Almost two decades after the fall of the Berlin Wall, most countries in Central and Eastern Europe (CEE) have established parliamentary democracies and joined the European Union. Nevertheless, government coalitions in the region have remained quite fragile. Although coalition research is most prominent in comparative politics, literature on government stability in post-communist Eastern Europe has been astonishingly scarce. This paper aims to explain coalition durability in CEE countries by structural patterns of party interaction. In so doing, we combine theoretical approaches which argue from a coalition-internal and a party-system related perspective. Relevant hypotheses are then derived for the numeric, ideological and organizational dimensions of party interaction and tested for more than 100 governments in 12 CEE countries. Our results do not only demonstrate that a systematic integration of coalition-internal and party-system related perspectives captures the dynamics of coalition politics in new democracies, but also suggest that the standard catalogue of variables affecting government termination is in need of revision.
1. Introduction

Almost two decades after the fall of the Berlin Wall, most countries in Central and Eastern Europe (CEE) have established parliamentary democracies and joined the European Union. Nevertheless, party government in the region remains apparently distinct from the ‘old’ EU member states. Not only post-communist party systems have been characterized by structural instability, but also government coalitions in CEE are quite fragile until today. Recent examples of coalition instability include even those countries that were once regarded as ‘front-runners’ of democratic consolidation in the former Eastern Bloc. In July 2007, the Polish government coalition broke apart, after Prime Minister Kaczyński from the Right and Justice Party (PiS) dismissed his Vice-Premier Lepper, leader of the peasant party Samoobrona (‘self-defense’). In April 2008, Hungary saw the Alliance of Free Democrats (SZDSZ) leaving the cabinet due to serious conflicts with its coalition partner, the Social-democrats (MSZP), about socio-economic reform policies. Most recently, the Czech coalition government under Mirek Topolánek had to step down after a successful vote of no-confidence. This led also to considerable repercussions at European level, as the Czech Republic was to hold the EU presidency until the middle of the year.

Coalition stability is not only a topical issue in CEE politics, but also in a more general sense considered to be crucial for the functioning of representative democracy (Saalfeld 2008: 327). In most parliamentary systems, governments are made up of more than one party. The more durable such multi-party cabinets are, the better they may be able to politically dominate the respective legislatures as well as effectively control their ministerial bureaucracies. This may in turn positively affect policy performance and, especially in post-authoritarian contexts, enhance democratic legitimacy. Consequently, formation and duration of coalition governments have been most prominent in the comparative literature on West European politics (cf. most recently Strøm/Müller/Bergman 2008).

Against this background it is quite surprising that coalition research on Central and Eastern Europe has been relatively scarce. While there are some analyses dealing with issues of coalition formation in post-communist countries, government duration in the region has hardly been investigated. Therefore, this paper aims to systematically explain the stability of government coalitions in CEE countries. In so doing we rely on structural patterns of party interaction as independent variables. This focus seems to be analytically rewarding in at least two respects.

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First, party-related attributes have played a major role in explaining cabinet duration in Western democracies. Relevant theories have usually been divided into those focusing on internal features of government coalitions and those centering on characteristics of the entire party system (Woldendorp/Keman/Budge 2000: 78ff.). We aim to demonstrate that these theoretical perspectives are not strictly separated but should rather be combined in order to get a more comprehensive understanding of how party interaction patterns affect the durability of government coalitions.

Second, we expect that coalition instability in CEE countries is closely linked to characteristics of post-communist party development. Such features are not only related to the numeric and ideological dimensions of party systems (fragmentation, polarization) that have been intensively studied for Western democracies (Sartori 1976). They also concern the fact that most parties in new democracies are ‘weakly institutionalized’ (Mainwaring 1998; Grotz 2000). In contrast to Western Europe, party systems in CEE have been characterized by considerable instability in organizational terms (Lewis 2006; Sikk 2005; Tavits 2008). Therefore, besides the numeric and ideological dimension, we will also include the organizational dimension of party interaction into our explanatory framework.

In the next section, we will elaborate why coalition-internal and party-system related perspectives should be combined for explaining government duration. On this basis, relevant hypotheses are systematically derived for the numeric, ideological and organizational dimensions of party interaction. These hypotheses are then tested for more than 100 governments formed between 1990 and 2009 in those 12 CEE countries that have become member states and/or accession candidates of the European Union. In the final section, the contribution of our analysis to an improved understanding of coalition stability in Central and Eastern Europe as well as to the development of coalition theory at large will be discussed.

2. Coalition stability: conceptual issues and theoretical approaches

In order to explain coalition stability in post-communist countries we generally rely on concepts and theories that have been applied to Western democracies. Following this literature, a government coalition consists of at least two political parties represented in parliament which agree to share executive office (Müller/Bergman/Strøm 2008: 6). This definition does not include inter-party cooperation at other levels, e.g. electoral alliances or voting together for parliamentary bills, nor caretaker cabinets that are usually made up by non-party members and supported by a broad majority in parliament.
While the concept of coalition is more or less undisputed, it has been ‘surprisingly difficult’ to determine the beginning and end of coalition cabinets cross-nationally (Laver 2003: 25). Following Arend Lijphart (1999: 131f.), there are two major alternatives in this respect. One can either define government duration as ‘maintenance of the party coalition in the cabinet’ (Dodd 1976: 122), or one may add further criteria for marking the end of a cabinet, such as parliamentary elections and a change of prime minister. The latter definition developed by Browne, Gleiber and Mashoba (1984) has become ‘widely accepted in the profession’ (Laver 2003: 26; see also Strøm/Müller/Bergman 2008).

