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Government instability and the state*

DANIEL WALTHER, JOHAN HELLSTRÖM AND TORBJÖRN BERGMAN

Government instability (cabinet duration) is an important feature of parliamentary democracy. Over time, the research on cabinet duration has improved in technical and theoretical sophistication. However, we note that little attention has been paid to the relationship between governments and the state itself. Our main hypothesis is that state capacity, e.g., factors such as state bureaucratic effectiveness and law and order, shape how easy it is for governments to implement the new policy and thus how well they can achieve policy objectives. We also argue that when state capacity is low, the ability to adequately respond to external shocks goes down, and instability increases. When testing this empirically we find that low state capacity does indeed help us predict an increased risk for early termination—in particular, whether the government ends through a replacement (but not by an early election). Using interaction effects, we also demonstrate that the effect of external shocks, such as an increase in unemployment, is conditional on state capacity. An increase in unemployment only has a significant effect on cabinet stability when state capacity is low, suggesting that the cabinet's (in)ability to address the economic problems is an important factor for understating cabinet durability.

Greece and Iceland were hit particularly hard during the international financial crisis in 2008. In economic terms, the root causes were not exactly the same. In Greece, an inefficient and under-funded public sector had assembled a huge budget deficit. In Iceland, the small privately owned banking system had with the help of the closely linked political elite gone international and grown all out of proportion, relative to both gross domestic product (GDP) and the state budget of that country. However, in both countries, the governments and the political elite were seen as scandalously incompetent and even corrupt (Hardarson and Kristinsson 2009; Mavrogordatos 2009). A series of demonstrations and public manifestations erupted in both counties. During the next few years, governments were forced to resign and incumbent political parties suffered compelling losses at the polls. New anti-establishment parties grew in both countries. Iceland recently (2016) had a new (corruption) scandal when the incumbent Prime Minister, Sigmundur Davíð Gunnlaugsson, was forced to resign in connection with his family having held off-shore holdings in Panama. However, while much of the "political class" in both countries is still met with distrust and suspicion, Iceland seems both to have mastered the crisis better and returned to a state of "normal" politics much faster than has Greece (Hardarson and Kristinsson 2009; Keesing's record of world events. Annual reference supplement 2009; Mavrogordatos 2009; Mylonas 2013). Thus, it seems that the Icelandic state seems somewhat better equipped to handle severe political crises.

The goal of this paper is to bring state capacity into research on government stability. Why governments in parliamentary democracies fail, i.e., come to an end before the next regular election, is both a well-researched topic and an important part of the life cycle of modern

* Daniel Walther is an Assistant Professor (daniel.b.walther@gmail.com), Johan Hellström is an Associate Professor (johan.hellstrom@umu.se) and Torbjörn Bergman, is a Professor (torbjorn.bergman@umu.se) in the Department of Political Science, Umeå University, Umeå 901 87, Sweden. The authors gratefully acknowledge the support of the Marianne and Marcus Wallenberg Foundation (Research grant MMW 2011.0030) that made this research possible. The authors also thank the anonymous reviewers of this journal. To view supplementary material for this article, please visit https://doi.org/10.1017/psrm.2018.20

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cabinets (King et al. 1990; Warwick 1994; Strøm, Müller and Bergman 2008). But generally, attempts to explain differences in average government duration have focused on factors such as government attributes, parliamentary make-up, the institutional environment and economic developments (Browne, Frendreis and Gleiber 1984; Laver 2003). We argue here that the effectiveness and capability of the public sector, what in a growing literature has become known as "state capacity" (Rothstein and Stolle 2008; Rothstein and Teorell 2008), is an important additional factor that impacts cabinet stability. It is also one that has previously received too little attention in duration research. It is an aspect of democratic governance that differs notably between countries, and it could thus be helpful in accounting for the distinctly different patterns that we can observe in government survival in different countries.

We argue that there are strong theoretical and empirical reasons to believe that governments in countries with low state capacity find it more difficult to achieve their policy goals. The main reason for this is that when the state bureaucracy is inefficient and corrupt, it becomes more difficult to ensure that new legislative proposals are successfully implemented (Dahlström, Lindvall and Rothstein 2013). We identify two main effects that are relevant for government stability. First, with reduced ability to achieve policy objectives, it becomes relatively more difficult for a government party to satisfy its voter base and government membership thus becomes less valuable (Laver and Schofield 1990). Second, when policy implementation is constrained, governments find it more difficult to address external shocks, be they economic crises, sharp declines in popular support or corruption scandals. Governments in low capacity environments, therefore find it more difficult to deal with unforeseen external crises because they struggle to introduce measures that adequately address the problem (Dahlström, Lindvall and Rothstein 2013).

With this in mind, we argue that state capacity is an important consideration for government parties when they decide whether to remain in the government or not. As we show below, these theoretical expectations are borne out in empirical tests. Our measure of state capacity, here operationalized through an aggregate indicator of the quality of governance (QoG) (Teorell et al. 2017), turns out to be a significant predictor of cabinet instability. In particular, state capacity appears to play an important role for replacement terminations but not for early elections (this distinction is explained below). Moreover, there is an interaction effect between the economy (here measured in terms of unemployment) and state capacity. For low levels of state capacity, an increase in unemployment has a significant and substantively large effect on the likelihood of early termination. However, when state capacity is high (over 8 on our ten-point scale) this effect disappears. This suggests that the actual effect of an external economic shock on government longevity is directly dependent on the capacity of the state to deal with it.

