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## **Bicameralism and government formation: Does bicameral incongruence affect bargaining delays?**

*Daniela Giannetti, Andrea Pedrazzani, and Luca Pinto*

**Abstract:** The effects of bicameral legislatures on government formation have attracted scholarly attention since Lijphart's (1984) seminal contribution. Previous research found support for the 'veto control hypothesis,' showing that bicameralism affects coalition governments' composition and duration. However, the effects of bicameralism on the duration of the bargaining process over government formation have yet to be explored. Our work contributes to this area of research by focusing on the impact of bicameralism on bargaining delays. We show that the duration of the bargaining process over government formation decreases at increasing levels of partisan incongruence of the two chambers, especially in those legislative assemblies in which the upper chamber plays a relevant role in the policy-making process. Such empirical evidence is in contrast with the conventional expectation according to which bicameralism should delay the government formation process, as it introduces an additional element of complexity in the bargaining environment. We test our hypothesis by using a novel data set about the partisan composition of upper and lower chambers in 12 Western and Eastern European democracies over the postwar period.

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## 1. Introduction

Effects of bicameralism on government formation have attracted scholarly attention since Lijphart's (1984) seminal contribution. Thereafter, a number of authors attempted to incorporate bicameralism into formal models of coalition governments' formation (Diermeier, Eraslan and Merlo 2007). Empirical research has highlighted that bicameral parliaments may indeed influence fundamental aspects of the process of government formation ■ such as the type of coalition that eventually forms, the number of attempts needed to reach an agreement, the decision to write a formal coalition agreement ■ as well as government duration (Druckman and Thies 2002; Druckman, Martin and Thies 2005; Eppner and Ganghof 2015, 2017; De Winter and Dumont 2008).

Following Lijphart, most scholars have characterized bicameral legislatures in terms of two dimensions: congruence and symmetry. Congruence refers to the extent to which the two chambers have similar composition; symmetry occurs when the two chambers have equal or near equal constitutional prerogatives. Such dimensions have been widely used for comparative purposes in order to gauge the strength of bicameralism. The literature on the effects of bicameralism on government formation has mainly focused on the symmetry dimension, by looking at the constitutional powers of the two chambers. We contend that to fully explore the impact of bicameral legislatures on the process of government formation we should also take into account their variation in terms of congruence. Congruence has been commonly interpreted in terms of the similarity of the two houses' political composition. Based on the veto player approach, Tsebelis and Money (1997) and Tsebelis (2002) argued that the two chambers can be considered as incongruent if and only if the partisan representation in the two houses is not the same and only in this particular case they may be considered as two potentially distinct veto players. In this article, we take the notion of partisan congruence as a starting point to analyse the impact of bicameralism on the process of government formation.

We restrict our attention to a particular feature of this process, that is the length of negotiations between political parties to form a new government. Bargaining delays are deemed important as may have substantial political and economic consequences. The literature, however, provides competing accounts of their potential effects. Warwick (1994) suggested that protracted negotiations imply a high level of attention to the bargaining details and hence a better deal between political parties which, in turn, reduces the risk of government termination. By assuming that the payoffs associated with forming a government evolve during the negotiation process, Merlo (1997) pointed out that parties may choose to delay it until a better compromise can be reached. The predominant view is that bargaining delays may perturb the ‘normal’ democratic cycle of representation and accountability, as until a new cabinet has installed political decisions need to be taken by the outgoing cabinet, whose legitimacy and authority are weak (Martin and Vanberg 2003; Conrad and Golder 2010). Moreover, coalition negotiations take place before an ‘audience’ of voters and other types of party supporters, who will evaluate and sanction parties’ behaviour during the bargaining process (Martin and Vanberg 2019).

