whose electoral system for national elections has the greatest variation in district magnitude. Additionally, there are no relevant regional parties. The twenty-four MPs elected in European elections in Portugal in 1987, 1989 and 2004 and the twenty-five in 1995 were elected in a single national district using the d’Hondt formula with closed party lists and no electoral threshold.

For the first three European elections and the 2004 one we estimate model (2):

\[ ENEP_{it} = \beta_1 + \beta_2 (\log) District\ Magnitude_{it} \quad (2) \]

\( ENEP \) is the effective number of electoral parties in every European election in the twenty districts into which the electoral system is divided for national elections, and \( District\ Magnitude \) is the number of seats to be filled in every district in the national
election held before the European one. If there is no coattail effect from the national election to the European one, $\beta_2$ should be equal to 0. As there are no districts in European elections, the effective number of electoral parties should be the same everywhere. However, if there is a coattail effect with party and voter behavior being to some extent driven by the electoral system employed in national elections, $\beta_2$ should be greater than 0. District fixed effects are not included as they are very highly correlated with district magnitude.

According to our argument, we should expect the greatest (negative) $\beta_2$ to be observed in the first European election, 1987, while it should decline as time goes by because of learning and the progressive weakening of the psychological effect induced by national elections. The results of our estimates are shown in Table 3. As can be seen, in the four elections (the log of) district magnitude is always positive, but it is only statistically significant at the 0.1 and 0.05 levels in 1987 and 1989 respectively. In other words, the effective number of electoral parties in European elections declines as district magnitude in national elections increases. As expected, the greatest coefficient on (the log of) district magnitude is in 1987, and in every election after then it declines. The Wald test shows that the hypothesis that the coefficient on (the log of) district magnitude is equal in 1987 to what it is in 1994 and in 2004 can be rejected at the 0.05 and 0.01 levels respectively. In sum, there is evidence of a coattail effect running from the national to the European election which fades out as elections go by.

---

7 The 1999 election is replaced by the 2004 election, given that the election results at the district level in the former are not available.

8 If the support of parties is to some extent correlated with urbanization (i.e., district magnitude), $\beta_2$ should be greater than 0 even if there is no coattail effect.

9 When merging the four elections and clustering standard errors by electoral district to account for the non-independence in the data structure, the interactions (and the marginal effects) between (the log of) district magnitude and 1994 and 2004 are statistically significant. The results are available upon request.
### Table 3: Coordination in European elections in Portugal

<table>
<thead>
<tr>
<th>Variables</th>
<th>1987</th>
<th>1989</th>
<th>1994</th>
<th>2004</th>
</tr>
</thead>
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<tr>
<td></td>
<td>ENEP</td>
<td>ENEP</td>
<td>ENEP</td>
<td>ENEP</td>
</tr>
<tr>
<td>(log) District Magnitude</td>
<td>0.402*</td>
<td>0.307**</td>
<td>0.147</td>
<td>0.109</td>
</tr>
<tr>
<td></td>
<td>(0.214)</td>
<td>(0.128)</td>
<td>(0.120)</td>
<td>(0.075)</td>
</tr>
<tr>
<td>Constant</td>
<td>2.70***</td>
<td>2.81***</td>
<td>2.85***</td>
<td>2.46***</td>
</tr>
<tr>
<td></td>
<td>(0.49)</td>
<td>(0.30)</td>
<td>(0.27)</td>
<td>(0.16)</td>
</tr>
<tr>
<td>H0: (log) District Magnitude = 0.402</td>
<td>p = 0.470</td>
<td>p = 0.048</td>
<td>p = 0.001</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.16</td>
<td>0.24</td>
<td>0.08</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Estimation is by ordinary least squares. Standard errors in parentheses. *p<0.1; **p<0.05, ***p<0.01.

**Robustness checks**

Our argument is that coattail effects running from the more important to the less important offices create an artificial and unnecessary deflationary pressure on the number of parties when two requirements are met: (1) the electoral system employed in the election for the less important office is more permissive than that employed in the election for the more important office, and (2) the election for the more important office is held in temporal proximity to the election for the less important office. We focus on legislative elections in Chile and Portugal to show that coattail effects do not affect the psychological effects of electoral systems when either of the two requirements are not met.