The paper starts with an overview of government duration studies. We here show the lack of attention to state capacity in the literature. We then turn to a deeper theoretical discussion of state capacity—what reasons do we have to expect that the competence and reliability of the public sector matter for cabinet stability? Next, we discuss our operationalization, data and methodology before looking at the empirical situation and discussing the results.

HOW STATE CAPACITY FITS INTO THE FIELD OF DURATION STUDIES

The empirical study of cabinet duration has a long history in comparative political science, with some important early studies published in the 1970s (Taylor and Herman 1971; Dodd 1976; Sanders and Herman 1977). In the 1980s the field was dominated by the so-called survival debates, where one side argued that there are institutional and cabinet attributes that systematically predict cabinet survival (Strøm 1985), and the other that governments above all fail as a result of general "wear and tear" and largely unpredictable external events and crises

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(Browne, Frendreis and Gleiber 1984; Browne, Frendreis and Gleiber 1986). From this emerged a consensus view that there are some risk factors affecting all governments, but the ability to deal with and withstand the effects of these external events depends on a more general set of factors, including the strategic situation and institutional environment of the government.

Strøm, Müller and Bergman (2008) divide this set of generally relevant factors into six overarching clusters, namely:

1. Structural attributes: such as the government type and the number of parties in the system.
2. Preferences: in particular, ideological spread and presence of extreme parties.
3. Institutions: for example, bicameralism and positive parliamentarism.
4. Bargaining environment: measured, e.g., by how long it took to form the government and the use of coalition agreements.
5. Time: since different decades bring different risks for the cabinets.
6. Critical events: such as economic development and scandals.

People can disagree on the precise divisions, and there are clearly a number of variables that fall into multiple categories. Still, this overview serves to highlight an important feature of the field—most of the commonly invoked explanatory factors focus either on characteristics of the government itself, on features of the opposition or the political institutions. Little attention tends to be paid to the general conditions of the state and the operations of the public sector.

On the one hand, it makes sense to focus on the cabinet and the immediate political environment since we know that many such factors matter for cabinet stability. Minority and coalition cabinets are less stable than their counterparts who control a parliamentary majority or consist of a single party (King et al. 1990). Similarly, in systems where there is a greater effective number of parties and an unstable bargaining environment, cabinets are also more likely to terminate prematurely (Damgaard 2008). Such features of the formal political environment are generally stable throughout the government's term of office. If there are five other parties represented in parliament when the government assumes office, there are usually also five other parties when it ends. In the case of institutions, they are even quasi-permanent features of the country as such.

In addition to these stable features, we might also be interested in how the government is impacted by developments that take place during its term of office. Some such factors are often included in duration models. Economic developments, e.g., pertaining to growth, inflation and unemployment affect government popularity, and are frequently found to also have a bearing on cabinet durability (Warwick and Easton 1992; Tzelgov 2011). Scandals and other critical events, following the tradition of Browne, Frendreis and Gleiber (Browne, Frendreis and Gleiber 1984; Browne, Frendreis and Gleiber 1986) are sometimes also included and capture another aspect of how the government's actions while in office affect its survival chances.

We argue here that *state capacity* should be included as a *seventh issue dimension* (or cluster) that affects government stability. It can be seen as a distinct and independent type of explanatory factor for a few different reasons. First, it deals with an area (the workings of the public sector) that is both conceptually and legally distinct from the other clusters discussed above (Soifer and Vom Hau 2008). Second, while it is affected by everyday political decision-making (Hellman, Jones and Kaufmann 2003; Andersen, Møller and Skaaning 2014; Innes 2014), state capacity can also be seen as a distinct background factor that sets the scene for a particular government. State capacity affects the rules of the game and presents an external constraint that shapes what an individual government can do—including what kind of policies it can hope to implement. As we show below, state capacity differs in important ways between the countries in our data set (Rothstein 2011; Andersson, Bergman and Ersson 2014). In the next section, we

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develop our theoretical arguments in a bit more detail as we explain why differences in state capacity are likely to have an impact on government stability.

THE THEORETICAL LINK BETWEEN STATE CAPACITY AND CABINET STABILITY

We see state capacity as the power that the state has to successfully carry out policy initiatives. This is in line with the definition from Besley and Persson that state capacity is "the institutional capability of the state to carry out various policies that deliver benefits and services to households and firms" (2011, 6). State capacity can therefore not be measured through outcomes (such as stable economic growth) but is instead an ability to implement those policy ideas that the people in charge of the state (i.e., the government and parliament) favor. A more detailed discussion of how this will be measured and operationalized in this study is presented in the next section.

The question for this section is instead why differences between countries in state capacity should, other things held constant, have a bearing on cabinet stability. Theories about cabinet stability generally focus on political parties, since it is individual parties who are the agents and decide to leave or remain in the government (Lupia and Strøm 1995; Diermeier 2008). If state capacity is relevant, it should therefore have an impact on the incentive structure of parties, and this impact should go above and beyond the explanatory capacity of other common variables that are used.

With these criteria in mind, our main theoretical reason for why state capacity should affect cabinet stability is this: when state capacity is low, the parties in government are less able to successfully introduce new policies. This simultaneously makes it more difficult for them to implement political initiatives favored by their voters and to deal with exogenous economic or political shocks.