As protracted negotiations generate uncertainty over the identity of governing parties and the content of policy compromises among them, they may also create ambiguity over the future direction of governments. This feature can affect not only the behaviour of political and economic actors inside and outside the country, but also undermine the perceived legitimacy of the democratic process (Golder 2010; Martin and Vanberg 2003). In addition, lengthy negotiations indicate deep disagreement among potential coalition partners, and hence may signal in advance the internal difficulties a coalition will encounter once formed (Grofman and van Roozendaal 1994; De Winter and Dumont 2008). Finally, the uncertainty generated by long and inconclusive bargaining rounds may affect exchange rate markets (Bernhard and Leblang 2002), stock market volatility (Leblang and Mukherjee 2005), and the types of investments in financial markets (Bernhard and Leblang 2006).<sup>1</sup>

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<sup>1</sup> Examples abound. Italy’s unprecedented political paralysis that reached the 88-day record after the inconclusive general election on March 4 2018 offered no smooth path towards a coalition government. The

While the empirical literature has examined potential consequences of bargaining delays, research on their determinants is scarce. In particular, despite having long recognized the role of institutional features on the bargaining environment, the effects of bicameralism on negotiations' duration have not been explored yet in the literature. This is somehow surprising as bicameralism – like all institutional arrangements devised to implement the separation of powers – is commonly understood as a mechanism that generates delay in policy-making and constraints for the executive. Historically, the constitutional choice of bicameralism has been justified on the basis of a need to improve the quality of legislation and generate more thoughtful political decisions. As far as policy-making is concerned, a second chamber is expected to induce stability in the law-making process. The downside of stability is gridlock – that is, inability to change the status quo policies inherited from previous governments – which is particularly likely to occur when the two branches of parliament diverge in their partisan composition.

In this article we take a closer look at the varieties of bicameral institutions to examine effects of bicameralism on bargaining delays. We focus on bicameral incongruence as this feature remains under-researched in the literature on coalition bargaining. We maintain that, attempting to anticipate future outcomes, political parties involved in government formation make efforts to include additional partners in the government coalition in order to secure cabinet's control of the upper chamber, which can be viewed as an additional veto power. Seen in this perspective, bicameralism may protract the length of negotiations. However, as bicameral conflict on legislation cannot be completely avoided even when the cabinet is supported by the same legislative majority in both chambers (Tsebelis and Money 1997), we contend that the difficulties associated with double deliberation of legislation might lower the payoffs associated to reaching a full-fledged coalition deal at the time of government formation. These incentives should have the opposite effect of reducing the length of negotiations. In

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political uncertainty spilt into financial markets, seeing the spread between Italy's 10-year bund and its German equivalent rocket to its highest level since 2013.

this article we aim at specifying the conditions under which we should expect less or more protracted negotiations over government formation in bicameral systems.

The remainder of this article is organized as follows. In the next section, we review the literature on bicameralism and generate expectations about the relationship between partisan congruence and bargaining duration. In Section 3, we test our argument using a dataset that includes information on the partisan composition of second chambers in Western and Eastern Europe. Overall, our data cover 275 formation processes that occurred in 12 bicameral countries over the post-war period. Section 4 presents and discusses our results. We find that incongruence between the two chambers shortens bargaining duration, but only when the powers of the upper house on policy-making are sufficiently strong. This result contrasts with the conventional wisdom that bicameralism introduces an additional element of complexity in the bargaining environment that has the effect of increasing delays. Concluding remarks follow in the final section.

## **2. Theory and hypotheses**

Bicameral legislatures have been analysed in terms of two properties: congruence and symmetry. To examine congruence scholars mainly refer to variations in institutional features such as electoral rules, chambers' size, requirements for being elected, length of mandate and simultaneity of elections. It is well known that variations of this kind are intentionally designed with the purpose of implementing constitutional goals such as protection of minorities or fair representation of states in a federal system. In turn, the different composition of the two chambers resulting from the above-mentioned institutional features is meant to accomplish the ultimate purpose that a long tradition in political thought associates with bicameralism, that is to minimize majority tyranny. According to classical justifications of bicameralism, divergent preferences deriving from a different composition of the two chambers are a necessary condition for bicameralism's effective control of unfettered majorities (Buchanan and Tullock 1962; Riker 1992).