In this paper, we use a concept of coalition stability\(^3\) lying in-between these two definitions (Laver/Schofield 1990: 145ff.). On the one hand, we follow Browne et al. by including parliamentary elections as criterion for government termination, even if this very government is continued afterwards. In parliamentary democracies general elections will change the relative strengths of parliamentary factions as well as the ‘issue environment’ of the party system. As the approximate date of the next election is generally known, governing parties usually take this time horizon into account: they may strategically decide on whether it is more advantageous to maintain the coalition until the upcoming election or to break it before (Lupia/Strøm 1995). More generally, coalitions are not designed to survive eternally, but to guarantee a parliamentary majority for one legislative period. On the other hand, it is not convincing to count any alternation in the identity of the head of government as the beginning of a completely new case. A ‘change in prime minister, through death for example, really does not constitute a meaningful change in cabinets’ (Dodd 1976: 121), because this does not necessarily affect the basic consensus of coalition parties to continue their cabinet. Therefore, we consider government coalitions as stable, until (a) the partisan composition of the cabinet changes or (b) general elections are held.

How can the stability of government coalitions be explained? During the last decades coalition research has turned out to be one of the analytically most elaborated fields of comparative politics. Not surprisingly, there is a variety of relevant approaches which not only differ in their explanatory variables, but also in their theoretical and methodological foundations. Considering the literature on government termination, Michael Laver (2003: 27ff.) makes a fundamental distinction between ‘empirical studies’ that apply a more or less inductive approach to explain cabinet survival and ‘a priori models’ that aim to predict cabinet durability based on a theoretical concept of equilibrium government. It is however interesting to note that both\(^3\) ‘Duration’, ‘survival’ and ‘longevity’ will be used synonymously to ‘stability’, equally referring to the empirical time span between the formation and termination of a government. ‘Durability’, in contrast, is mostly associated with models predicting the potential duration of governments (Laver 2003: 24f.).
approaches follow an *actor-centered logic* insofar as they primarily refer to *patterns of party interaction* in order to explain or predict the longevity of government coalitions. While this is obvious for the modeling approach, it is not always made explicit in the theoretical arguments of empirical approaches.

We aim to demonstrate that making the actor-centered foundations of ‘empirical approaches’ explicit sheds new light on another fundamental aspect of coalition research: the distinction between attributes of a government coalition itself and attributes of the parliamentary party system in which a coalition operates. In particular in our case of the relatively young democracies in CEE, reinterpreting this distinction allows to account for a range of phenomena that otherwise remain unexplained. Let us elaborate these arguments in more detail.

Comparative analyses of coalition survival have mainly relied on certain ‘attributes’, i.e. properties of a government and/or its political environment, as independent variables (Strøm 1988).4 Not surprisingly, most explanations in this context have referred to features of party interaction: as the making and breaking of governments in parliamentary democracies depends on the political strategies of parties represented in the legislature, it is quite obvious to take their structural relationships as key for understanding coalition stability.5 According to Woldendorp, Keman and Budge (2000: 78), these party-centered factors can be divided into two groups. The first group includes features related to the internal configuration of a coalition, like its parliamentary support or ideological composition. The underlying assumption is that whether parties leave or stay in government exclusively depends on the interaction patterns within the coalition. The second group of factors refers to features of the party system, such as the effective number of parliamentary parties or the degree of polarization. Here, the theoretical focus is on the bargaining environment: it is assumed that a given coalition proves to be stable as long as there are no alternatives considered to be more advantageous by a relevant number of parties.

Woldendorp et al. (2000) have thus provided a comprehensive categorization of party-centered factors explaining coalition stability. However, their classification does not highlight

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4 Up to the early 1990s there was a heated debate between coalition scholars focusing on structural ‘attributes’ and those that claimed critical ‘events’ to be decisive for government termination. This dispute has been more or less resolved with the publication of King et al. (1990) which combined a stochastic approach (event-history method) with certain structural features of particular governments as independent variables. This unified model is now ‘the standard way to analyze government terminations’ (Laver 2003: 29; see also Saalfeld 2008).

5 Apart from party-oriented ‘attributes’, institutional features constitute another category of structural explanations for coalition stability (Grofman/Van Roozendaal 1997: 437ff.; Woldendorp et al. 2000: 78ff.). It goes without saying that the constitutional ‘rules of the game’, such as executive powers of the Head of State or regulations for an early dissolution of parliament, may form an obstacle to break a government coalition or offer additional incentives to do so. In this paper, we will not include institutional factors in our explanatory framework as operationalizing all relevant provisions for the CEE countries would be another demanding endeavor in both theoretical and empirical terms (for a respective analysis of West European cases see Saalfeld 2007).
the important fact that the two categories are theoretically intertwined: as coalition-related explanations and party-system related approaches equally refer to patterns of party interaction, they cannot be strictly separated in all cases. For example, a well-known theory of coalition survival claims that minority governments are more unstable than minimal-winning coalitions (Dodd 1976). One may argue that this theory belongs to the inner-coalition approaches, as the type of coalition is taken as independent variable. However, it would be equally justified to subsume this theory under party system-related explanations because the same phenomenon can be rephrased as ‘how many opposition parties could provide the government with a majority in a single vote.’ Therefore, coalition-related and party system-related theories of coalition stability rather seem to be extreme points of a continuum than mutually exclusive categories.

This problem is avoided by a slightly different typology of relevant theories (Grofman/Van Roozendaal 1997). Regarding party-centered explanations of cabinet survival, Grofman and Van Roozendaal do not differentiate between coalition-related and party system-related features, but between ‘characteristics of party strength’ and ‘ideological structure of party competition’ (Grofman/Van Roozendaal 1997: 427ff.). In other words, they use the distinction between a numeric dimension and an ideological dimension of party interaction which is well-known from the comparative literature on party systems (Sartori 1976).

For the purpose of this paper we follow Grofman and Van Roozendaal (1997) insofar as we take the dimensions of party interaction as starting point for our analytical framework of coalition stability in CEE countries. In each of these dimensions, we then discuss relevant theories of the coalition research on Western democracies that range between Woldendorp et al.’s (2000) coalition-related and party system-related poles. In this way, we reach at a number of party-centered hypotheses that are based on different approaches of the given literature and systematically interconnected at the same time.