In Chile, the carrying capacity of the electoral systems employed in presidential and legislative elections is the same, three competitors (Cox, 1997). In presidential elections a two-round majority runoff voting method is used, while in lower house elections, Chile uses two-seat districts. Each Chilean voter has one vote to cast, which she must cast for an individual candidate. For purposes of seat allocation, candidates are grouped into lists, each list having two candidates. Votes are counted and seats allocated in two stages. First, the votes for all the candidates on a given list are summed to give a list vote total. These vote totals are then translated into an allocation of seats among the lists by the d'Hondt PR divisor method. Second, a plurality rule is used to allocate each list's seats among that list's candidates. Typically, a Chilean list will win only one seat, in which case that seat goes to the candidate on the list receiving the greatest number of votes. The Chilean system creates a strong incentive to form coalitions and in practice
has given rise to two large alliances, the Union por El Progreso and Concertación (Cox 1997, 117-8).

As the number of viable candidacies is the same in presidential and legislative elections, the coattail effect does not create an unnecessary deflationary pressure in the legislative arena. Therefore, our expectation is that the conventional wisdom should hold and so the greatest number of wasted votes and the greatest disproportionality should be observed in the founding election. This is what Figure 4 shows. The relationship between coordination and the number of elections declines in a non-linear fashion, although stable levels of wasted votes and disproportionality are not yet reached. The results of the regressions displayed in Table 4 strongly support the conventional wisdom that the psychological effect goes in the expected direction. In the second election, the percentage of wasted votes and the level of disproportionality are respectively 6.16 and 3.51 points lower than in the founding election. The two differences are statistically significant at the 0.01 level.

Figure 4: Wasted Votes and disproportionality in legislative elections in Chile and Portugal

10 Wasted votes in Chile are those not obtained for the first two lists in the district.
11 The 1989 and 1993 legislative elections were held at the same time as the presidential elections.
Table 4: Coordination in national elections in Chile and Portugal

<table>
<thead>
<tr>
<th>Variables</th>
<th>Chile</th>
<th>Portugal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wasted Votes</td>
<td>Disproportionality</td>
</tr>
<tr>
<td>Election (ref. founding election)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>-6.16***</td>
<td>-3.51***</td>
</tr>
<tr>
<td></td>
<td>(1.45)</td>
<td>(1.35)</td>
</tr>
<tr>
<td>Third</td>
<td>-1.88</td>
<td>-2.63*</td>
</tr>
<tr>
<td></td>
<td>(1.67)</td>
<td>(1.61)</td>
</tr>
<tr>
<td>Fourth</td>
<td>-6.27***</td>
<td>-8.13***</td>
</tr>
<tr>
<td></td>
<td>(1.60)</td>
<td>(1.73)</td>
</tr>
<tr>
<td>Fifth</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>28.00***</td>
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<tr>
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<td>60</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.44</td>
<td>0.60</td>
</tr>
</tbody>
</table>

Estimation is by ordinary least squares. Standard errors in parentheses. The models include district fixed effects (not shown).
*p>0.1; **p<0.05, ***p<0.01.

In Portugal, which is a semi-presidential regime, the first two legislative elections in 1975 and April 1976 were held before the first presidential election in June 1976. Therefore, as the incentives provided by the legislative electoral system were already known by the parties and voters before the first presidential election, the psychological effect should manifest itself as the conventional wisdom predicts. That is, both the number of wasted votes and the level of disproportionality should drop in the second election. Additionally, the hypothetical coattail effect starting in the third legislative election should exacerbate coordination. The effective number of presidential candidates in the 1976 and the 1980 elections was low: 2.31 and 2.08 respectively.