On the other hand, symmetry has been characterized in terms of the distribution of legislative and non-legislative powers between the two chambers. Legislative powers refer to legislative attribution to the upper chamber in comparison to the lower chamber (for example, extreme asymmetry occurs when the upper chamber can only delay the passing of legislation), origin of bills, mechanisms of dispute resolution, and instruments of legislative control of the executive such as investigation powers. Non-legislative powers are very different in the context of presidential vis-à-vis parliamentary systems. In presidential systems, such powers may refer to the fact that both chambers share the approval of executive appointments or participation in impeachment. In parliamentary systems, non-legislative powers mainly refer to the ‘dual responsibility’ in appointing and dismissing governments (Diermeier, Eraslan and Merlo 2007). Although the ‘dual responsibility’ is uncommon, two European countries – Italy and Romania – require the governing coalition to maintain the confidence of both chambers of parliament to stay in power. In the past, this was true also in Belgium (until 1995) and Sweden (until 1970).<sup>2</sup>

The literature highlights how bicameralism can affect the process of government formation in several ways, as the upper chamber is likely to be taken into account by both *formateur* parties and other parties considering cabinet entry. This is especially true in those parliamentary systems where the government has to maintain the confidence of both chambers to stay in office. Hence, building a new government means gathering a coalition of parties that has to be consistent across the two chambers. In most parliamentary systems, however, only the lower house takes part in the confidence relationship with the executive. Even in those cases bicameralism may shape the key parameters of the cabinet formation game, because when negotiating the formation of a new cabinet the presence of a second chamber can affect party leaders’ expectations about future law-making. This is what Druckman, Martin and Thies (2005) have called ‘influence without confidence’. Research linking bicameralism with cabinet formation focused on the type of governments that are likely to form and

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<sup>2</sup> Let us note, however, that in Italy the investiture vote for the government takes place in each chamber separately, while in Romania the investiture is voted by the two chambers sitting in a joint session.

on government duration. In particular, Lijphart (1984; 1999) conjectured that cabinet builders tend to form oversized coalitions in order to control strong second chambers (see also Sjölin 1993). More recently, it has been found that those government coalitions holding a majority of seats in each chamber are more likely to form (Druckman, Martin and Thies 2005; Eppner and Ganghof 2017) and have a substantially longer life (Druckman and Thies 2002) in comparison to those that do not control the upper chamber. As previously noted, however, this literature has primarily focused on the institutional prerogatives of the two chambers – that is, on the degree of symmetry in the powers of the two houses. Much less attention has been paid to the extent to which the preferences of the two chambers differ due to their different composition – something that can be defined as the degree of bicameral incongruence. Moreover, to the best of our knowledge nobody has ever taken into account the partisan incongruence of the two chambers, i.e. the divergence in the partisan representation in each branch of a bicameral parliament.

Our *explanandum* here is the variation in the length of negotiations to form a government. In so far as political outcomes are produced by the interaction of institutions and actors' preferences, we expect bicameralism to have greater impact especially when the second chamber has relevant policy-making powers and, at the same time, divergent preferences (Heller 2007). In other words, bicameralism should affect more deeply the political process – including bargaining over government formation – when the two chambers' preferences diverge and the constitutional rules assign relevant prerogatives to both of them. In contrast, if the political composition of the upper chamber mirrors the lower chamber's one, the upper chamber can be seen as a redundant institution (Krehbiel 1996; Binder 2003; Cutrone and McCarty 2007) which does not add any further element to the bargaining environment. If the upper house has no sufficient leverage to keep the lower house from acting unilaterally, there is not so much need to consider it during cabinet formation.<sup>3</sup> In particular, provided

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<sup>3</sup> In contrast, Tsebelis and Money (1997) argue that even an institutionally weak upper chamber can have some influence on policy-making. This is because the mere faculty to delay the approval of legislation can induce a particularly impatient lower chamber to make some concession to the upper one.



that the second chamber is powerful enough in the law-making, we expect that the greater the incongruence between the two chambers, the greater will be the impact of bicameralism on the duration of the bargaining process when a new government has to be formed.

