
Original Article

How to analyze second-order election effects? A refined second-order election model

Arjan H. Schakel

Department of Political Science, Maastricht University, PO Box 616, MD 6200, Maastricht,
The Netherlands.

E-mail: a.schakel@maastrichtuniversity.nl

Abstract The second-order election (SOE) model assumes that voters in subordinate elections tend to turn out in lower numbers and support opposition, small and new parties to the detriment of parties in national government. This model has been successfully applied to European and subnational elections taking place in Western Europe but it fares far less well in explaining electoral outcomes in Central and Eastern Europe (CEE). I refine the model by differentiating between six party types (large and small government and opposition parties and new and no-seat parties) and by introducing the state of the economy (economic growth, inflation and unemployment) as explanatory variable instead of time elapsed between first- and second-order elections. An analysis on 488 regional elections taking place in 6 CEE countries shows that second-order effects relate to the state of the economy that has a different impact depending on party type. These results strongly suggest that regional elections in CEE are second-order but in order to be able to trace SOE effects the SOE model needs to be refined.

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Introduction

Political scientists generally assume that subnational and supranational elections are best understood in some way as a subordinate function of national-level politics. This assumption is captured by the second-order election (SOE) model which lies at the basis of many studies on non-national elections. Reif and Schmitt (1980) introduced the SOE model in their study on the first election to the European Parliament (EP) in 1979. These results were not to be understood as the single outcome of one EP-wide election, but rather as the aggregation of ‘simultaneous national SOEs’. Reif and Schmitt observed that turnout tended to be low, that parties in national government were likely to lose vote share while opposition, small and new parties gained votes.



This electoral behavior comes about because, as Reif and Schmitt (1980, pp. 8–9) proposed, more is ‘at stake’ in elections that determine the composition of national governments, that is, ‘first-order’ elections, than in ‘second-order elections’. Reif and Schmitt (1980, p. 10) also noted that SOE effects follow a cyclical logic; they are strongest at the mid-point between elections that produce national governments, and less strong soon after, or in the run-up to, a national election.

This conceptual framework was foundational for the study of EP elections (Norris, 1997), and remains the starting point for EP elections analysis today (Schmitt, 2004; Clark and Rohrschneider, 2009; Marsh, 2009; Hix and Marsh, 2011). Reif and Schmitt (1980, p. 8) also proposed that second-order electoral behavior might be observed in the ‘plethora of “SOEs”’ that are variously held, that is: ‘by-elections, municipal elections, various sorts of regional elections, those to a “second chamber”’. This ‘invitation’ has been taken up by many scholars studying subnational elections, in particular by scholars who study regional elections taking place in the United Kingdom (Heath and Taylor, 1999; Bromley, 2006), but also in France (Duporier, 2004), Germany (Jeffery and Hough, 2001), Italy (Tronconi and Roux, 2009) and Spain (Pallarés and Keating, 2003).

One of the striking findings in the literature is that the SOE model does not seem to apply in Central and Eastern Europe (CEE) as well as in Western Europe (Schmitt, 2004; Koepke and Ringe, 2006; Hix and Marsh, 2007). In addition, Koepke and Ringe (2006) apply the SOE model to EP as well as local elections and they observe that the SOE model does not fare well in both types of elections, whereas Jeffery and Hough (2006) find that most subnational elections in Austria, Belgium, Germany, Italy, Spain and the United Kingdom do appear to be second-order. In CEE, government parties do not consistently lose vote share (Koepke and Ringe, 2006), and when they do lose votes (Stefanova, 2008), these losses do not follow the cyclical pattern as we may observe for Western European countries (Schmitt, 2004). These results are especially striking because individual level survey data suggests that voters in the new democracies make their vote choices in SOEs in ways that are very similar to voters in the more established democracies (Van der Brug *et al.*, 2008).

In this article I argue that the SOE model does apply to elections taking place in the CEE, but the SOE model is in need of further specification with regard to explaining dynamics in SOEs. By tracing back the conceptual ‘roots’ of the SOE model, it becomes clear that the timing of the SOE in the national election cycle was not a central part of the model until the seminal work by Reif and Schmitt (1980). Rather, vote share losses and gains can be related to the state of the economy (unemployment, inflation and economic growth) at the time of the SOE.

This article aims to develop the SOE model by focusing on 488 regional elections taking place in six CEE countries. I propose to advance the SOE model by, first, differentiating between party types and, second, by distilling several factors that may impact on the magnitude of SOE effects. In the analysis I look at vote share losses and gains for six party types (largest versus smaller government and opposition

parties and two types of small parties: new and no-seat parties) and relate vote share gains and losses to the national election cycle and state of the economy. The analysis shows a very limited role for the national election cycle but the state of the economy has great explanatory power. These results suggest that the SOE model does apply in CEE countries but in order to be able to ‘trace’ SOE effects the SOE model needs to be refined.

The next section I discuss the SOE model in detail by summarizing the literature on SOE effects and by discussing its conceptual history. Regional elections taking place in Croatia, the Czech Republic, Hungary, Poland, Romania and the Slovak Republic are introduced in the third section as ideal-type SOEs that can be studied in depth in order to advance the SOE model. The fourth section presents the results of a multivariate analysis, and the final section concludes.

A Refined Second-Order Election Model

The term Second-Order Election (SOE) was first introduced by Reif and Schmitt (1980) who analyzed the first election to the European Community (EC) in 1979. They found that the electoral results of this election did not reflect the ‘real’ balance of forces in the then nine member states but rather could be seen as the aggregation of ‘simultaneous national SOEs’. Each of these national SOEs was ‘determined more by the domestic political cleavages than by alternatives originating in the EC’ (Reif and Schmitt, 1980, p. 3). After the second EP election in 1984, Reif (1985) even concluded: ‘what is important is the political situation of the first-order arena at the moment when the second-order election is being held’ (p. 8). An election that produces national governments is considered by voters to be more important because there is more ‘at stake’ than in a SOE. As less is ‘at stake’, Reif and Schmitt (1980, pp. 9–10) propose that voters behave differently in SOEs:

- voters tend to turn out in lower numbers;
- voters tend to support small or new parties;
- parties in national government lose, whereas national opposition parties gain favor;
- moreover, voters’ propensity to behave in these ways follows a cyclical logic; they are most likely to do so at the mid-point between elections that produce national governments, and less likely to do so soon after, or in the run-up to, an election that produces a state-level government.