State capacity can thus influence the government's propensity to terminate prematurely in two main ways. First, as briefly mentioned above, when state capacity is low it takes a longer time to implement new policies, and it is less likely that it is done successfully. Many previous studies in the duration literature have acknowledged that governments differ in their ability to realize their political goals and that this influences how valuable they find government membership. But the focus has generally been on policy agreement, not implementation. For example, minority cabinets, other things equal, have been found to be less well posed to pass new legislation that is close to their (and their voters) ideal preferences because they need to rely on help from the opposition (Dodd 1976; Laver and Schofield 1990). Similarly, governments that contain ideologically heterogeneous parties find it more difficult to agree on new policy because they might have different preferred courses of action (Müller and Strøm 1999). This can render both of these government types less stable.

To test this argument, *our first hypothesis* is that having low state capacity has a similar effect to being in the minority or being in an ideologically divided coalition government—the policy that can be accomplished will be further away from the parties and the voters' ideal positions. It has been shown that countries with low state capacity have a reduced ability to implement the new political decision, especially if these are complicated and demand more discretionary action from the bureaucracy (Dahlström, Lindvall and Rothstein 2013). Corrupt bureaucrats with their own agendas are less likely to implement new policies conscientiously. Since the policy that is eventually implemented is likely to be diluted, this makes both voters and policy-seeking politicians less content with the outcome. All of this serves to reduce the value of holding office and increases the risk of an electoral punishment in the next election which can make remaining in power less appealing.

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The above argument thus suggests that the utility of holding office is generally lower in countries with low state capacity and that this can lead to increased instability. However, the low utility is not enough in and of itself to bring about termination. Since this utility was known by the parties when they formed the government, they must still have reached an informed decision that taking part in this government was favorable to other alternatives. An external change in circumstances is therefore needed to set the causal path in motion that leads to termination.

In the duration literature, a popular way to think about such external changes is to use the game theoretic model developed by Laver and Shepsle (1998). The key insight in their model is that governments are exposed to a wide range of exogenous shocks and that stable governments are those that are better equipped to deal with such shocks. Examples of exogenous shocks are rapid changes in public opinion, agenda shocks (when a certain political topic suddenly becomes prominent) and policy shocks (when an external shock such as an economic crisis or a war forces the government to reconsider its policies). Some governments are better able to devise and implement crisis management techniques that allow them to weather the storm. Exogenous shocks can thus be understood as the causal triggers that can bring down a government, but the government's other characteristics make it more or less resistant to them (Laver 2003).

Building on this, *our second hypothesis* is that governments in countries with low state capacity find it more difficult to respond to crises that erupt during their term of office. When external circumstances change, and political response is needed, it is crucial that a swift and precise policy response can be launched. However, as noted above, for a new policy to be effective against a crisis, it is not enough that decision-makers successfully come to an agreement. Rather, the new policy also needs to be adequately implemented, and here the public bureaucracy comes into play. This means that a government in a country with low state capacity can realize that it does not have the tools to deal effectively with, e.g., a sudden rise in unemployment because the actions needed would be opposed, delayed or otherwise hindered by the public officials in the bureaucracy. Even if a government can get legislative support for new measures, such decisions matter little if they are implemented too slowly or not at all. Party leaders with strategic foresight will therefore realize that the subpar crisis management will lead to voter disaffection and which could make it a sensible choice to leave the government in order to reduce the vote loss.

This second hypothesis is built on a four-step causal pathway, consisting of the following discrete steps:

1. An external shock occurs.
2. The shock is substantive enough to upset the government equilibrium.
3. The government can ameliorate the shock in a way that could preserve government stability if new policies that address the shock are swiftly introduced.
4. The new policy must be both successfully implemented and effective.

Steps 3 and 4 highlights that an extra assumption built into our argument is that government policy must not only be implemented, but must also be reasonably well-designed and effective. If we take the 2008–2009 financial crisis as an example of an external shock, a government that failed to introduce policies that prevented banks from collapsing and unemployment from spiraling will suffer higher risks of early termination, even if the policies were faithfully implemented by the bureaucracy. However, we have little reason to believe that countries with lower state capacity are consistently less successful at designing policies that would be effective at addressing a particular exogenous shock. If policy skill is approximately equally distributed

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among political systems (even if not between individual cabinets), then accurate and swift implementation becomes a crucial difference. And here countries with low state capacity are known to be at a disadvantage (Dahlström, Lindvall and Rothstein 2013).

As noted by Lupia and Strøm (1995, 649), exogenous shocks can have a set of different consequences for cabinet stability depending on the circumstances, including early election, the formation of a replacement government, a redistribution of power within the cabinet, as well as a retention of the status quo. The precise consequence of a shock depends both on the type of event, when it happens in the electoral cycle, and how the complex negotiations between and within parties about how to address the issue turn out. The actual outcome is therefore likely to be both contextually and temporally dependent (Diermeier and Stevenson 2000).[1] It is our strong contention, though, that the scales are more likely to tip in favor of termination of any type if the government parties are under the impression that it will be hard to effectively handle the crisis because of policy implementation considerations.