Finally, regarding the dimensions of party interaction we must take some specificities of the CEE context into account. The literature on regime transition in general and on post-communist countries in particular has stressed that party systems in young democracies are not as stable as their West European counterparts. Therefore, the ‘institutionalization’ of party systems in terms of organizational continuity and voter alignments becomes a key feature for understanding politics in post-authoritarian contexts (Mainwaring 1998; Grotz 2000). This still applies to Central and Eastern Europe, where many parliaments have seen the entering of new parties until recently (Sikk 2005; Lewis 2006). Furthermore, the comparative literature on party systems in CEE has shown that there is a close relationship between patterns of coa-
lition-building and the stability of party systems (Mair 1997; Toole 2000; Müller-Rommel 2005). Turning this argument the other way round, we might reasonably assume that party system stability is an important feature to explain government duration in Central and Eastern European countries. Therefore, we add the organizational dimension to the numeric and ideological ones in the following elaboration of party-centered hypotheses on coalition stability.

3. Explaining coalition stability in the post-communist context: hypotheses

3.1. Numeric features

For any structural analysis of party interaction the numeric dimension, i.e. the number and relative strengths of relevant parties, seems to be a ‘natural’ starting point. This also applies to the comparative study of coalition stability. Research on Western democracies has shown that numeric attributes are powerful variables to explain government duration (Grofman/Van Roozendaal 1997: 428ff.; Müller 2004: 290ff.).

In this regard the literature highlights different factors ranging from cabinet-internal to party system-related explanations. Obviously, the first one is the number of government parties (coalition format). The more parties are represented in cabinet, the higher are transaction costs in coalition governance and the more likely political conflicts between coalition partners, which may in turn lead to shorter government tenures (Leiserson 1970).

*Hypothesis 1:* The more parties in a government coalition, the less durable the latter will be.

The format measures gradual differences between coalitions with regard to the number of member parties. In addition, we expect a categorical difference between single-party governments and ‘real’ (multi-party) coalitions. In single-party governments, no conflict can arise across party lines by definition. This property should stabilize these cabinets over and above their minimum format.

*Hypothesis 1a:* Single-party governments are more stable than multi-party coalitions.

A second explanation based on the inner-cabinet relationships refers to the strength of governing parties in relation to the parliamentary majority. Here, the literature generally distinguishes between three major types: minimal-winning coalitions (in which each partner is needed to
reach the absolute majority in Parliament), oversized coalitions (in which at least one partner is not needed for the absolute majority) and minority governments (in which the cabinet does not possess an own parliamentary majority). Dodd (1976: 49ff.) convincingly argues that minimal-winning coalitions are more durable than oversized ones, because in the latter at least one party is ‘dispensable’, i.e. it can be removed from the cabinet without its majority status being jeopardized. As in this case the other cabinet parties would gain new ministerial positions, they may try to reduce the coalition to minimal-winning status. A similar logic applies to the comparative duration of minimal-winning coalitions and minority governments. In contrast to the former type, the latter is constantly faced with the possibility of being overthrown by an opposing parliamentary majority.

_Hypothesis 2: Oversized coalitions and minority governments are less stable than minimal-winning coalitions._

Applying the numeric logic of party interaction, one may furthermore identify different degrees of instability within the two non-minimal-winning types. For oversized coalitions it can be argued that the more ‘extra’ parties there are in cabinet, the greater the possibility that the other governing parties remove one of the ‘dispensable’ partners more quickly (Dodd 1976: 50f.).

_Hypothesis 2a: The greater the number of individually ‘dispensable’ parties in an oversized coalition, the less durable the government will be._

An analogous argument can be made for minority governments. In this case, the theoretical focus shifts from the inner-coalition interaction logic towards the party-system perspective. Accordingly, the relative stability of minority cabinets does not depend on the numeric relationship between governing parties, but rather on the relative strength of opposition parties: the more options there are for building ‘shifting majorities’ with different opposition parties, the higher is the bargaining power of a minority government and the more likely it is to survive (cf. Strøm 1990).

_Hypothesis 2b: The greater the number of opposition parties able to provide a minority government with majority status, the more stable the minority government will be._
Besides the focus on bargaining power, the requirement to negotiate with opposition parties has another implication for minority governments: the categorical difference between single-party and multi-party cabinets introduced above should be less pronounced. In Hypothesis 1a, we expected single-party governments to be particularly stable because they do not have to consider the positions of coalition partners. Single-party minority governments, however, exchange dependence on coalition partners for dependence on opposition parties.

*Hypothesis 2c: The stabilizing effect of single-party status is lower for minority governments.*

Finally the numerical structure of the party system can be claimed to influence government stability as well (Taylor/Herman 1971). According to this argument, a higher fractionalization of parliament, which is usually measured by the ‘effective number of parties’ (Laakso/Taagepera 1979), provides a more complex bargaining environment for government formation, because there are more feasible options for coalition-building than in highly concentrated party systems (King et al. 1990: 857). In this case it is also more likely that ‘a minor perturbation may change the locations of each party’s most preferred coalition’ (Grofman/Van Roozendaal 1997: 429); as a result, the acting government is expected to be replaced by another party coalition.

*Hypothesis 3: The higher the fractionalization of the parliamentary party system, the lower coalition stability will be.*

### 3.2. Ideological features

A major advancement in the comparative study of party systems was the insight that the numeric dimension of party interaction had to be systematically complemented by an ideological one (La Palombara/Weiner 1966; Sartori 1976). Coalition research took up this idea quite early. According to Laver (1974), Warwick (1979) and others, the stability of a coalition depends on its degree of (internal) ideological homogeneity: if programmatic differences between governing parties are large, serious conflicts over the policy agenda may arise which lead to the break-up of the coalition. In this context, Paul Warwick (2006) has more recently developed a sophisticated model based on ‘policy horizons’ of political parties, i.e. the circle around their ideological ideal point in which they are willing to make policy compromises in exchange for cabinet participation. The durability of a multi-party coalition government con-
sequently depends on the size of its ‘horizon intersection’ (Warwick 2006: 145). The basic assumption of Warwick’s model remains to be the ideological homogeneity within a coalition.