The SOE model lies at the basis of many studies on elections to representative bodies at the supranational and the subnational level. Studies on European elections have shown that the SOE model is helpful in explaining electoral outcomes in elections to the EP (Marsh and Mikhavlov, 2010; Hix and Marsh, 2011). Similar to studies on European elections, regional election studies confirm several predictions



of the SOE model. Regional turnout is lower than for national elections (Pallarés and Keating, 2003; Schakel and Dandoy, 2014), government parties tend to lose vote share, whereas opposition, new and small parties gain in regional elections (Jeffery and Hough, 2003; Pallarés and Keating, 2003), and the extent to which government parties lose and opposition parties win vote share varies according to the placement of the regional election in the national electoral calendar (Jeffery and Hough, 2001).

Despite the general confirmation of the SOE model a more ‘nuanced picture’ has also arisen. The applicability of the SOE model to the EU member states joining in 2004 is less straightforward (Schmitt, 2004; Koepke and Ringe, 2006). Government parties tend to lose vote share (Hix and Marsh, 2011), but these losses do not follow the cyclical pattern as we observe for Western European countries (Schmitt, 2004). In addition, government parties do not lose vote share equally across the member states and the punishment effect is more noticeable in bipolar party systems (Reif, 1985) and countries with genuine alternation of parties in government (Marsh, 1998). Similarly, the extent to which regional elections may be considered second-order varies substantively (Schakel and Jeffery, 2013). Jeffery and Hough (2003) found only partial confirmation that regional elections are second-order in the case of Germany and Spain where the authors observe a reduced tendency to follow the national electoral cycle and a growing dissimilarity of regional and national election results. Similarly, Tronconi and Roux (2009) conclude in the case of the Italian regions that the degree to which regional elections may be considered to be second-order depends on the decade of observation, and Pallarés and Keating (2003) observe that Spanish governing parties generally lose regional elections, but national opposition parties do not consistently win.

In sum, many studies found that the SOE model applies in different degrees to types of elections and contexts. On the one hand, two predictions of the SOE model seem to apply universally: turnout is low and government parties lose vote share in non-national elections. On the other hand, the extent to which opposition parties win vote share and the way in which government party vote share losses relate to the national election cycle seems to vary. This has led authors to think about how to further differentiate the ‘hierarchy’ between various types of elections. For example, the analysis on two SOEs induces Heath *et al* (1999, p. 391) to suggest that ‘if the elections to the European Parliament are regarded as second-order, then we might think of elections to local councils as “one and three-quarters order”’ (see also Rallings and Thrasher, 2005; Skrinis and Teperoglou, 2008). However, rarely do authors question the specification of the SOE model itself. The underlying assumptions behind the SOE model can be revealed by tracing back the conceptual history of the SOE model (Schakel and Jeffery, 2013).

Reif (1997, p. 115) admits that his inspiration for the SOE model was based on the work done by a German political scientist, Dinkel (1977), on regional (*Land*) elections in Germany. Dinkel (1977) analyzed regional (*Land*) elections held in the 1970s and observed a pattern of loss of support for the parties in the German federal

government coalition, and the biggest losses of support were incurred at the federal mid-term. Subsequently, Dinkel (1977, p. 357) concluded that *Land* elections were significantly influenced by the superordinate constellation in the *Bundestag* (lower chamber of parliament). Dinkel's ideas were in turn shaped by electoral studies conducted in the 1970s, in particular those studies on by-election results in the United Kingdom, and in the relationship of the results of mid-term congressional elections to presidential elections in the United States. The UK and US examples revealed persistent patterns of dips in support for the UK governing party and the party of the US President at mid-term (Miller and Mackie, 1973; Tufte, 1975; Stimson, 1976).

While 'translating' the US literature to the European context, Reif and Schmitt needed to amend the 'mid-term election model'. On the one hand, Reif and Schmitt could adopt the 'mid-term election model' to explain the uniform trend of government party vote share losses across the member states in the first European-wide election. On the other hand, they were also confronted with electoral outcomes that seem to result from the particular characteristics of multiparty systems and the non-fixed electoral cycles on the European continent. Reif and Schmitt observed that in addition to opposition parties, small and new parties tended to gain vote share. Furthermore, the losses for government parties seemed to be related to the timing of the European election in the national election cycles. These observations were incorporated into an amended 'mid-term election model' which was subsequently relabeled as a 'Second-Order Election model'. As a result the SOE model contained two new elements as compared with the older 'mid-term election model'. First, new and small parties gain vote share in addition to opposition parties and, second, the extent of vote share loss for the party in statewide government is related to the placement of the SOE in the national election cycle.

The SOE became the standard model to study non-national elections and many of the studies applying the SOE model look at two outcomes. First, they look at the presence and magnitude of aspects of electoral behavior considered to be indicative of SOEs: government parties lose vote share, whereas small, new and opposition parties win vote share. Second, they observe in how far the magnitudes of these SOE effects relate to the national election cycle. A number of authors (for example, Manow, 2005; Hix and Marsh, 2007) have studied the effects of party ideology, electoral systems, government alternation and public opinion to see whether this would lead to a better fit of the model but the general conclusion is that 'context was not a source of significant difference' (Hix and Marsh, 2007, p. 507). In this article I claim that SOE model itself is in need of further refinement. This claim rests on two thoughts.

The 'mid-term election model' has been developed for elections taking place in Germany, the United Kingdom and the United States, which are countries with a two or two-and-a-half party system (more recently Germany cannot be considered to be a two (-and-a-half) party system). In these political systems a punishment vote for the government party almost automatically results in an electoral gain for the party in



opposition. Attribution of government responsibility is relatively simple in two (-and-a-half) party systems because there is one party in government and one party in opposition. In many European countries multiparty systems are the norm and it is clear that small and new parties win vote share in addition to opposition parties. But which government party do voters want to punish in oversized majority governments and which party do voters want to support when there is a surplus of opposition parties? In addition, how does a protest vote look like in highly volatile party systems which can be found in CEE countries? In other words, a punishment vote for the party in government and the reward vote for non-governmental parties can be attributed by voters to different party types depending on the characteristics of the party system.