State capacity should thus have a direct, independent effect on cabinet stability through our first hypothesis (by lowering the general utility derived from being in office) as well as a moderating effect on the government's sensitivity to exogenous shocks through the second. Both of these hypotheses will be tested empirically in our regression analysis.

HOW STATE CAPACITY CAN BE OPERATIONALIZED

Thus, state capacity is the power and capability to use state resources to implement political initiatives. As mentioned, in this paper we use a measure of QoG as a way to operationalize state capacity. QoG itself is a rich and detailed research field, and the concept has been used in different ways over the years. Sometimes it pertains to input into governance, relating, e.g., to transparency and accountability. Sometimes it is more about the formal rules and procedures of public operations and about ensuring that they are fair and impartial (Rothstein and Teorell 2008). Sometimes it is more about output, such as when the World Bank uses the term to talk about effective management and good economic results (Kaufmann and Kraay 2008). And finally, the concept can also pertain to perceptions and people's confidence in the stability and predictability of the state sector (Holmberg, Rothstein and Nasiritousi 2009). Some refer to the basic idea as QoG, others at Quality of *Government* (Rothstein 2011).

The different definitions stem both from different philosophies and from different purposes. When academics try to understand how QoG affects democracy, the focus is likely to be slightly different from when the World Bank wants to pinpoint how economic management can be improved. Still, the differences should not be exaggerated. When Holmberg, Rothstein and Nasiritousi (2009) compared a wide range of popular measures, they found that they had a correlation coefficient of more than 0.9. So certain differences in operationalization notwithstanding, the different measures seem to by and large tap into the same underlying phenomenon.

Here we choose a definition and a measure that is particularly suited for the definition of state capacity we have offered above. In particular, we use a composite index created by the Gothenburg QoG institute based on data from the International Country Risk Guide's

[1] It is also possible that there is a greater number of external shocks in countries with low state capacity. In particular, low state capacity is associated with greater vote swings for the governing parties (and thus also more noticeable opinion shocks) (Andersson, Bergman and Ersson 2014) and a higher frequency of corruptions scandals (Anderson and Tverdova 2003). So governments that have assumed power in countries with low state capacity are both more prone to experience some of the exogenous shocks identified by Laver and Shepsle (1998) as well as less equipped to deal with them. However, such simultaneous effects must be left to future research as they are beyond the empirical scope of this article.

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(Teorell et al. 2017). This measure focuses specifically on the effectiveness of the state bureaucracy and the reliability of state officials, which seems suitable for our purposes. The International Country Risk Guide's (ICRG) measure is popular in the "comparative social trust" field and has, e.g., been used by Rothstein in his book-length treatment of QoG (Rothstein 2011).

According to the QoG Standard Data Set 2017 Codebook[2] (Teorell et al. 2017), the index is created from the aggregation of three individual variables, namely "Corruption," "Law and Order" and "Bureaucratic Quality." Let's look briefly at the different measures in turn. First, the *corruption*[3] score focuses both on monetary types of corruption, such as bribes and special payments, and also on biased actions such as nepotism, job reservations and excessive patronage. Monetary corruption clearly displays a lack of impartiality in the work of the public sector since people with money can get preferential treatment. But nepotism and patronage are often equally adept at setting aside just rules and procedures. In political environments where formal qualifications are ignored, and personal relationships take a more prominent role, corrupt outcomes follow. Political corruption in this measure thus focuses on both of these features. Corruption lowers state capacity by making it less likely that public officials will implement laws in an unbiased and effective way.

Law and order in turn are measured as two distinct phenomena. *The law side* focuses on the strength and objectivity of the legal system—this can be seen as the impartiality of the judicial framework that underpins many other activities. *Order*, in turn, assesses the public observance of said regulations. Having fair and balanced regulations matter little if there is a widespread culture of ignoring legal dictums. Thus, in order to understand how law and order are actually experienced by average citizens, it is important to factor both legal provisions and the culture of rule following into the equation. Moreover, since applying and enforcing the law is part of the government's mandate, public observance of the law can also be seen as a reflection of the effectiveness of public management.

Finally, *bureaucratic effectiveness* is concerned with whether the public bureaucracy is capable and strong enough to create a stable and predictable governing environment. Public services should continue to operate as expected even amidst other socio-political changes. That is, even if the government changes or the country is faced with other types of political turmoil, the public bureaucracy should continue to work effectively. This is often tied to how independent the bureaucracy is from day-to-day political control. In addition to this, there should also be established mechanisms for hiring and for promotion so that the impartiality of public sector recruitment is ensured. That is, there should be established, meritocratic criteria for hiring staff to the bureaucracy so that professionalism is ensured (Andersen, Møller and Skaaning 2014).

In Figure 1 we can see an overview of how state capacity levels as measured by this index differ among the 28 countries that are included in our data set. The measure ranges from 1 to 10, with 10 being the highest QoG. The bars show the mean level in each country for the period from 1989 to 2014. In the graph we can see that there are systematic differences between

[2] Available at www.qog.pol.gu.se

[3] Given the frequent use of the full ICRG measure in studies referring to State Capacity and QoG, we use it for our purposes too. The "corruption" part of the measure could potentially be conceptually problematic though. Corruption in the state might to some extent also include "government corruption". This could mean that our dependent variable, government termination and main independent variable, state capacity, are partly linked. For this reason, we undertook an empirical analysis that excluded corruption from the state capacity measure. This did not change the results. In our statistical analysis, whether corruption is included in the aggregated measure or not does not influence our overall finding. The statistical result where corruption is excluded is available in the Online Appendix.