_Hypothesis 4: The more heterogeneous the governing parties in ideological terms, the less stable the coalition._

Following the same line of argument, Robert Axelrod (1970) already went one step further by combining ideological and numeric features of government coalitions. Accordingly, he expected cabinets in multi-party democracies to be formed on a ‘minimal connected winning’ (MCW) basis, i.e. minimal-winning coalitions of parties with adjacent positions on an ideological dimension. No parties must be excluded that are located within the ideological segment spanned by the governing parties. Due to their numeric as well as ideological cohesiveness, MCW coalitions are claimed to be more stable than all others. For the Central and Eastern European cases, testing this theory proves to be very difficult, as we do not have sufficient reliable and historically complete data for the policy positions of parliamentary parties.6 However, we take up Axelrod’s general argument by linking the ideological structure and the format of a coalition to explain its duration.

_Hypothesis 5: The more parties in government, the more pronounced the negative effects of ideological heterogeneity on coalition stability will be._

Furthermore, the ideological structure of the entire party system (polarization) was also found to have a significant impact on government duration in Western democracies. Polarization, which is measured by the strength of extremist parties in this context (Grofman/Van Roozendael 1997: 432), has traditionally been seen as an indicator of cabinet instability (King et al. 1990). However, following our general differentiation between a coalition-internal and a party-system perspective, it may be necessary here as well to distinguish between attributes of government and opposition. On the opposition side it can be argued that extremist parties have a positive influence on coalition duration, because ‘their presence ought to simplify the

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6 On the one hand, there are some differentiated datasets on party policy dimensions for all ECE countries which are based on expert surveys (Laver/Benoit 2006; Marks et al. 2006). However, these surveys were deployed only in 2002 or 2003 respectively and thus do not allow for analysis over time. On the other hand, the Comparative Manifesto Project provides historically more complete data for post-communist party systems (Budge et al. 2001; Klingemann et al. 2006). Yet, the focus and terms of reference of this approach ‘are inevitably skewed toward the Western European experience’ (Mair/Mudde 1998: 219). This may be the reason why these data have hardly been used in comparative analyses of the ‘most difficult case of post-Communist party systems’ (Whitefield et al. 2007: 50).
bargaining environment and result in a reduction of government instability’ (Warwick 1994: 63). In other words, the formation of alternative government majorities should be ‘blocked’ by the share of extremist seats, as they are generally regarded as ‘non-coalitionable’. In case of a minority government, however, the presence of extremist parties may have the reverse effect: as this restricts the options for ‘shifting’ parliamentary majorities which minority cabinets rely on (see Hypothesis 2b), they should become more instable. These considerations thus lead to two differentiated hypotheses.

**Hypothesis 6a:** The stronger extremist parties in opposition, the more durable a majority government.

**Hypothesis 6b:** The stronger extremist parties in opposition, the less durable a minority government.

As in Western democracies extremist parties were considered ‘anti-system’ and, therefore, ‘non-coalitionable’ actors (Sartori 1976), it did not make sense to examine the effects of their participation in government. In post-communist Central and Eastern Europe, however, the situation seems to be different: take, for example, Slovakia where the right-wing extremist Slovak National Party (SNS) participated in several governments since 1993 (Müller-Rommel et al. 2008). One might assume that the very presence of extremist parties in cabinet has a negative impact on coalition stability, as their fundamental distance to all democratic parties should provoke deep conflicts between the coalition partners which in turn lead to early government termination.

**Hypothesis 7:** The more extremist parties in government, the less durable the coalition.

### 3.3. Organizational features

In the comparative literature on party systems, their institutionalization and/or stability hardly played any role for a long time. As the political cleavages underlying Western European party systems were considered to be ‘frozen’ since the 1920s (Lipset/Rokkan 1967), ‘fluidity’ of

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7 In the light of his empirical findings showing a strong negative correlation between extremist parties and cabinet duration, Warwick (1994: 63) finally reaches at a different conclusion: ‘The greater the anti-system presence, the more necessary it becomes to involve most of the remaining party spectrum if a pro-system majority is to be formed. However, coalitions formed on this basis tend to be ideologically diverse.’ In our model, this indirect relationship between extremist parties and coalition stability is captured by the ideological heterogeneity of the coalition (see Hypothesis 4).
party interactions was not an issue to be investigated systematically (Sartori 1976). Likewise, coalition research paid only minor attention to the potential effects of party system stability on cabinet survival. Some authors argued that high volatility, i.e. turnover in mass voting between consecutive parliamentary elections, should be negatively related to government duration, because it makes the bargaining environment more complex and unstable (Laver/Schofield 1990; King et al. 1990). Empirically, however, this variable lacked statistical significance. Grofman and Van Roozendaal (1997: 429) explained this by the convincing idea that volatility as such could ‘go in either direction’: in highly uncertain electoral environments larger parties may be more ‘reluctant to rock the boat’, while smaller parties may have nothing to lose and thus take the risk of leaving the cabinet before the end of the legal term. These theoretical considerations seem to be very useful for analyzing coalition duration in Central and Eastern Europe, where party system development continues to be more dynamic than in the Western part of the continent. In the CEE context, however, volatility cannot be regarded as a valid indicator for ‘party system instability’, as the concept does not allow for a clear distinction between the levels of party elites and electoral support (Mair 1997). Recent studies have indeed shown that instability of post-communist party systems is rather caused by the emergence of new parties than by ‘volatile’ voting behavior (Sikk 2005; Tavits 2007, 2008). Therefore, when we operationalize party system stability in CEE, the focus should be more on the elite level than the mass level of political competition.

In line with these considerations, Lewis (2006: 574ff.) suggested to measure party system institutionalization by the general continuity of parliamentary representation. We adopt this idea, but again differentiate between a coalition-internal and a party-system perspective. In the first perspective, it is the ‘seniority’ of governing parties which matters. More concretely, previous parliamentary representation of governing parties should pay off for coalition survival, as this experience may be a helpful resource to maintain a coalition in difficult circumstances. In contrast, high ‘seniority’ of opposition parties may have the reverse effect in the very same situation. Parliamentary experience provides the opposition with additional skills to build viable alternatives to the incumbent coalition.