The extant literature on cabinet negotiations emphasizes the role of uncertainty and complexity in the bargaining environment to explain delays in the government formation process.<sup>4</sup> Despite none of the few existing studies dealing with bargaining cycles (Diermeier and van Roozendaal 1998; Martin and Vanberg 2003; Golder 2010) explicitly investigates the role of upper chambers, at first glance one might conjecture that bargaining over government formation should be facilitated when the composition of the two legislative branches is similar. This expectation rests upon the assumption that, when trying to form a new government, negotiators are interested in building a coalition that can extend its control over the second chamber. If the distribution of seats among parties in the second chamber diverges from that in the first one, the *formateur* would face a situation made more complex by the potential extension of negotiations to parties that gain leverage in the bargaining process because of their strength in the upper chamber. In short, uncertainty and the complexity of the bargaining environment should lead to longer delays, and partisan incongruence would add further complexity to the bargaining process. However, there are good reasons to hypothesize that bicameral incongruence might mitigate to some extent the effect that second chambers potentially have on the complexity of the bargaining environment. This is because an incongruent second chamber might indeed shorten the time spent in negotiations over a new government due to a smaller set of feasible coalitions and policy agreements.

To start with, the desirability for the negotiators to reach an agreement ensuring the control of an incongruent upper house should ‘double’ all majority considerations that enter the process of coalition formation (Müller, Bergman and Strøm 2008, p. 24). In other words, by constraining the

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<sup>4</sup> In a recent article, Ecker and Meyer (2020) offer an interest account of the duration of coalition formation processes where actor-specific factors (i.e. characteristics of parties) are tested along with standard systemic factors.

options of the negotiators, incongruence should reduce the overall number of viable coalitions in the government formation game (Strøm, Budge and Laver 1994). Maintaining that government builders strive to control both branches of a bicameral parliament, we may assume that they will try to assemble a legislative majority not only in the lower house, but also in the upper house. Yet, not all the coalition alternatives that can be formed in the lower chamber would allow the government to control a majority of seats in the upper chamber. Some of them are not acceptable simply because they would grant the government only a minority of votes in the upper chamber.<sup>5</sup> In this way, an incongruent (and relevant) second chamber can act as an institutional constraint on the game of government formation. Bicameralism should therefore make government formation easier through directing the bargaining process towards a more limited set of ‘focal’ solutions.<sup>6</sup>

While incongruence might decrease the number of viable coalition options – thereby reducing the complexity of the bargaining environment – some of the feasible coalitions could be ideological diverse and involve many parties. Coalitions’ ideological heterogeneity and fragmentation can of course make it difficult for negotiating parties to strike a compromise deemed acceptable to all the potential government members. However, it should be noted that these characteristics of potential governments depend primarily on the polarization and fragmentation of the entire party system (Golder 2010), which can be controlled for in empirical terms.<sup>7</sup>

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<sup>5</sup> For example, imagine that legislative seats are distributed as follows in a bicameral parliament. Lower chamber: party A 36%, party B 25%, party C 20%, party D 19%. Upper chamber: party A 26%, party B 25%, party C 20%, party D 19%, party E 10%. If we consider all the potential majority coalitions, the coalitions that are viable in the lower chamber are seven: AB, AC, AD, ABC, ABD, ACD, BCD. However, the coalitions that represent a legislative majority in both chambers are only five: AB, ABC, ABD, ACD, BCD.

<sup>6</sup> This argument presupposes that, especially when the upper chamber is strong, parties involved in the bargaining process will tend (or at least attempt) to build government coalitions controlling a majority of seats in both houses. To empirically check this implication, we looked at the actual outcome of the bargaining process – that is, at the governments formed as a result of the negotiations. Evidence supports the idea that cabinets controlling a majority in both houses do form more often in the presence of a strong second chamber. In particular, in the dataset we use for the analyses reported in the next section we found that the percentage of governments controlling a ‘double’ majority is lower in countries where bicameralism is weak, and higher in countries where bicameralism is strong.