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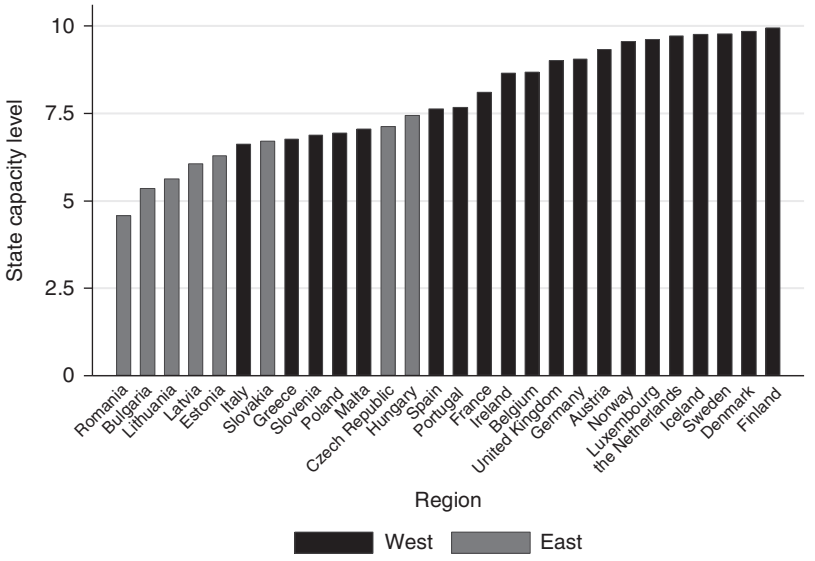


Fig. 1. Average state capacity level in different European countries

European countries when it comes to QoG. A number of countries, notably the Nordic ones, are at the top of the scale with average scores hovering between 9.5 and 10. At the other end of the spectrum, the Baltic countries, Romania and Bulgaria generally receive scores between 4.5 and 6. In general, Eastern European countries have a far lower score than their Western European neighbors, with the exception of Greece and Italy that also have below average scores. An overview of how state capacity levels have developed over time within each country is available in the appendix.

In sum, the ICRG measure nicely captures some of the main features of state capacity that we think are theoretically relevant from a duration perspective and it is well established in the QoG field (Rothstein 2011). There are also pronounced differences on this measure between the countries in our data set, and if our theoretical arguments hold true, those differences should have an effect on average cabinet longevity.

DATA AND METHODOLOGY

The data used in this study, apart from our operationalization of state capacity which was discussed at length in the preceding section, comes from the 2014 version of the European representative democracy data archive (Andersson, Bergman and Ersson 2014). The data set contains information on the 640 governments that have come to power under democratic forms in 29 countries[4] in Europe since the end of the Second World War. So the data in most Western European countries goes back to 1945, whereas the Mediterranean countries of Greece, Spain and Portugal are only there from the 1970s onwards. Eastern Europe then joins in 1989/1990. In this study we have decided to limit the entire sample to the years since 1989 to ensure that the samples from Eastern and Western Europe are approximately balanced as well as to ensure that our state capacity scores and economic data are available. This gives us a total of 237 cabinets.

In line with the theoretical findings from Lupia and Strøm (1995) and from many empirical studies since (e.g., Saalfeld 2008), on the dependent variable we also distinguish between two

[4] Cyprus, with its presidential system, is excluded here though, which leaves 28 countries for our analysis.

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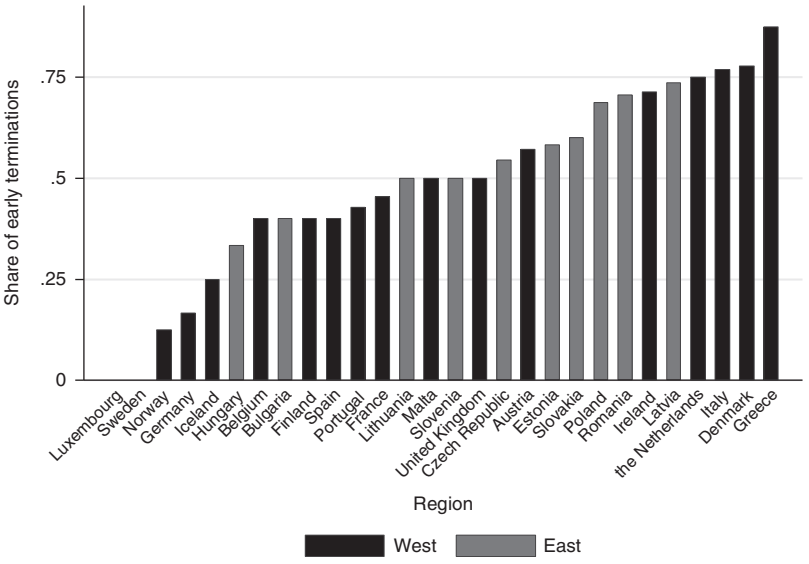


Fig. 2. Early terminations since 1989

types of discretionary termination—early elections[5] and replacement terminations. Although we believe, as argued above, that state capacity has a more general effect that has the potential to lead to both of these termination types depending on the circumstances, they are empirically distinct and treating them separately is therefore warranted.[6] An early election is the dissolution of parliament and the calling of a general election before the next regularly planned one. A replacement termination is defined as a change in the party make-up of the government caused by parties either joining or leaving the government without an election being held.