Hypothesis 8: The more parliamentary experience government parties have, the more stable the coalition will be.

Hypothesis 9: The more parliamentary experience opposition parties have, the less stable the incumbent government will be.
Finally, the importance of context for the role of parliamentary experience should be considered. Particularly in the countries of CEE where democratic politics started almost from scratch after 1990, the (numeric) structure of a given party system that elites have to get experienced with should matter. As Dodd (1976: 66f.) already argued, fluidity of a party system may become a serious problem for coalition survival only in a highly fragmented parliament, as in this situation ‘party leaders must follow maneuvers among a large number of parties with little past behavior to provide a reliable indication of probable parliamentary moves’ (Dodd 1976: 66). Thus, there is a plausible interaction of fractionalization and instability of the party system with regard to government duration. Especially in complex systems, previous parliamentary experience should help coalition parties to survive and opposition parties to bring the government down.

**Hypothesis 10:** The effects of parliamentary experience on coalition stability are more pronounced in fragmented party systems.

Figure 1: Party-centered theories of coalition stability and hypotheses for CEE countries

Figure 1 summarizes the preceding considerations on party-centered theories of coalition stability in a systematic form. It shows that the hypotheses outlined above can each be assigned to one dimension of party interaction and at the same time located on the theoretical spectrum between a coalition-internal and a party-system perspective. In line with our general argu-
ment, the latter spectrum is not divided into two disjunctive types, but includes a category in-between which explains coalition duration by opposition attributes affecting the behavior of government parties. Therefore, this ‘middle perspective’ is both systemic-oriented and coalition-related. Moreover, H5 and H10 refer to interaction effects across the dimensions of party interaction. This list of hypotheses is certainly not exhaustive. However, they are all derived from the basic assumption that structural patterns of interaction matter for the behavior of parliamentary actors with regard to maintenance or termination of government coalitions. In this way, we have not assembled ‘a portfolio of independent variables gleaned from previous published work, [...] each given a brief ad hoc “theoretical” justification in its own terms’ (Laver 2003: 30), but rather a number of systematically interconnected hypotheses which are now examined in the CEE context.

4. **Data and variables**

To test our hypotheses on the determinants of coalition stability in CEE, we have assembled a dataset containing all relevant coalitions (according to our definition) that have been formed in the 12 EU member or candidate countries since 1990: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Poland, Romania, Slovakia and Slovenia. The selection of these countries follows a simple logic: we are interested in democratic government. In other CEE countries such as Belarus, autocratic regimes still obstruct democratic consolidation. If the ‘rules of the game’ do not permit free party competition, these cases are not comparable with democratic systems as regards the determinants of coalition stability (or, in statistical terms, the dataset would lack unit homogeneity).

Several cases were not included in the dataset due to their highly idiosyncratic context: the first free elections in six countries which were held before independence from the former federations of the USSR or Yugoslavia, respectively, and the first parliaments in three other countries which were in charge of drafting a new Constitution within an ex-ante limited term. The dependent variable to be estimated from these cases is the duration of a coalition, measured in days. As explained above, the end of a coalition is either marked by the change of the partisan complexion of government or comes about as a consequence of general elections.

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8 Estonia, Latvia and Lithuania, and Croatia, Macedonia and Slovenia. We also excluded the first two governments in independent Croatia under the semi-autocratic Tudman-regime. By contrast, the 1992 elections to the Czech and Slovak National Councils were included because these bodies served as parliaments of the two independent states after the dissolution of Czechoslovakia on the 1st of January 1993.

9 Bulgaria, Romania and Czechoslovakia.
Thus, the maximum value a coalition can achieve is equivalent to about four years.\textsuperscript{10} Data for coalition duration and partisan complexion were taken from Müller-Rommel, Fettelschoss and Harfst (2004) and Müller-Rommel et al. (2008) and updated since then.

As for the independent variables, the numeric dimension is most easily operationalized. The format of a coalition is the number of parties in government (H1). To capture the particularities of single-party government, we also include a dummy for these cases on top of the linear format effect (H1a). Oversized and minority status are each represented by a dummy whose coefficient indicates hazard relative to minimal winning coalitions (H2). Two variables are added to refine the operationalization of coalition type: the number of dispensable parties for oversized coalitions (H2a), and the number of potential majority providers for minority governments (H2b).\textsuperscript{11} Moreover, minority status is interacted with single-party government (H2c). Fractionalization is measured by the effective number of parliamentary parties (Laakso/Taagepera 1979) (H3). Data for seat shares were taken from Stojarová et al. (2007) and updated since then.

Operationalizing the ideological dimension proved to be more difficult due to the lack of data on policy positions across time and space that we discussed above for ‘minimal connected winning’ coalitions. In more general terms, however, ideological differences can be captured on the basis of party families. Major ideological conflicts are more likely between parties of different families. We applied the classification schema developed by Klingemann and Hofferbert (2000) and updated by Müller-Rommel, Fettelschoss and Harfst (2004) and Müller-Rommel et al. (2008) to assign government parties to one of 14 families. We assume two parties to be ideologically homogeneous if they belong to the same or to related families.\textsuperscript{12} Ideological heterogeneity applies for all other pairs of parties.

A coalition could theoretically break due to conflict between any pair of its members. We therefore calculated the number of potential conflicts within a coalition (two parties – one conflict, three parties – three conflicts, etc.) where pairs of parties of the same or related families were ignored. This measure of conflict between party families is then divided by the

\textsuperscript{10} In Latvia the reenacted pre-war Constitution required general elections to be held every three years. In 1997 this term was changed to four years (Schmidt 2004: 121). This deviation from the other CEE countries is relatively unproblematic because in Latvia government coalitions have generally collapsed long before the regular end of their legal term.