Reif and Schmitt (1980) observed a link between the national election cycle and vote share loss for the party in national government, but they also indicated that the ‘real’ driving cause for the cyclical pattern of government party support is the relatively higher mobilization of opposition support (p. 10; see also Lau, 1985; Jeffery and Hough, 2009). Following Hirschman’s (1970) concept of ‘voice’, Reif and Schmitt (1980, p. 10) suggest that the cause may be found in the relatively higher mobilization of opposition support by voters who have become disappointed by specific policies of the government and want to apply pressure on the government. In other words, Reif and Schmitt (1980) did not think it was the national election cycle *per se* that was driving SOE dynamics. Rather, time elapsed between first- and second-order election is used as a ‘proxy’ to tap into the popularity of the parties in national government. Despite the fact that many SOE model scholars acknowledge that it is not time itself that is driving the ‘punishment’ vote, they nevertheless resort to ‘cycle’ (Schmitt, 2004) and ‘timing’ variables (Hix and Marsh 2007, 2011).

In order to better grasp SOE dynamics, I propose to study SOEs according to a refined model that consists of two amendments. First, I differentiate between six party types. The idea behind the categorization of parties is that – especially in multiparty systems – it better ‘captures’ the reward and punishment vote that result from party popularity. The parties in statewide government and opposition are separated into two categories. The largest parties are differentiated from the other (and smaller) government and opposition parties that will allow for an assessment on whether the largest party in national government tends to attract the ‘punishment vote’ and the largest party in national opposition will be the beneficiary of the ‘reward vote’. Typically the punishment vote is studied by lumping all government parties together. Studies on subnational and supranational elections have found that the punishment effect is more noticeable in bipolar party systems (Reif, 1985; Hix and Marsh, 2007; Schakel and Jeffery, 2013). This is explained by Marsh (1998, p. 597) because the ‘relationship between elections and government formation is extremely opaque’ in multiparty systems. However, it might also be the case that some parties of the same governing coalition are winning, whereas others are losing vote share with an overall, aggregate result of muted SOE effects. The largest party in

government often delivers the prime minister who leads the government and who often attracts most media attention. Similarly, the politicians of the largest opposition party may be more 'visible' than those of the smaller opposition parties.

The other two categories of parties concern small parties that are differentiated into 'new' parties and parties that have no seat in national parliament. New parties win votes in the SOE but did not participate in the preceding national election. No-seat parties did participate in the preceding national election but failed to win a seat in national parliament. Small government and opposition parties are categorized into the 'other' category of government and opposition parties. Small parties are often defined according to their electoral strength but it is doubtful whether these parties tend to win vote share because of their size or because they are in national opposition or whether they are newly established parties. Small parties can even be invited to form part of a government coalition which just falls short of majority support in national parliament. In other words, when small parties tend to win vote share, we do not know whether it is because of their electoral size, their governmental or oppositional status, whether they are newly established parties or whether they are part of the extra-parliamentary opposition.

The second amendment to the SOE model is that vote share swings are directly related to the state of the economy (unemployment, inflation and economic growth) rather than time elapsed between first- and second-order elections. It is assumed that the state of the economy is a better 'proxy' for government party popularity than 'time' since the economy may be related to the national election cycle but not necessarily so (see also Kousser, 2004). Manow (2005) uses the bi-annually collected national vote intention question of the Eurobarometer surveys as a measure of party popularity and he finds that it is a strong predictor for the actual vote share shifts between national and European elections. Although the use of a national vote intention question is perhaps the closest measure of party popularity we can obtain, I do not prefer to use it for two reasons. First, individual survey data is by-and-large missing for most SOEs beyond European elections. Second, vote intention does not tell us anything about the reasons for government popularity and in order to understand SOE dynamics we need to understand its causes as well.

The inclusion of economic variables is inspired by a number of bodies of literatures. First, and foremost, concerns the literature that provides the conceptual roots of the SOE-model. Most authors looking at SOEs in the United States often relate the magnitude of the loss for the presidential party to the performance of the President and his administration in the management of the economy (Stein, 1990; Carsey and Wright, 1998; Chubb, 1998). Second, recent studies on elections to the EP also seem to suggest that the extent of SOE behavior depends on voters' evaluations of the economy and unemployment (Jesuit, 2003; Kousser, 2004; Clark and Rohrschneider, 2009). Third, there is a rich literature on retrospective or economic voting literature (Lewis-Beck and Stegmaier, 2000), and these kinds of models have been successfully applied to presidential and parliamentary elections in CEE



(Tucker, 2006). Fourth, there is a growing literature on the electoral costs of governing for different party types (Kitschelt, 1999; Pereira and Mueller, 2004; Akkerman and de Lange, 2012).

In order to explore SOE dynamics in more detail, I propose to study regional elections taking place in CEE which, as argued in the next section, present us with ‘ideal’ cases to study the explanatory power of the refined SOE model.

Regional Elections in CEE

Table 1 reports the countries, regions and elections under study. Case selection is discussed in the appendix, which is available online (www.arjanschakel.nl).

Regional elections in CEE are useful to study SOE dynamics because regional government is relatively weak (see Online Appendix), turnout is low and government parties tend to lose vote share. Figure 1 reports average turnout – measured as the percentage of the electorate who turned out at the ballot box – in national and regional elections.

Turnout in regional elections in the CEE is (exceptionally) low and regional turnout is (much) lower than national turnout except in Poland. Regional turnout barely exceeds 50 per cent in Croatian, Hungarian and Romanian regional elections. Turnout figures for Poland lie around 45 per cent, whereas the lowest turnout figures can be found in the Czech Republic (35 per cent) and Slovakia (22 per cent). These are low turnout figures when compared with Western European countries. The provincial elections in the Netherlands and some cantonal elections in Switzerland report turnout figures in the 50 per cent range but hardly ever go below (Dandoy and Schakel, 2013).