It should also be noted that termination is here considered to be a *discretionary* termination. That is, a government that terminates for a reason that could not be prevented (such as the death of the Prime Minister or a constitutionally mandated early election) is not considered to be a "failure." Instead such terminations are right censored (i.e., the information from their life-span is included but the actual termination is treated as unobserved) (Kleinbaum and Klein 2005).

Figure 2 gives an overview of the combined share of early elections and replacements in the different countries in our sample, i.e., the total premature dissolution rate. In the Online Appendix, we present a more detailed set of graphs where early elections and replacements are treated separately. In Figure 2, though, we can see that some western countries, such as Greece and Denmark, had a very high share of early termination—in the case of Greece more than 80 percent of governments leave prematurely. In general though, the Eastern European countries proved less stable. Only two eastern countries, Hungary and Bulgaria, have an early termination rate of less than 50 percent, meaning that in most Eastern European countries more than half of all governments terminate before the next regular election.

[5] The Norwegian constitution altogether precludes an early dissolution of the parliament (Storting) and early elections, but our statistical findings regarding the general European pattern do not change if we drop Norway from the analysis.

[6] That they are empirically distinct is demonstrated by the fact that the risk of ending through a replacement is fairly constant throughout the term of office whereas the risk of early elections increases rapidly.

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In terms of the *control variables* employed here, we select 11 common explanatory factors that have frequently been employed in other studies (King et al. 1990; Laver and Schofield 1990; Warwick and Easton 1992; Warwick 1994; Laver 2003; Damgaard 2008). These are selected to capture different facets of the six overarching factors influencing cabinet duration that were outlined in second section as well as our new, seventh factor. A few of the control variables are adapted from QoG studies and have not been frequently used in duration studies. One less commonly used factor is *GDP per capita.* Here the absolute level of GDP per capita at the start of the government term was included as a static control in order to ensure that our state capacity measure does not inadvertently pick up other general socio-economic differences between the countries. If this is not included, state capacity might simply act as a proxy for the material well-being of the country. Second, we also included a measure of the *age of parliamentary democracy* in the country. This measure is often included in QoG studies and has recently also been used in duration studies (Fernandes and Magalhaes 2015; Schleiter and Issar 2015). Since many features of the political system tend to mature over time in a democracy, we include the age of parliamentary democracy here to ensure that our measure of state capacity does not inadvertently pick up other characteristics of the political environment. Like previous studies, we use the natural log of the number of years since each additional year of experience is likely to matter more in the early days after democratization. This score is taken from the coding of Cheibub, Martin and Rasch (2015).

Finally, to measure economic changes we used time changing measures of unemployment and inflation. So rather than having one measure for the entire government life cycle, these two economic measures change every quarter to get a more dynamic picture of how economic developments during the term of office impact stability. Moreover, rather than using the static level, we used the change from one quarter to the next. So if, e.g., unemployment was 6 percent in one quarter and 6.3 percent in the next, this would be coded as an increase of 0.3. Measuring the change, rather than the absolute level, was theoretically warranted in our case since we are concerned with the government's response to changes and exogenous shocks, not how it deals with the static baseline level.

Statistical Tests

In order to test our hypothesis that state capacity has an effect on cabinet stability both directly and as a moderating variable, we will rely on a *discrete-time duration model*. This model is asymptotically identical to the more common Cox proportional hazards model, but since the data used are already time changing (with economic indicators changing every three months), the time-split discrete model is a suitable option. The discrete-time model also offers some advantages in that it avoids the proportional hazards assumption and, being logit based, has a number of useful post-estimation options (Box-Steffensmeier and Jones 2004, Chapter 5). The discrete-time model can thus be interpreted in a similar way to a standard logit-based model.

And as suggested by Box-Steffensmeier and Jones (2004, 75), time (transformed by taking the natural log) is entered as a control variable to ensure that the baseline hazard is allowed to change over time. Moreover, since there are three possible exit options for each government—survival, an early election, replacement—the multinomial version of the discrete-time model is used as our main model. This is similar to the Cox competing risks model.

To test whether state capacity has a direct effect (Hypothesis 1) we will simply include our state capacity measure as a separate variable in the cross-sectional regression models. If our hypothesis is true, we expect a significant coefficient where higher capacity levels should be associated with a lower likelihood of early termination.

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Second, to test our conditional hypothesis (Hypothesis 2), that external shocks are more detrimental to the government if it is an incumbent in a context of low state capacity, we will include interaction terms for state capacity and economic deterioration. To operationalize an economic shock, we opted for our unemployment measure since unemployment has consistently been found to be the strongest economic predictor of cabinet instability, in particular in the time period we focus on here. Unemployment has been found to matter for cabinet stability in both Eastern (Roberts 2008; Bergman, Ersson and Hellström 2015) and Western Europe (Warwick 1994; Damgaard 2008) and will be used here to exemplify an external economic shock. As mentioned above, unemployment is measured here on a quarterly basis. If our hypothesis is true that countries with lower state capacity are less equipped to deal with external shocks, then there should be a *conditional effect*. Low state capacity and economic deterioration might be harmful in their own right, but an economic shock[7] (increase in unemployment) in countries with low state capacity should, if our theory is correct, have an additional effect that is even more detrimental than a simple additive calculation of the individual effects would suggest.