\textsuperscript{11} Majority governments, which do not have an obvious value on this latter variable, were coded as 0. Note, however, that this value is arbitrary and does not influence the estimation results because the dummy variable for minority governments absorbs its effect. We will present the results in a graphical way that takes this into account.

\textsuperscript{12} The 14 families are Communist, Socialist, Social Democratic, Green, Left Liberal, Liberal, Right Liberal, Conservative, Christian Democratic, Agrarian, Ethnic, Right-wing and Nationalist, Regionalist, Single-issue. As related families we defined Socialist/ Social Democratic, Conservative/ Christian Democratic, and Left Liberal/ Liberal/ Right Liberal.
number of theoretically possible conflicts between *parties*, resulting in the final measure of relative heterogeneity (H4). The product of heterogeneity and format is included as an additional term to model the interaction of the two variables (H5).

The second ideological variable, extremist parties in government and opposition, introduces a categorical distinction into the family classification on top of relative heterogeneity. Following Klingemann and Hofferbert (2000), two party families were coded as extremist: communist parties and right-wing/nationalist parties. For the opposition, the extremism variable measures the seat share controlled by such parties in parliament. In case of a majority government an extremist opposition should lead to stability (H6a). To test for the reversed effect for minority governments, we add an interaction between minority status of the coalition and extremism in the opposition (H6b). For the government, the extremism variable is coded differently: Since every partner could provoke the termination of a coalition irrespective of its seat share, the relevant measure is the number of extremist parties in government (H7).

Turning to the organizational dimension, we measure the ‘parliamentary seniority’ of a party as the sum of the years during which the party was represented in the legislature since the first election registered in the dataset. Data were derived from Stojarová et al. (2007). These party-level scores were then averaged on the level of government and opposition, weighted by seat share. Seniority on the government’s side should stabilize a coalition (H8); seniority on the opposition’s side should destabilize it (H9). To test whether these effects are more pronounced in fragmented party systems, both variables are interacted with the effective number of parliamentary parties (H10).

5. **Method**

The estimation of coalition durability has been traditionally approached from two different perspectives: a deterministic approach focusing on attributes of coalitions and their environment, and a stochastic approach focusing on critical events that lead to coalition termination (Strøm 1988; Browne/Frendreis/Gleiber 1988). These perspectives were united by King et al. (1990) who proposed to employ coalition attributes as covariates in a stochastic survival mod-

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13 This variable ranges from 0 to 1. The minimum value applies for coalitions whose parties all belong to the same family, and for single-party governments. The maximum value applies for coalitions whose parties all belong to different families. The remaining coalitions are located in between these two poles.

14 Data from Armingeon and Careja (2008) were used to supplement the above mentioned sources.

15 Of course a non-linear functional form would be required to test the effect of seniority in established democracies, but in the relatively young democracies of CEE a linear trend is preferable for the sake of simplicity.

16 We also estimated the effects of these variables while controlling for a linear time trend (years since 1990) and achieved similar results. This means that the seniority variables capture both the general consolidation of CEE
We basically follow their approach, with two deviations. The first is that we model the baseline hazard (i.e. the part of the estimate that is not influenced by structural covariates) in a non-parametric way. This allows us to relax King et al.’s assumptions about the shape of the parametric hazard function over time – assumptions that have been subject to severe criticism (e.g. Diermeier/Stevenson 1999). We use Cox regression and its partial-likelihood approach to combine non-parametric estimation of the baseline hazard with parametric estimation of the covariate effects (cf. Cox 1975).\(^{17}\)

The second deviation from King et al.’s approach concerns the ‘censoring regime’, an important topic in duration models of any kind. The basic idea of censoring is that some coalitions would have lasted longer in absence of an event that is not of interest to the researcher. The durability of this coalition is treated as a latent variable that is not fully observable due to censoring by this event. King et al. treated all coalitions as censored that end within the last year before the regular end of the legislative period because the expectation of upcoming elections might provoke strategic termination. A modification of this regime was made by Diermeier and Stevenson (1999) who only treated those coalitions as censored that actually reached the regular end of the legislative period.\(^{18}\) Only the elections themselves (and not their anticipation) are seen to censor the duration of a coalition.

There is reason to be skeptical about both of these solutions. Censoring depends on the assumption that a coalition would have lasted longer in the absence of elections. It is equally possible, however, that a coalition would have lasted shorter (and not longer) without upcoming elections. Coalition contracts are made for four years, and all partners know that the next general elections will reshuffle the pack in any way. Making a government fall for seemingly strategic reasons may be unpopular with many voters, so there is an incentive to handle conflict within a coalition with care. If there was no ‘light at the end of the tunnel’ in the form of elections, however, the ideal point to break a coalition might well be earlier. Simply assuming that elections always tend to constrain coalition duration seems arbitrary from a theoretical perspective. We will therefore not treat any coalitions as censored except for those currently in office.

One complication not directly taken into account by our censoring regime is that calling early elections may be a means to break a coalition for strategic reasons and to ‘reshuffle the pack’

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\(^{17}\) It should be noted that Cox regression is based on the so-called proportional hazards assumption, meaning that hazard ratios must not vary over time. We tested this assumption on the basis of Schoenfeld residuals and encountered only minor deviations from proportionality.

\(^{18}\) Another issue is whether ‘natural’ causes of cabinet termination like the death of prime minister should be treated as censoring. In our context, however, this question is irrelevant because such theoretically meaningless
at the same time (cf. Balke 1990; Lupia/Strøm 1995). We therefore controlled for the timing of early elections (i.e. for the time remaining until the regular end of the term), but this variable did not have a notable effect.

The final issue to be addressed by the estimation strategy concerns governments formed during a legislative period after others failed. This creates two problems: First, the possible maximum duration of such a coalition is limited by the mere fact that the predecessor government has used up a certain share of the term. Our model incorporates this effect by controlling for the time (in months) that has already passed since the last general elections when a coalition takes over. Second, coalition formation during a legislative period is obviously more likely in instable systems where many post-electoral governments fail in the first place. Given that the unit of analysis is the individual coalition, this means that instable systems are overrepresented in the dataset. We therefore weight the data by the inverse of the average number of coalitions in a certain country during a four-year term.