Second, government parties tend to lose and opposition and small parties tend to gain vote share in regional elections in CEE countries. Table 2 displays vote share

Table 1: Countries, regions, elections, parties, and observations

| <i>Country</i> | <i>Regional tier</i> | <i>N</i> <i>regions</i> | <i>Election</i> <i>period</i> | <i>N</i> <i>elections</i> | <i>N</i> <i>parties</i> | <i>N</i> <i>vote</i> <i>share swings</i> |
|-----------------|----------------------|----------------------------|----------------------------------|------------------------------|----------------------------|---|
| Croatia | Zupanija | 21 | 1997–2009 | 105 | 35 | 774 |
| Czech Republic | Kraje and Prague | 14 | 2002–2010 | 42 | 21 | 316 |
| Hungary | Megyek | 20 | 1994–2010 | 100 | 50 | 676 |
| Poland | Wojewodztwa | 16 | 1998–2010 | 64 | 26 | 441 |
| Romania | Judete | 42 | 1996–2008 | 168 | 34 | 2035 |
| Slovak Republic | Samospravne kraje | 8 | 2001–2009 | 24 | 16 | 223 |
| | Total | 121 | | 488 | 182 | 4465 |

Note: See the Online Appendix for sources of the electoral data.

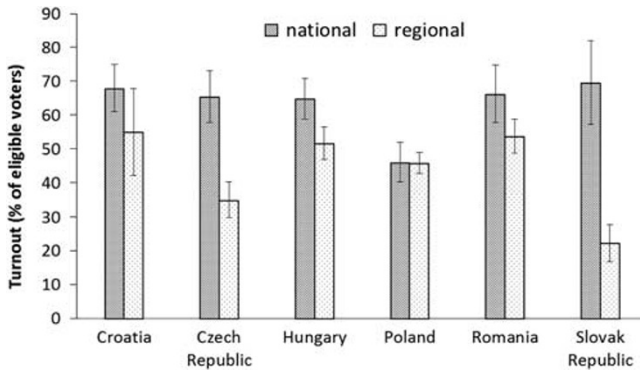


Figure 1: Turnout in regional and preceding national elections.

Notes: Shown are average regional turnout rates and standard deviations for regional and preceding national elections. See Table 1 for included countries, regions and elections.

Table 2: Change in vote share between regional and preceding national elections

| | <i>Government parties</i> | | | <i>Opposition parties</i> | | | <i>Small parties</i> | | |
|-----------------|---------------------------|-------------|--------------|---------------------------|-------------|--------------|----------------------|------------|----------------|
| | <i>All</i> | <i>Main</i> | <i>Other</i> | <i>All</i> | <i>Main</i> | <i>Other</i> | <i>All</i> | <i>New</i> | <i>No seat</i> |
| Croatia | -1.90 | -4.52 | 2.62 | 1.11 | -0.50 | 1.57 | 0.47 | 1.70 | -1.19 |
| Czech Republic | -16.93 | -15.25 | -1.68 | 8.92 | 4.17 | 4.75 | 6.56 | 5.51 | 1.05 |
| Hungary | -4.78 | -2.27 | -2.51 | -3.94 | -3.49 | -0.44 | 3.06 | 4.27 | -1.32 |
| Poland | -7.09 | -6.76 | -0.33 | 4.83 | -1.91 | 6.74 | -0.61 | 3.58 | -4.19 |
| Romania | -1.72 | -4.62 | 2.90 | 0.11 | -4.68 | 4.79 | 1.61 | 3.32 | -2.12 |
| Slovak Republic | -14.98 | -1.49 | -13.49 | -2.96 | 1.62 | -4.58 | 3.65 | 5.50 | -2.39 |
| Total | -8.10 | -6.30 | -1.80 | 1.53 | -0.82 | 2.44 | 3.28 | 4.09 | -1.56 |

Notes: Shown are average vote share swings between a regional election and the preceding national election for six party types. See Table 1 for included regions and election periods.

swings between regional and previous national elections for six different categories of parties. Government parties are parties that were in national government at the time when the regional election was held. Opposition parties are represented in national parliament but are not part of executive government. The difference between ‘main’ and ‘other’ government and opposition parties is the difference between the largest and the other (smaller) parties. Small parties are subdivided into new parties and no-seat parties. New parties did not participate in the preceding national election, whereas no-seat parties did participate in the preceding national election but did not win a seat in national parliament. In practice it appears that new and no-seat parties obtain national vote shares of less than 6 per cent.



The pattern in Table 2 is clear, regional elections in these six countries tend to produce results as expected by the SOE model. Government parties, especially the largest one, lose vote share, whereas smaller opposition and new parties gain vote share. However, the differentiation of vote share swings according to party types also reveals some interesting variation. The smaller government parties tend to win vote share in Croatia and Romania, and are the smaller government parties in the Slovak Republic that tend to lose most vote share. Only in the Czech Republic and the Slovak Republic does the largest opposition party tend to gain vote share; in the other four countries the largest opposition party faces the fate of electoral loss while the smaller opposition parties attract the vote. Finally, by definition new parties gain vote share in regional elections but the other subcategory of small parties, those who did not win a seat in parliament at the preceding national election, loses vote share except in the Czech Republic.

By ‘eye-balling’ the electoral data we come to mixed conclusions. On the one hand, regional elections in CEE tend to conform to the expectations of the SOE model. Parties in government tend to lose vote share, whereas opposition and small parties tend to gain vote share. On the other hand, vote share gains and losses vary to a great extent across countries and party type and some government parties may even gain vote share, whereas some opposition and small parties may lose vote share. The next section presents and discusses the results of regression models in order to explore more in depth the dynamics of regional elections in CEE.

Multivariate Analysis

The multivariate analysis will relate vote share swings between regional and preceding national elections for six party types to our main independent variable of interest, namely, the state of the economy. Vote share swings are calculated by taking the vote share of a particular party obtained in a regional election and subtract it from the regional vote share gained in the previous national election.

The state of the economy is tapped by three variables: economic growth, inflation and unemployment. Economic growth is operationalized as percentage change between the regional election year and the preceding year; inflation is operationalized as the percentage change in average consumer prices; and unemployment is operationalized as the percentage of unemployed people in the year of the regional election. When the state of the economy deteriorates, which is indicated by low or negative economic growth and/or an increase in inflation and unemployment, we expect government parties to lose vote share and opposition and small parties to gain. Data is obtained from the International Monetary Fund (IMF) (2012) and the 1993 Croatian elections are excluded because of exceptional hyperinflation (1500 per cent) in that particular year (see Table 1).

In order to explore whether the state of the economy variables have a different effect on party type, I interact party type dummies with the state of the economy variables. In line with the advice of Brambor *et al* (2006), I include the dummy as well as the interaction variable for each party type except for the main government party which will serve as a reference category.