<sup>7</sup> As a way to operationalize bargaining complexity, in our analyses we incorporated the effective number of parliamentary parties and a measure of polarization in the parliament. At least indirectly, we then control for the presence of particularly heterogeneous and fragmented potential coalitions.

Moreover, even though some viable potential coalitions may be heterogeneous and include many parties, this possibility does not necessarily translate into bargaining delays because of another factor – that is, bargaining parties’ expectations about future policy-making. We contend that this is a second reason why bicameral incongruence may be associated with shorter bargaining delays. When negotiating over the formation of a new government, potential coalition partners try to anticipate what will occur during the law-making process once the government has formed. These expectations affect not only the outcomes of the bargaining process such as government membership, type of government, distribution of cabinet posts and agreed-upon coalition government programme (Laver and Shepsle 1996; Schofield 1993; Tsebelis 2002) but also negotiations’ duration. Looking at the impact of bicameralism on the legislative process, social choice scholars have theorized that bicameral legislatures produce more stable legislative outcomes than unicameral ones, making it harder for a legislative majority (or the government) to overcome the status quo policy. This is because, when legislation is deliberated in two distinct houses, reaching a majority agreement to change the status quo is more difficult and takes longer. Hence, the presence of a second chamber tends to mitigate problems associated with majority cycles, which are particularly likely to occur in a simple majority-rule institution – especially when collective decisions involve more than one policy dimension (Riker 1992; Levmore 1992). Put in a slightly different way, the set of policy alternatives (i.e. bills) that can beat the status quo (the *winset* of the status quo) is likely to be smaller in a bicameral parliament than in a unicameral assembly (Tsebelis 2002). These social choice arguments are grounded on the two chambers having a different composition and hence incongruent preferences. On the contrary, if the composition of the two chambers is the same, their preferences overlap; in this event, the risk of majority cycling is not reduced by bicameralism and the second chamber turns out to be ‘absorbed’ by the first one.

As a consequence, the greater the incongruence between the chambers, the greater will be the difficulties for any government (once formed) in the law-making process. This also implies that under great bicameral incongruence all governments, once formed, will be relatively unstable. *Ceteris*

paribus, incongruent bicameralism decreases government duration because governments with a smaller *winset* are weaker in the policy-making process and less able to respond to unexpected policy shocks (Tsebelis 2002; Tsebelis and Ha 2014). To sum up, when bicameralism is incongruent potential coalition partners anticipate that, whatever government forms, it will have lower chances to change the status quo and to survive for long.<sup>8</sup> Under these circumstances, there is no reason why bargaining over the formation of a new (relatively weak and probably unstable) government should take a long time; it is no worth spending a lot of time and resources trying to negotiate a government. Under incongruent bicameralism the precious time that would be spent in ‘screening out’ potentially unstable governments would be wasted. This argument also resonates with theoretical accounts according to which the type of government formed, the time needed for its formation and the expected cabinet duration are all endogenous variables and are simultaneously determined in equilibrium (e.g., Diermeier, Eraslan and Merlo 2007). Partial support for this conjecture derives from observing those situations in which coalition partners subscribe post-electoral coalition agreements. Empirical evidence shows that in bicameral systems coalition agreements are shorter and consequently less detailed.<sup>9</sup>

Finally, unlike lower chambers, many upper chambers are subject to partial renewal of their members. This can be due to staggered election terms, selection of members of the upper house by local governments, or a longer length of mandate (Fortunato, König and Proksch 2013). A future change in the composition of the upper chamber may deter coalition builders from spending a long time in negotiating a consistent coalition across chambers at the time when a new government has to be formed. At the time of government formation, an incongruent upper chamber may be the outcome of staggered elections and partial renewal occurred in the past, and its composition may be prone to

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<sup>8</sup> Data on cabinet duration in Western European countries seem to support this conjecture. Despite not considering the congruence dimension of bicameralism, Saalfeld (2008: 340-341) shows that the presence of a second chamber increases the risk of government termination.