### 6. Results

Table 1 presents the results of the Cox regression. The left column reports estimated coefficients. A negative coefficient means that the respective variable decreases the hazard of coalition termination; a positive coefficient indicates an increase of the hazard. Since these coefficients are hard to interpret beyond the direction of influence, the right column also reports hazard ratios. This is the ratio between the predicted hazard of a coalition with a particular characteristic (e.g. minority status) and a coalition without this characteristic. (For non-discrete variables the same applies for a one-unit change.) Thus, values above 1 mean that the variable increases the hazard while values below 1 indicate a decrease of the hazard.

The first two effects in Table 1 are surprising at first sight: both the numerical format and the ideological heterogeneity of a coalition negatively affect the hazard of termination. However, it should be noted that the model also contains an interaction term of format and heterogeneity. The constitutive coefficients thus only indicate the effect of a variable under the condition that the interacting variable is equal to 0. For all other values, a comprehensive evaluation of interaction effects requires graphical means (cf. Brambor/Clark/Golder 2006). Figure 2 presents the hazard ratio of heterogeneity for all observed values of format, whereas Figure 3 shows the hazard ratio of format for all values of heterogeneity. Again it should be noted

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19 These estimates and their standard errors were obtained by averaging over 10,000 simulations drawn from the multivariate normal distribution.
that a value between 0 and 1 means that the hazard is reduced while a value between 1 and infinite denotes an increase of the hazard.

Table 1: Hazard of coalition termination estimated from attributes of parties and party systems

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Hazard ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format</td>
<td>-2.887***</td>
<td>0.0557</td>
</tr>
<tr>
<td></td>
<td>(0.814)</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity</td>
<td>-8.313***</td>
<td>0.0002</td>
</tr>
<tr>
<td></td>
<td>(2.623)</td>
<td></td>
</tr>
<tr>
<td>Format*Heterogeneity</td>
<td>3.293***</td>
<td>26.9157</td>
</tr>
<tr>
<td></td>
<td>(1.006)</td>
<td></td>
</tr>
<tr>
<td>SingleParty</td>
<td>-6.144***</td>
<td>0.0021</td>
</tr>
<tr>
<td></td>
<td>(1.466)</td>
<td></td>
</tr>
<tr>
<td>Oversized</td>
<td>-1.263**</td>
<td>0.2829</td>
</tr>
<tr>
<td></td>
<td>(0.638)</td>
<td></td>
</tr>
<tr>
<td>DispensableParties</td>
<td>0.472**</td>
<td>1.6024</td>
</tr>
<tr>
<td></td>
<td>(0.235)</td>
<td></td>
</tr>
<tr>
<td>Minority</td>
<td>1.755***</td>
<td>5.7816</td>
</tr>
<tr>
<td></td>
<td>(0.451)</td>
<td></td>
</tr>
<tr>
<td>SingleParty*Minority</td>
<td>1.659**</td>
<td>5.2515</td>
</tr>
<tr>
<td></td>
<td>(0.691)</td>
<td></td>
</tr>
<tr>
<td>MajorityProviders</td>
<td>-0.525***</td>
<td>0.5917</td>
</tr>
<tr>
<td></td>
<td>(0.100)</td>
<td></td>
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<tr>
<td>ExtremistsGov</td>
<td>-0.072</td>
<td>0.9307</td>
</tr>
<tr>
<td></td>
<td>(0.136)</td>
<td></td>
</tr>
<tr>
<td>ExtremistsOpp</td>
<td>-2.439**</td>
<td>0.0872</td>
</tr>
<tr>
<td></td>
<td>(1.106)</td>
<td></td>
</tr>
<tr>
<td>Minority*ExtremistsOpp</td>
<td>3.476*</td>
<td>32.3260</td>
</tr>
<tr>
<td></td>
<td>(2.064)</td>
<td></td>
</tr>
<tr>
<td>ENP</td>
<td>0.474*</td>
<td>1.6056</td>
</tr>
<tr>
<td></td>
<td>(0.242)</td>
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<tr>
<td>SeniorityGov</td>
<td>0.584***</td>
<td>1.7939</td>
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<td>(0.222)</td>
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<tr>
<td>ENP*SeniorityGov</td>
<td>-0.161***</td>
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<td>SeniorityOpp</td>
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<td>(0.261)</td>
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<tr>
<td>ENP*SeniorityOpp</td>
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<td>1.1575</td>
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<td></td>
<td>(0.065)</td>
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<tr>
<td>TimeElapsed</td>
<td>0.067***</td>
<td>1.0695</td>
</tr>
<tr>
<td></td>
<td>(0.011)</td>
<td></td>
</tr>
</tbody>
</table>

Observations: 102
Log pseudolikelihood: -271

Cox regression estimates with robust standard errors in parentheses (clustered by country).
* significant at 10%  ** significant at 5%  *** significant at 1%
For both variables we find threshold effects: Heterogeneity increases the hazard as expected, but only for large coalitions. For coalitions of two partners, it actually decreases the hazard. Likewise, format increases the hazard only for highly heterogeneous coalitions, and this effect is not even significant. For lower values of heterogeneity, format significantly reduces the hazard. These results only conditionally support the hypothesis that small and homogeneous coalitions are the most stable ones. Somewhat broader and moderately diverse coalitions exhibit the highest durability in the countries of CEE. We interpret this finding as a consequence of high uncertainty in a changing political environment. Under the condition of ongoing party system change on the parliamentary and electoral level, overly narrow alliances run a higher risk of being wiped out by unpredictable events.

Figure 2
Similar conclusions can be drawn from the effects of coalition type. We expected minimal-winning coalitions to be the most durable type. However, this hypothesis is only conditionally supported as well. As regards oversized coalitions, Table 1 shows a negative effect on the hazard, which is counteracted by the positive effect of the number of dispensable parties. Again, we observe a threshold effect: Figure 4 shows that oversized status increases the hazard only in coalitions with three or more individually dispensable parties; for one or two dispensable parties, there is no significant effect. Thus, bare majorities do not necessarily lead to longer duration. Again, somewhat broader alliances seem to offer a viable alternative.