Studies on EP elections have also shown that party size matters as well: small parties should gain and large parties should lose vote share but medium size parties should remain stable (Marsh, 1998; Hix and Marsh, 2007, 2011). To assess this cubic relationship a party size variable – which is the regional vote share of the preceding national election – plus a party size squared and a party size cubed variable are introduced into the models.

A multivariate analysis on vote share swings should account for vote shares obtained by electoral alliances, which is a common phenomenon in CEE. In this study 35 per cent of the vote share swings involve an electoral alliance. Unfortunately, the seat distribution cannot be used to allocate vote share across the partners of an electoral alliance because seat distributions are not reported in official election data. A number of authors have proposed alternative strategies in order to account for electoral alliances. Bochsler (2010) assigns vote shares to the first party on the list and Koepke and Ringe (2006) distribute vote shares equally among the number of participants in the electoral alliance. These strategies are not preferred because the parties involved in an electoral alliance may differ substantially across the regions but often one (senior) party participates in all electoral alliances across the regions. For example, in the 1997 county assembly elections in Croatia the HDZ, a senior partner in electoral alliances, won absolute or relative majorities in 20 out of 21 regions. Therefore, my approach is to assign the vote share for the electoral alliance to the senior party (that is, the party that obtained the largest vote share in the preceding national/regional election) and to include dummy variables for four alliance strategies that can increase or decrease vote share swings.

Vote shares in national elections can be higher than for regional elections because the party was in an electoral alliance in the national but not in the regional election (in alliance national) or the party was in alliance in the regional election and its vote share is ascribed to another party but the party was not part of an alliance in the national election (out alliance national). In both cases I expect to observe a negative vote share swing. In analogy, vote shares can be higher in regional elections than in national elections because the party was in an alliance in the regional but not in the national election (in alliance regional) or the party was in alliance for the national election and its vote share is ascribed to another party but the party is not part of that alliance in the regional election (out alliance regional). In these two cases I expect to observe a positive vote share swing. In the models presented below I include dummies for each electoral alliance strategy as control variables. The Online Appendix provides more detail on electoral alliances.

Following Hix and Marsh (2007), OLS is the preferred method despite the limited range of our dependent variable. Advanced solutions for dealing with variations in



(multi-) party performance across regions and countries (Tomz *et al*, 2002) are impractical because party systems and the number of parties vary hugely across regions. In order to control for the clustering of the data the models present robust standard errors clustered by regional election (one party's gain is another party's loss) and because regions and regional elections are clustered within countries I include country dummies (Croatia is the reference category). An additional advantage of including country dummies is that these models focus on within-country and between-region and between-election variation.

Table 3 presents the results for three models, one model for each state of the economy variable. In each model the main government party serves as a reference category and the state of the economy variable is interacted with the party type dummies.

The β coefficients for the state of the economy variables reflect the effects on main government parties. A 1 percentage point increase in GDP growth rate leads to a 0.39 percentage point increase in vote share. A deterioration of the economy leads to negative vote share swings for main government parties. A 1 percentage point increase in inflation and in unemployment rate leads to a vote share loss of, respectively, 0.31 and 0.49 percentage points. An assessment of the impact of the state of the economy on the other party types requires a consideration of the party type dummy and its interaction with the economy variable. In addition, Brambor *et al* (2006) recommend exploring the interaction effects along the whole range of values on the 'modifying' variable. In Figures 2a–2c I explore the effects of GDP growth rates, inflation and unemployment on vote share swings for five party types moving from the minimum to the maximum score on the state of the economy variables (descriptive statistics are provided in an Online Appendix). As the main government party is the reference category the effects should be interpreted relative to the vote share swing of the main government party. Statistical significance ($P < 0.05$; two-tailed) of the interaction effect is indicated by connected dots, whereas dots which are not connected to each other indicate that the interaction effect does not reach statistical significance.

When the state of the economy deteriorates – that is, negative GDP growth rates and positive inflation and unemployment rates – main opposition and new parties appear to win most vote share. Vote share gains for main opposition and new parties may increase up to, respectively, 10 and 6 per cent when GDP growth rates are negative. Main opposition and new parties also gain vote share when GDP growth rates turn positive and this indicates that SOE effects may also occur when the state of the economy improves. Positive vote share swings for main government parties in times of economic growth seems to be to the detriment of other government and no-seat parties, whereas other opposition parties do not seem to be affected by GDP growth rates.

When inflation and unemployment rates increase, it is again main opposition and new parties that gain most vote share, but, in contrast to GDP growth rates, positive

Table 3: A refined Second-Order Election model

| | <i>GDP growth</i> | | | <i>Inflation</i> | | | <i>Unemployment</i> | | |
|-------------------------|-------------------|-----------------------|---------------------|------------------|-----------------------|---------------------|---------------------|-----------------------|---------------------|
| | β | <i>Standard error</i> | <i>Significance</i> | β | <i>Standard error</i> | <i>Significance</i> | β | <i>Standard error</i> | <i>Significance</i> |
| State of the economy | 0.39 | 0.18 | * | -0.31 | 0.02 | ** | -0.49 | 0.11 | ** |
| Government other | 0.09 | 1.16 | — | -5.87 | 0.84 | ** | -6.66 | 1.45 | ** |
| Interaction economy | -0.40 | 0.18 | * | 0.27 | 0.03 | ** | 0.56 | 0.13 | ** |
| Opposition main | 5.65 | 1.33 | ** | -2.65 | 1.02 | ** | -3.48 | 1.90 | — |
| Interaction economy | -0.80 | 0.25 | ** | 0.35 | 0.04 | ** | 0.64 | 0.17 | ** |
| Opposition other | 0.55 | 1.13 | — | -3.52 | 0.88 | ** | -5.28 | 1.38 | ** |
| Interaction economy | -0.07 | 0.18 | — | 0.24 | 0.03 | ** | 0.61 | 0.12 | ** |
| New | 3.63 | 1.31 | ** | -3.16 | 0.94 | ** | -1.81 | 1.49 | — |
| Interaction economy | -0.68 | 0.19 | ** | 0.28 | 0.03 | ** | 0.31 | 0.12 | ** |
| No representation | -1.84 | 1.21 | — | -8.05 | 0.84 | ** | -6.47 | 1.34 | ** |
| Interaction economy | -0.32 | 0.18 | — | 0.31 | 0.02 | ** | 0.38 | 0.11 | ** |
| Party size | -0.46 | 0.05 | ** | -0.42 | 0.05 | ** | -0.46 | 0.05 | ** |
| Party size ² | 0.00202 | 0.00108 | — | 0.00163 | 0.00105 | — | 0.00198 | 0.00108 | — |
| Party size ³ | 0.00005 | 0.00002 | ** | 0.00001 | 0.00002 | — | 0.00005 | 0.00002 | ** |
| Out alliance national | -5.60 | 0.34 | ** | -5.97 | 0.35 | ** | -6.26 | 0.34 | ** |
| In alliance national | -0.95 | 0.41 | * | -0.14 | 0.39 | — | -0.93 | 0.44 | * |
| Out alliance regional | 3.28 | 0.40 | ** | 3.59 | 0.39 | ** | 3.47 | 0.42 | ** |
| In alliance regional | 3.78 | 0.46 | ** | 3.92 | 0.46 | ** | 3.92 | 0.47 | ** |