<sup>9</sup> Data are taken from the *Comparative Democracies Data Archive* (see Müller and Strøm 2008). The Pearson correlation coefficient is negative (-0.258) and statistically significant.

change again in the future because of the same mechanisms. In these circumstances, as those parties that are involved in the bargaining process cannot easily anticipate the future composition of the second chamber, they may have few incentives to engage in protracted negotiations.

To sum up, even though bicameral incongruence may lengthen negotiations through increased complexity, there are a number of reasons to hypothesise the opposite effect. First, bicameral incongruence reduces the number of viable potential coalitions due to the ‘double majority’ constraint. Second, bicameral incongruence may generate the expectation of a gridlocked policy-making process and a potentially unstable government. This may shorten negotiations, as bargaining parties have no incentive to waste time in crafting full-fledged policy agreements (even when there are many coalition builders or they are ideologically diverse). Third, bicameral incongruence may reduce delays when there is a reasonable expectation that the composition of the upper chamber is likely to change at a later stage because of mechanisms such as staggered elections.

We expect these three arguments to hold when the second chamber is strong enough. Therefore, we formulate the following conditional hypothesis on the relationship between bicameral incongruence and the length of the bargaining process over government formation, using the potential influence of the upper chamber on the policy-making process as a moderator:

*Hypothesis 1: When the influence of the upper house on policy-making is sufficiently high, the greater is the partisan incongruence between the two chambers, the shorter will be the duration of negotiations over government formation.*

In order to properly single out the impact of bicameral incongruence on bargaining delays, we test our hypothesis by including in the empirical analysis a number of indicators of uncertainty and complexity of the bargaining environment that the existing literature has employed to explain the variations observed in the duration of the bargaining process over government formation (see Golder 2010 for a review).

### 3. Data and Coding

Data to test our hypothesis come from the European Representative Democracy Data Archive (ERDDA) (Andersson, Bergman and Ersson 2014) and cover 12 bicameral countries in Western and Eastern Europe. The countries included in our dataset are: Austria (1945-2013), Belgium (1946-2010), Czech Republic (1996-2013), France (1962-2012), Germany (1949-2013), Ireland (1944-2011), Italy (1948-2011), Netherlands (1946-2012), Poland (1991-2011), Romania (1990-2012), Spain (1977-2011), and Sweden (1945-1970).<sup>10</sup> Altogether, these data provide information on 275 government formation processes including government formation's duration, which is our key dependent variable.<sup>11</sup> Following the existing literature (Diermeier and van Roozendaal 1998; Martin and Vanberg 2003; De Winter and Dumont 2008; Golder 2010; Ecker and Meyer 2015), formation's duration is defined as the number of days between the termination of the previous government and the start of the new one. The beginning of the bargaining period coincides either with the day of the formal resignation of the previous government or with the date of the general elections. The formation process ends either the day on which the new government is officially inaugurated by the head of state or the day of the investiture vote (Strøm, Müller and Bergman 2008).

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<sup>10</sup> Observations for Sweden are limited until 1970, the year in which the second chamber was abolished. Belgium weakened the veto power of the upper chamber in 1995. Two bicameral countries are excluded from our dataset: United Kingdom and Slovenia. The exclusion of the former is motivated by the peculiar institutional features of the House of Lords – hereditary membership and lifetime appointments in addition to a significant part of the membership without a clear party affiliation – which make it an almost unique case in Europe. As for the latter, we experienced difficulties in collecting data on the composition of the second chamber.

<sup>11</sup> We drop from our analysis all the formation processes that eventually end with nonpartisan governments. We also exclude observations for which data on formation duration are missing. Our unit of analysis is the government formation process – which can involve more than one bargaining round and entail many different potential coalitions ■ and not the government that eventually formed after negotiations (Ecker and Meyer 2020). For this reason, following Golder (2010), we use variables referring to the whole formation process. Our dataset includes only bargaining processes that ended with a government agreement, excluding therefore those cases in which negotiations failed, and new elections were called.