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Note that unlike in the case of heterogeneity and format, oversized status and the number of dispensable parties do not interact but simply vary together. Still, the logic of the graph is the same.
With regard to minority status, we first have to distinguish between single-party and multi-party governments. As expected, single-party governments of any type enjoy considerable stability, and this bonus is reduced if the government does not command a majority in parliament. For both single- and multi-party governments, the positive effect of minority status on the hazard shown in Table 1 is counteracted by the negative effect of the number of potential majority providers in the opposition. Figure 5 and 6 display the net effects: single-party governments do not significantly suffer from minority status if there are more than four majority providers. Admittedly such a constellation does not occur very often, but even a single majority provider substantially reduces the destabilizing effect of minority status.

For multi-party coalitions, the effect is even more pronounced. For more than three majority providers, our model actually predicts a negative effect of minority status on the hazard. If several options for ‘shifting majorities’ are available, a minority government can compensate for the lack of majority status and exploit the advantages of small size in terms of office benefits. Only in case of no or few potential majority providers does the model predict a positive
effect of minority status on the hazard. The role of coalition type thus crucially depends on party system features.

Figure 5

Whereas we have seen above that the ideological heterogeneity of a coalition in terms of party families affects its durability, the number of extremist parties in government does not seem to have an effect. This should not surprise us. Even in the countries of CEE, extremist parties do not routinely enter government: the dataset features eight relevant cases, five of which from Slovakia. Moreover, in four of the five Slovak cases, the coalition was exclusively made up of extremist parties. These data do not really permit a meaningful test of the hypothesis that fundamental conflicts between moderate and extremist parties lead to coalition termination.
On the opposition’s side, however, testing the impact of extremist parties is feasible. As expected, we find that majority coalitions are stabilized by an extremist opposition. The more seats are controlled by extremist parties, the fewer options there are to build alternative coalitions and the more likely the partners of an existing coalition are to stay together even under unfavorable circumstances. For minority governments, however, this effect is reversed: The stronger extremist parties in opposition, the higher the hazard of coalition termination. Thus, the viability of ‘shifting majorities’ does not only depend on the mere number of potential majority providers (as shown above), but also on ideological differences. Extremist parties are unlikely to support the government and therefore reduce the room for maneuver of a minority coalition.

Finally, the model shows an intriguing pattern of interaction between parliamentary seniority and fractionalization. Fractionalization of the party system increases the hazard as expected. Seniority on the government’s side seems to increase the hazard whereas seniority on the opposition’s side seems to decrease it. However, it must again be noted that these two coefficients in Table 1 are conditional on the interacting variable (the effective number of parties)
taking a value of 0 – a logically irrelevant case. A comprehensive picture again requires graphical presentation. Figure 7 and 8 demonstrate that once the interaction effects are taken into account, seniority of the government reduces the hazard and seniority of the opposition increases it. This applies for almost all common values of fractionalization, and both effects are more pronounced in more fragmented party systems. Thus, the value of parliamentary seniority for a coalition is highest in complex bargaining environments where experience is vital. By contrast, parliamentary seniority seems to help opposition parties especially in complex bargaining environments to outmaneuver the government in office.

Figure 7
In summary, the results first demonstrate that all three dimensions of party interaction – numerical, ideological and organizational – contribute to a model of coalition stability in CEE and to a better understanding of coalition stability more generally. Second, coalition-internal and party-system-related factors should not be strictly separated. Neither of these groups can be entirely subsumed under the other one, but it is primarily their overlap and the interaction between them what explains coalition survival. And third, a consequent actor-centered perspective reveals that some of the standard effects discussed in the empirical literature hold only conditionally.

7. Conclusions

Our comparative analysis of coalition stability in Central and Eastern Europe has led to some remarkable insights. First of all it was shown that party-centered variables are very well able to explain the duration of those coalitions which were formed in the 12 post-communist EU member states and accession countries since 1990. Quite in contrast to what the descriptive
literature on Central and Eastern European politics sometimes suggests, early government terminations in the region should not be interpreted as merely idiosyncratic decisions of political leaders in specific situations. We could rather demonstrate that coalition-related behavior of CEE elites is considerably influenced by their immediate political environment, i.e. the given patterns of party interaction. Therefore, explanatory approaches focusing on ‘party attributes’ that were developed on the basis of Western democracies may be fruitfully applied to the new EU member states as well.

Nevertheless, the empirical results of this paper also point to obvious specificities in the CEE context. Some findings even tend to contradict relevant hypotheses derived from West European experiences. For example, both oversized coalitions and minority governments show only conditional instability. Furthermore, the ‘ideal’ format of CEE coalitions in numerical and ideological terms is not ‘small and homogenous’, but lies in-between the extreme poles of ‘small and homogenous’ and ‘large and heterogeneous’. And, what is more, extremist parties in CEE governments do not have a negative effect on coalition survival. All in all, these novel results might stimulate further research on the subject. Analyses to come could include additional variables, such as institutional factors or socio-economic conditions, in a quantitative model and/or focus on ‘critical cases’ in a more qualitative framework.

Finally, the idea of combining a coalition-internal and a party system-related perspective has indeed proved to be analytically rewarding. In particular, this approach led us to more nuanced theoretical assumptions concerning the impact of party interaction on coalition survival. Following this perspective we did, for example, not expect a ‘simple’ relationship between organizational instability of post-communist party systems and coalition survival, but rather a differentiated effect according to the ‘seniority’ of parties in government and in opposition which was empirically confirmed. Similarly, extremist parties in opposition were not expected to have an overall destabilizing effect, but only in case of a minority government. This hypothesis which holds for the new EU member states might also be tested for longer established democracies. In general terms, our argument underlines Laver’s (2003) plea to reinforce the theoretical discussion in the empirical study of government termination which has primarily focused on methodological issues in the recent past.
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