| | | | | | | | | | |
|-----------------------|-------|------|----|-------|------|----|-------|------|----|
| Dummy Czech Republic | 0.21 | 0.28 | — | 0.46 | 0.29 | — | 0.22 | 0.34 | — |
| Dummy Hungary | 0.52 | 0.24 | * | 1.28 | 0.23 | ** | 0.47 | 0.28 | — |
| Dummy Poland | 1.00 | 0.26 | ** | 1.29 | 0.26 | ** | 1.44 | 0.24 | ** |
| Dummy Romania | -0.62 | 0.22 | ** | 0.94 | 0.22 | ** | -0.42 | 0.31 | — |
| Dummy Slovak Republic | 0.17 | 0.39 | — | 0.48 | 0.41 | — | 0.56 | 0.40 | — |
| Constant | 2.09 | 1.27 | — | 7.42 | 0.88 | ** | 7.93 | 1.45 | ** |
| <i>F</i> | 106** | — | — | 109** | — | — | 113** | — | — |
| <i>R</i> ² | 0.35 | — | — | 0.37 | — | — | 0.35 | — | — |
| Root MSE | 6.27 | — | — | 6.16 | — | — | 6.29 | — | — |

Notes: * $P < 0.05$; ** $P < 0.01$. Shown are the results of Ordinary Least Square regression with clustered corrected (by regional election, $N = 482$, the Croatia elections of 1997 are excluded) standard errors. The dependent variable is party vote share swings between regional and previous national elections ($N = 4465$). Government main is the reference category for the party dummies and interactions and Croatia is the reference category for the country dummies. See Table 1 for included regions and election periods and see the Online Appendix for sources and descriptive statistics of the variables.



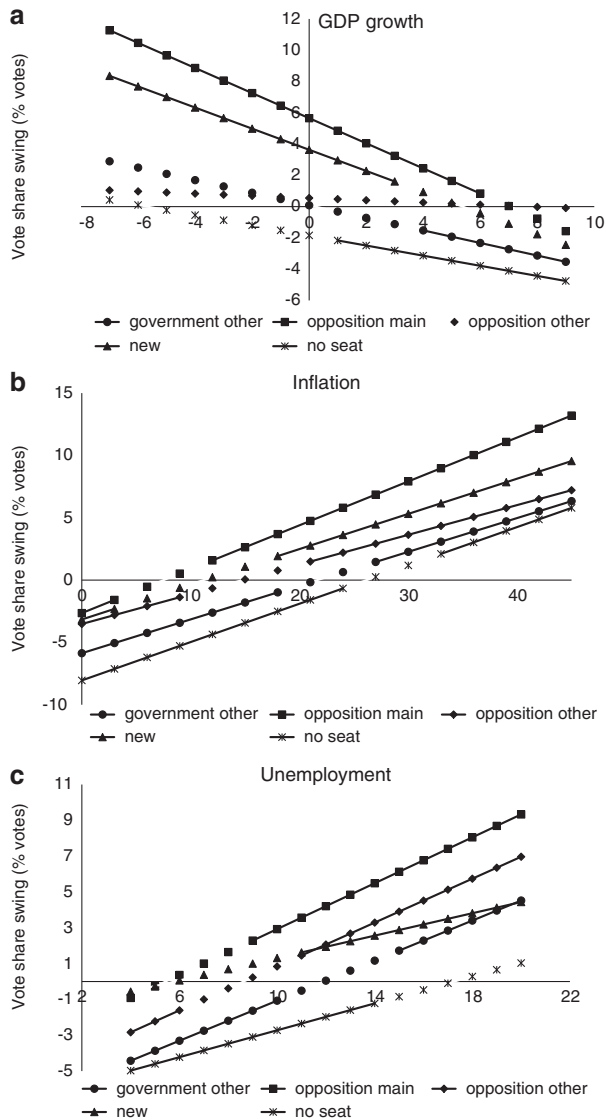


Figure 2: The effect of the state of the economy on vote share swings for five party types. (a) Shown are the effects of GDP growth, (b) inflation and (c) unemployment.

Notes: Shown are the effects of GDP growth rates, inflation and unemployment on party vote share swings between regional and preceding national elections. Estimates are based on the results presented in Table 3 for the party dummies and their interaction effects with economy variables. The connected dots indicate statistically significant effects ($P < 0.05$) which are calculated according to the procedure suggested by Brambor *et al.* (2006).



vote share swings may also be observed for other opposition parties. In case of dire economic circumstances – that is, when inflation is above 25 per cent and/or unemployment rates exceed 15 per cent – other government and no-seat parties gain vote share to the detriment of main government parties. However, in more favorable economic circumstances – that is, when inflation is below 20 per cent and unemployment falls below 10 per cent – main government parties gain vote share, whereas no-seat, other government and other opposition parties lose vote share. In the discussion I will consider possible causes underlying varying vote share swings across party types.

Turning to the control variables we may observe that the β coefficients for all four electoral alliance dummies have their hypothesized sign and attain statistical significance in most of the models, which indicates that it is quite important to consider electoral alliances while studying election outcomes in CEE. Depending on the particular alliance strategy vote share swings may range from -6 percentage points up to $+4$ percentage points. The statistically significant country dummies indicate that there is substantial cross-country variance in vote share swings that cannot be further explored here because the number of included countries is quite low (possible explanatory variables are contextual and largely time invariant factors such as electoral rules and thresholds).