To further investigate the conditional relationship, we also present a marginal effects analysis to measure how and to what extent state capacity moderates the effect of an economic shock on the likelihood of early termination. The marginal effects are calculated as the instantaneous effect on termination of a change in one variable over the full range of the other, with other variables in the original model being held at their mean values. This is a helpful way to determine the magnitude of an effect, in particular when an interaction effect is involved (Brambor, Clark and Golder 2006).

EMPIRICAL FINDINGS

The results from the discrete-time model are reported in Table 1. If we first look at state capacity alone in the models without interaction terms, we can see that state capacity appears to have an effect on replacements but not on early elections. For replacements, an increase of one in our state capacity measure makes the government 22.5 percent less likely to terminate prematurely, other variables held constant at their mean values.[8] Given that there is fairly large variation in state capacity, e.g., Bulgaria's 5.9 compared to Sweden's 9.8, this can make a large substantive difference. To be specific, a government in Sweden would be $0.778^{9.8-5.9} = 0.376$, or 37.6 percent as likely to end through a replacement as a Bulgarian, other variables held constant.

For early elections, we find no robust effect for state capacity. The hazard rate points in the right direction, but the large standard error suggests that there is a lot of noise in the data. One reason for this is that in Central and Eastern Europe, early elections are rare events. In our data, the countries in CEE have had 75 early terminations, but 72 of these have been replacements and only three early elections. This suggests that in countries with low state capacity, forming a replacement option is the most likely option.

A brief look at the control variables shows that they confirm some common findings from previous research. The less time there is left in office, the more likely it is that an early termination takes place (as the constitutional inter-election period (CIEP) variable shows). Also, when the prime minister can dissolve the cabinet this strongly increases the risk of early elections. A greater effective number of parties increases the risk of a replacement but reduces the risk of early elections. Finally, the greater the ideological polarization, the more likely a termination through early election becomes.

[7] "Shock" is here defined as any unforeseen external development that forces governing parties to change their status quo operations. It does not have to be sudden or short-lived.

[8] That is $(1-0.775)\times100 = 22.5\%$ decrease in risk or, in other words, less likely to terminate prematurely.

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TABLE 1 *Results From Multinomial Discrete-Time Models*

	Without Interaction		With Interaction	
	Early Elections	Replacements	Early Elections	Replacements
State capacity	0.852	0.775**	0.851	0.778**
	(0.262)	(0.089)	(0.263)	(0.090)
Unemployment	1.809***	1.574***	1.936	2.807
	(0.291)	(0.245)	(1.576)	(3.717)
State capacity × unemployment			0.991	0.917
			(0.094)	(0.189)
Controls				
Inflation	0.885	1.000	0.883	1.000
	(0.074)	(0.000)	(0.074)	(0.000)
CIEP	0.197***	0.196***	0.197***	0.197***
	(0.045)	(0.044)	(0.045)	(0.045)
GDP per capita	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)
Majority cabinet	1.879	1.286	1.881	1.268
	(0.906)	(0.470)	(0.910)	(0.464)
Polarization	1.068*	0.986	1.068*	0.986
	(0.038)	(0.032)	(0.038)	(0.032)
PM dissolution power	4.696***	0.583	4.703***	0.581
	(2.719)	(0.553)	(2.704)	(0.552)
Effective nr parties	0.730*	1.247**	0.730*	1.252**
	(0.127)	(0.125)	(0.129)	(0.127)
Age of democracy (log)	1.055	0.986	1.058	0.985
	(0.423)	(0.338)	(0.425)	(0.338)
N	267		267	
Early elections	37		37	
Replacements	105		105	
Pseudo R^2	0.42		0.42	

Note: GDP = gross domestic product; PM = Prime Minister.
Table entries are relative risk ratios with their standard errors in parentheses. The standard errors are clustered on the country level.
CIEP is the constitutional inter-election period (or how much time is left in office). Unemployment and inflation are time changing variables that change on a quarterly basis.
*p < 0.1, **p < 0.05, ***p < 0.01.

The results thus suggest that Hypothesis 1—that state capacity directly affects government stability—seems to find empirical support, but only for replacements. Let us then turn to the trickier question of interpreting the model *with interaction terms*. As noted in the methodology literature (Jaccard and Turrisi 2003; Brambor, Clark and Golder 2006), once you include interaction terms in the model, the constituent variables can no longer be interpreted independently. To be more precise, the coefficient reported in the regression table only has that value when the other variable in the interactive relationship is zero. In our case, that means that unemployment only has an effect on the likelihood of ending through a replacement of 2.810 when state capacity is 0. Since this is never the case (no country has a state capacity score of less than 4), this coefficient is of little interest.

Instead, the substantive effect of the variables can be interpreted by calculating the marginal effect of one variable over the range of the other. Since we are interested in whether an increase in unemployment is more difficult to deal with when state capacity is low, we can calculate the marginal effect of a one-unit change in unemployment for different values of state capacity. The results of this exercise are reported in Table 2.