As can be seen from Figure 4, the psychological effect of the legislative electoral system reduces the percentage of wasted votes and the level of disproportionality in the second election, while coordination is more pronounced once the coattail effect affects legislative elections (in the third, fourth and fifth elections). When the regression model is run, the coefficient on the second election is negative but not statistically significant. Interestingly, the most pronounced coordination is observed in the first two elections: the difference between the coefficients on the founding and second elections is greater than those between the coefficients on the second and third elections, the third and fourth elections, and the fourth and fifth elections. In sum, our argument about the importance of the timing of presidential and legislative elections is strongly supported by the results from Portugal.
Conclusions

A surprising omission in electoral system scholarship is study of the relationship between coattail effects and the political consequences of electoral systems. Using data from the first democratic elections in Chile, El Salvador, Portugal, Sao Tome and Principe, and Spain we have shown that coattail or contamination effects in legislative, regional and European elections challenge the conventional wisdom about the psychological effects of electoral systems.

When political authority is dispersed across several levels of government in a country, coattail effects running from the more important to the less important offices create an artificial deflationary pressure on the number of parties in founding elections. If the more important office is elected with a more restrictive electoral system than the less important office and in temporal proximity, parties and voters adjust their behavior to the incentives provided by the most restrictive electoral system in use in the country. As a result, some parties which are non-viable in the election for the more important office will also be strategically abandoned in the election for the less important office even when they are viable competitors there. A psychological effect limiting the number of actual competitors and/or the number of competitors for whom voters actually vote is then expected in the founding election for the less important office. This goes against conventional wisdom. We have shown that coordination failures increase in the second election due to learning once (some) actors realize that strategic behavior is no longer necessary. Coordination across elections does not take place in a non-linear, logarithmic way, but with an inverted U-shaped relationship. The conventional wisdom about electoral systems is again challenged.

The goal of our empirical analysis has been to show the consistency of our argument with evidence of diverse vertical coattail effects from different countries. In the three cases in our sample of countries in which there are not deflationary pressures induced by coattail effects (i.e., in legislative elections in Chile, Portugal and Spain), the greatest coordination failures are observed in the founding election, as the conventional wisdom predicts. However, in the four case in which there are deflationary pressure going from the more important to the less important elections, (i.e., in legislative elections in El Salvador and Sao Tome and Principe, and in regional elections in Portugal and Spain), coordination failures increase after the founding election. Although
European elections in Portugal are not directly comparable as the dependent variable is different, the pattern is similar than in the second group of countries.

Clearly, data from more districts and elections is needed to support our argument. Among the possible research questions that this paper might open up, the long-term consequences of coattail effects for electoral coordination are particularly interesting. Apart from the initial differences between party systems in which coattail effects are present and party systems in which they are not possible, it is not clear whether the behavior of rational political actors will produce a similar long-term equilibrium in the two types of party system. This question deserves attention in the election studies research agenda.

References


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**Appendix**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Chile Wasted Votes</th>
<th>Chile Disproportionality</th>
<th>El Salvador Wasted Votes</th>
<th>El Salvador Disproportionality</th>
<th>Sao Tome and Principe Wasted Votes</th>
<th>Sao Tome and Principe Disproportionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal proximity</td>
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<td>0.0006</td>
<td>0.0035</td>
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<tr>
<td></td>
<td>(0.0014)</td>
<td>(0.0014)</td>
<td>(0.003)</td>
<td>(0.0020)</td>
<td>(0.0033)</td>
<td>(0.0029)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second</td>
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<td>-3.51**</td>
<td></td>
<td></td>
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</tr>
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<td>(1.35)</td>
<td></td>
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<td>(1.65)</td>
<td>(1.61)</td>
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</tr>
<tr>
<td>Fourth</td>
<td>-6.27***</td>
<td>-8.13***</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td>(1.60)</td>
<td>(1.73)</td>
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</tr>
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<td>(1.41)</td>
<td>(1.24)</td>
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<td>56</td>
<td>28</td>
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<td>60</td>
<td>14</td>
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<td>7</td>
<td>7</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.44</td>
<td>0.60</td>
<td>0.64</td>
<td>0.69</td>
<td>0.16</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Estimation is by ordinary least squares. Standard errors in parentheses. The models include district fixed effects (not shown).

**p<0.05; ***p<0.01.