The results presented in Table 3 have been subject to a number of robustness checks and in an Online Appendix I report on the results of these models. The robustness models include variables that tap into the timing of a regional election relative to the national election cycle (Schmitt, 2004; Hix and Marsh, 2007), and I also ran models whereby vote shares that involve party alliances are excluded. Furthermore, I ran models which include state of the economy variables that are measured at the regional level and I conducted a jackknife analysis. Overall, the results for the state of the economy variables and their interactions with the party type dummies remain highly robust.

Discussion

The impact of the state of the economy clearly affects each party type to a different extent. The main beneficiaries of a worsening economy are main opposition and new parties that gain vote share. When the economy deteriorates further other opposition, other government and even no-seat parties will gain vote share. These patterns can be explained by two processes. Voters who are dissatisfied with the current national government tend to vote for main opposition and new parties because these are the party types that ‘embody’ the strongest signal of dissatisfaction to the main government party. It is the main (largest) party that attracts the ‘punishment’ or ‘rewarding’ vote because these are the parties that tend to attract most media attention. A new party finds its origin with dissatisfaction with the present party offer and thereby this

party type constitutes the ‘natural voice’ for voter discontent. When the economy deteriorates further, other government and no-seat parties gain vote share as well. Although these parties are often not perceived as viable government alternatives and tend to not appear often in the media, the dissatisfaction with current government may reach such high levels that voters also turn to these parties to voice their discontent.

The results presented in this article show that the state of the economy is key to our understanding of SOE effects. This finding has important implications because it suggests that the ‘mid-term US congress’ election model, the SOE model and the ‘referendum voting’ model are part of the same ‘family’ of models, which assumes that voters are in large part driven by the state of the economy. An overview of the conceptual history of the SOE model also indicates that the SOE model shares its basic assumptions with US scholarship on mid-term elections, which also emphasizes the state of the economy as explanatory variable for the magnitude of the mid-term loss for the presidential party.

This article presents a specified SOE model which differentiates between six party types and which highlights the role of the state of the economy as driving factor for SOE effects. However, this is not the first attempt of further specifying the SOE model. Hobolt *et al* (2008) argue that government parties lose vote share in European elections because they tend to be more pro-European than the typical voter. They also find that voters are more likely to vote against governing parties the more the campaign context primes Eurosceptic sentiments. Another refinement of the SOE model is presented by Weber (2011) who finds that the timing of a EP election in the national electoral cycle affects different groups of voters differently. All these refinements of the models do not necessarily exclude each other, as, for example, Weber (2007) shows. In his model the cyclical pattern of government party losses may arise out of an interaction between retrospective voting on the (economic) performance by government and the capacities of government parties to mobilize their supporters. This clearly indicates that both micro-level and macro-level approaches for accounting for SOE dynamics should continue.

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About the Author

Arjan H. Schakel is Assistant Professor at Maastricht University and his research interests span the topics of federalism, multilevel governance, regional government, regional elections and regionalist parties. He is co-author of *The Rise of Regional Authority* (Routledge, 2010) and co-editor of *Regional and National Elections in Western Europe* (Palgrave Macmillan, 2013). His research has appeared in journals such as *Acta Politica*, *Comparative Political Studies*, *European Journal of Political Research*, *Governance*, *Party Politics*, *Regional Studies*, *Regional and Federal Studies* and *West European Politics*. Regional government and regional election data can be found on his website www.arjanschakel.nl.

References

- Akkerman, T. and de Lange, S.L. (2012) Radical right parties in office: Incumbency records and the electoral cost of governing. *Government and Opposition* 47(4): 574–596.
- Bochsler, D. (2010) *Territory and Electoral Rules in Post-Communist Democracies*. Basingstoke, UK: Palgrave Macmillan.
- Brambor, T., Clark, W.R. and Golder, M. (2006) Understanding interaction models: Improving empirical analyses. *Political Analysis* 14(1): 63–82.
- Bromley, C. (2006) Devolution and electoral politics in Scotland. In: D. Hough and C. Jeffery (eds.) *Devolution and Electoral Politics*. Manchester, UK: Manchester University Press, pp. 192–213.
- Carsey, T.M. and Wright, G.C. (1998) State and national factors in gubernatorial and senatorial elections. *American Journal of Political Science* 42(3): 994–1002.
- Chubb, J.E. (1998) Institutions, the economy, and the dynamics of state elections. *The American Political Science Review* 82(1): 133–154.
- Clark, N. and Rohrschneider, R. (2009) Second-order elections versus first-order thinking: How voters perceive the representation process in a multi-layered system of governance. *Journal of European Integration* 31(5): 645–664.
- Dandoy, R. and Schakel, A.H. (eds.) (2013) *Regional and National Elections in Western Europe. Territoriality of the Vote in Thirteen Countries*. Houndmills, UK: Palgrave Macmillan.
- Dinkel, R.H. (1977) Der Zusammenhanf zwischen Bundes- und Landtagswahlergebnissen. *Zeitschrift für Parlamentsfragen* 18(2/3): 348–360.
- Dupoirier, E. (2004) La régionalisation des élections régionales? Unmodèle d'interprétation des élections régionales en France. *Revue Française de Science Politique* 54(4): 571–594.