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TABLE 2 *The Marginal Effect of Unemployment on the Risk of Replacement Terminations for Different Levels of State Capacity*

Level of State Capacity	Marginal Effect of Unemployment	Standard Error	p-Value	95% Confidence Interval	
6	0.014**	0.006	0.012	0.003	0.025
7	0.010**	0.005	0.044	0.000	0.019
8	0.006	0.008	0.431	−0.010	0.022
9	0.004	0.011	0.735	−0.018	0.025
10	0.002	0.013	0.899	−0.024	0.027

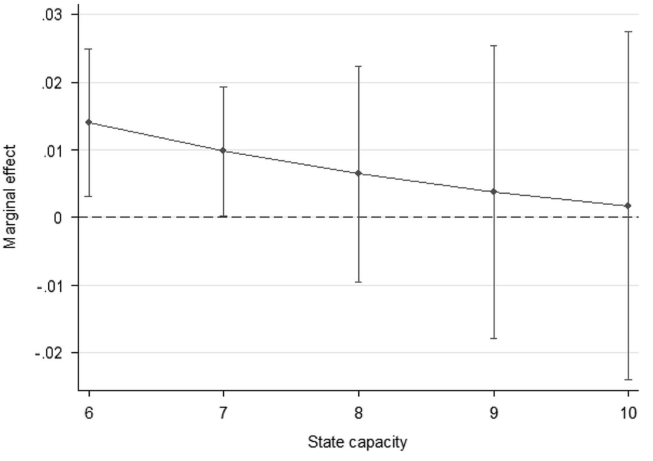


Fig. 3. Marginal effect of unemployment on the probability of a replacement termination

As Table 2 demonstrates, the quarterly change in unemployment does have a significant effect on the likelihood of early termination (in the form of replacements), but only for low levels of state capacity. When state capacity is at 6 or 7, as it is in most of Eastern Europe as well as in Italy and Greece, an increase in unemployment does make the government more likely to leave prematurely. When state capacity is at 6, a one percentage point increase in unemployment makes the government 1.4 percent more likely to terminate prematurely. When state capacity is 8 or more, this effect disappears. This finding supports our theoretical argument that when the capacity of the state to handle unemployment is high, the effect of an increase in unemployment on stability is much lower (if at all existent).

To see the relationship more clearly, Figure 3 presents a marginal effects plot. Here we can see that when state capacity is low (6 or 7), the marginal effect of a change in unemployment is both statistically significant (confidence interval does not touch 0) and substantively strong. As state capacity increases, the effect becomes weaker and can no longer be differentiated from 0. Moreover, the effect is curvilinear. That is, the improvement in stability is strongest for low levels of state capacity and then gradually seems to flatten out.

Thus, all in all the empirical results confirm that state capacity has a relevant and previously unacknowledged effect on the likelihood of discretionary terminations. There is both a direct effect of low state a capacity as well as an interactive effect that influences how well governments can respond to economic deterioration. Both the direct and the indirect effects are, however, only present for replacements. These findings suggest that state capacity should be taken seriously as a new explanatory dimension that matters for cabinet stability.

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CONCLUSION

The main result of this study is that state capacity has a significant, and substantively meaningful, effect on cabinet stability. If governments are less able to implement policies that they and their voters favor and if they find it more difficult to respond effectively to exogenous shocks, there also appears to be a higher risk of early termination. State capacity, here captured through a joint measure of corruption, bureaucratic efficiency and rule of law, is an important factor in day-to-day political life (Rothstein 2011) but has previously not been used in government duration studies.

Testing the effects of state capacity empirically shows that our state capacity measure does indeed help us explain and predict cabinet termination, but only in the form of replacements. As mentioned above, each extra level of state capacity on our ten-point scale make the government about 22.5 percent less likely to terminate prematurely through a replacement, other variables held constant. Moreover, it was shown that there was a conditional effect of economic shocks—in the sense that such shocks seem to affect government stability, in particular, when there is limited state capacity to deal with them. An increase in unemployment only increases the risk of early termination when state capacity is low, which suggests that this type of external shock is primarily a problem when the government finds the crisis difficult to deal with.

Why state capacity appears to have an impact on replacements but not on early elections is an interesting question and only tentative answers can be provided at this time. From Lupia and Strøm (1995) it is clear that whether a destabilizing event leads to a replacement, early election, reshuffle or preservation of the status quo, is a strategic decision. Exactly which outcome ensues depends on many factors including which type of government it is and when it happens in the electoral cycle. However, if a negative event transpires such as a corruption scandal or a rapid increase in unemployment, it seems likely that the government would want to avoid an election in the direct aftermath of that. Voters are likely to want to punish the government under such circumstances. This could make early elections less likely.

This study was a first attempt to bring the workings of the state into duration studies. Many other interesting questions remain to be answered in future studies. This includes whether governments in countries with low state capacity are also more susceptible to shocks other than unemployment, such as changes in popular opinion or a pronounced change in the policy agenda. Likewise, the Laver (2003) argument—presented above—suggest that the link to the type of government (minority, majority, surplus, etc.) should be investigated further. Another interesting question is why a few countries with high state capacity, such as the Netherlands and Denmark, have relatively high government turnover. Here additional explanations need to be sought. As Schleiter and Morgan-Jones (2009) suggest, one explanation probably lies with institutional arrangements, such as the ability of the Danish Prime Minister has to unilaterally call an early election at a time when the opinion polls are favorable. But in the Dutch case this explanation does not suffice and further work is therefore needed.

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