- Heath, A. and Taylor, B. (1999) Were the Welsh and Scottish referendums second-order elections? In: B. Taylor and K. Thomson (eds.) *Scotland and Wales: Nations Again?* Cardiff, UK: University of Wales Press, pp. 149–168.
- Heath, A., Mclean, L., Taylor, B. and Curitce, J. (1999) Between first and second-order: A comparison of voting behaviour in European and local elections in Britain. *European Journal of Political Research* 35(3): 389–414.
- Hirschman, A.O. (1970) *Exit, Voice and Loyalty*. Cambridge, USA: Harvard University Press.
- Hix, S. and Marsh, M. (2007) Punishment or protest? Understanding European Parliament elections. *The Journal of Politics* 69(2): 495–510.
- Hix, S. and Marsh, M. (2011) Second-order effects plus pan-European political swings: An analysis of European Parliament elections across time. *Electoral Studies* 30(1): 4–15.
- Hobolt, S.B., Spoon, J.-J. and Tilley, J. (2008) A vote against Europe? Explaining defection at the 1999 and 2004 European Parliament elections. *British Journal of Political Science* 39(1): 93–115.
- International Monetary Fund (IMF) (2012) World Economic Outlook Database. October 2012, <http://www.imf.org/external/pubs/ft/weo/2012/02/weodata/index.aspx>, accessed 12 October 2012.
- Jeffery, C. and Hough, D. (2001) The electoral cycle and multi-level voting in Germany. *German Politics* 10(2): 73–98.
- Jeffery, C. and Hough, D. (2003) Regional elections in multi-level systems. *European Urban and Regional Studies* 10(3): 199–212.
- Jeffery, C. and Hough, D. (2006) Devolution and electoral politics: Where does the UK fit in? In: D. Hough and C. Jeffery (eds.) *Devolution and Electoral Politics*. Manchester, UK: Manchester University Press, pp. 248–256.
- Jeffery, C. and Hough, D. (2009) Understanding post-devolution elections in Scotland and Wales in comparative perspective. *Party Politics* 15(2): 219–240.
- Jesuit, D. (2003) The regional dynamics of European electoral politics. Participation in national and European contests in the 1990s. *European Union Politics* 4(2): 139–164.
- Kitschelt, H. (1999) European social democracy between political economy and electoral competition. In: H. Kitschelt, P. Lange, G. Marks and J.D. Stephens (eds.) *Continuity and Change in Contemporary Capitalism*. Cambridge, USA: Cambridge University Press, pp. 317–345.
- Koepke, J.R. and Ringe, N. (2006) The second-order election model in an enlarged Europe. *European Union Politics* 7(3): 321–346.
- Kousser, T. (2004) Retrospective voting and strategic behavior in European Parliament elections. *Electoral Studies* 23(1): 1–21.
- Lau, R.R. (1985) Two explanations for negativity effects in political behaviour. *American Journal of Political Science* 29(1): 119–138.
- Lewis-Beck, M. and Stegmaier, W.B. (2000) Economic determinants of electoral outcomes. *Annual Review of Political Science* 3: 183–219.
- Manow, P. (2005) National Vote Intention and European Voting Behavior, 1979–2004. Second-Order Election Effects, Election Timing, Government Approval and the Europeanization of European Elections. Cologne (Köln), Germany: MPIfG Discussion Paper 05/11.
- Marsh, M. (1998) Testing the second-order election model after four European elections. *British Journal of Political Science* 28(4): 591–607.
- Marsh, M. (2009) Vote switching in European Parliament elections: Evidence from June 2004. *Journal of European Integration* 31(5): 627–644.
- Marsh, M. and Mikhavlov, S. (2010) European Parliament elections and EU governance. *Living Review in European Governance* 5(4), <http://europeangovernance.livingreviews.org/Articles/lreg-2010-4/>.
- Miller, W.L. and Mackie, M. (1973) The electoral cycle and the asymmetry of government and opposition popularity: An alternative model of the relationship between economic conditions and popularity. *Political Studies* 21(3): 263–279.



- Norris, P. (1997) Second-order elections. *European Journal of Political Research* 31(1): 109–114.
- Pallarés, F. and Keating, M. (2003) Multi-level electoral competition: Regional elections and party systems in Spain. *European Urban and Regional Studies* 10(3): 239–255.
- Pereira, C. and Mueller, B. (2004) The cost of governing. Strategic behavior of the president and legislators in Brazil's budgetary process. *Comparative Political Studies* 37(7): 781–815.
- Rallings, C. and Thrasher, M. (2005) Not all 'second-order' contests are the same: Turnout and party choice at the concurrent 2004 local and European Parliament elections in England. *The British Journal of Politics and International Relations* 7(4): 584–597.
- Reif, K. (1985) Ten second-order national elections. In: K. Reif (ed.) *Ten European Elections*. Aldershot, UK: Gower, pp. 1–36.
- Reif, K. (1997) Second-order elections. *European Journal of Political Research* 31(1): 115–121.
- Reif, K. and Schmitt, H. (1980) Nine second-order national elections – A conceptual framework for the analysis of European election results. *European Journal of Political Research* 8(1): 3–44.
- Schakel, A. and Dandoy, R. (2014) Electoral cycles and turnout in multilevel electoral systems. *West European Politics*, published online on 28 April 2014.
- Schakel, A.H. and Jeffery, C. (2013) Are regional elections really second-order? *Regional Studies* 48(3): 323–341.
- Schmitt, H. (2004) The European Parliament elections of 2004: Still second-order? *West European Politics* 28(3): 650–679.
- Skrinis, S. and Teperoglou, E. (2008) Studying and comparing second-order elections. Examples from Greece, Portugal and Spain. In: C. Van der Eijk and H. Schmitt (eds.) *The Multilevel Electoral System of the EU*, Mannheim, Germany: CONNEX Report Series No 4, pp. 163–189.
- Stefanova, B. (2008) The 2007 European elections in Bulgaria and Romania. *Electoral Studies* 27(3): 566–571.
- Stein, R.M. (1990) Economic voting for governor and U.S. senator: The electoral consequences of federalism. *Journal of Politics* 52(1): 29–53.
- Stimson, J.A. (1976) Public support for American presidents. A cyclical model. *Public Opinion Quarterly* 40(1): 1–21.
- Tomz, M., Tucker, J. and Wittenberg, J. (2002) An easy and accurate regression model for multiparty electoral data. *Political Analysis* 10(1): 66–83.
- Tronconi, F. and Roux, C. (2009) The political systems of Italian regions between state-wide logics and increasing differentiation. *Modern Italy* 14(2): 135–150.
- Tucker, J. (2006) *Regional Economic Voting: Russia, Poland, Hungary, Slovakia and the Czech Republic, 1990–1999*. New York: Cambridge University Press.
- Tufte, E.R. (1975) Determinants of outcomes of midterm congressional elections. *American Political Science Review* 69(3): 812–826.
- Van der Brug, W., Franklin, M. and Gábor, T. (2008) One electorate or many? Differences in party preference formation between new and established European democracies. *Electoral Studies* 27(4): 589–600.
- Weber, T. (2007) Campaign effects and second-order cycles: A top-down approach to European Parliament elections. *European Union Politics* 8(4): 509–536.
- Weber, T. (2011) Exit, voice, and cyclicity: A micrologic of midterm effects in European Parliament elections. *American Journal of Political Science* 55(4): 906–921.