**Figure 1 – The duration of the government formation process across and within 12 bicameral systems.**

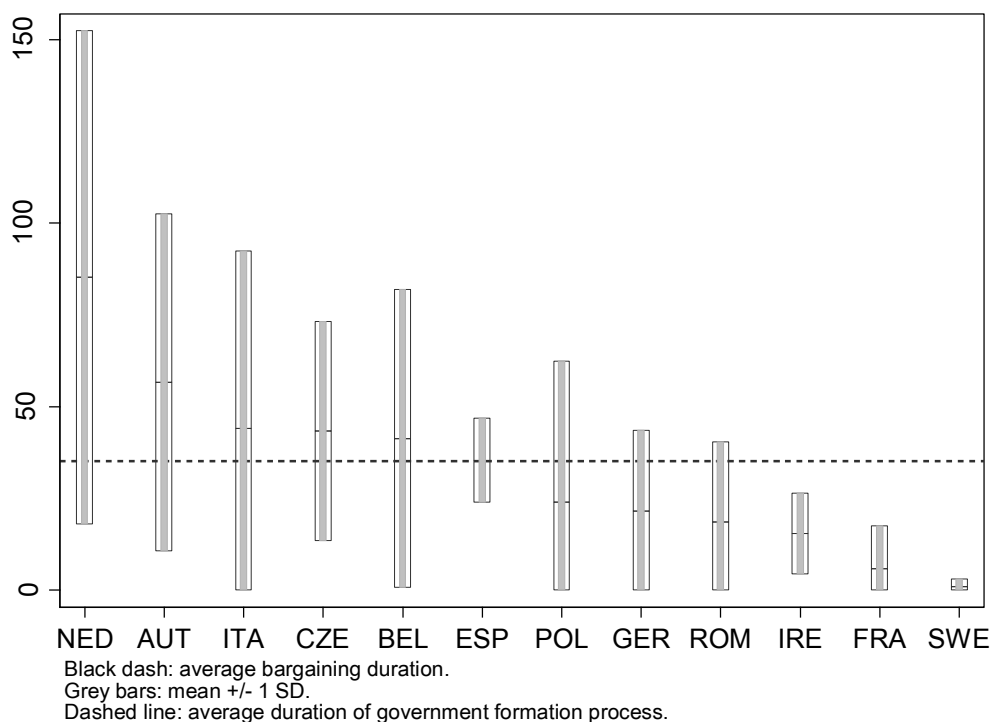


Figure 1 shows the distribution of formation duration across and within the countries included in our dataset. The black dashes represent the average duration of the bargaining process in each country. The grey bars span all over the values between one standard deviation below and one standard deviation above the mean. Finally, the horizontal dashed line indicates the average duration of the government formation process in the 12 bicameral systems selected for our analysis. In general, formation duration is longer in countries with two chambers (35 days) than in those with a unicameral parliament (20 days).<sup>12</sup> Therefore, these data support the idea that bicameral veto constraints make bargaining somehow more difficult.<sup>13</sup> However, the impact of bicameralism is not constant across

<sup>12</sup> The two average values are computed contrasting the duration of the government formation process in the 12 bicameral systems included in our dataset with that registered for 15 unicameral countries incorporated in the ERDDA. A difference in means test shows that we can reject the null hypothesis that the average duration is equal in the two sets of countries.

<sup>13</sup> Our replication of Golder's (2010) study shows that the inclusion of a dummy variable identifying bicameral systems significantly increases the duration of the government bargaining process. The impact of bicameralism survives even when controlling for other factors that the literature identifies to be negatively or positively correlated with formation's duration. However, it should be noted that De Winter and Dumont (2008) – using

and within the countries included in our analysis. On average, the process of government formation lasts almost three months in the Netherlands (86 days), but only few days in Sweden (1 day) or France (6 days). There is also a considerable variation of formation duration within countries, with the length of the bargaining process spanning through a wide range of values.

We argue that the variability observed in the duration of the government formation process in our set of countries is a function of different combinations of the characteristics of bicameral institutions mentioned above. To measure ‘symmetry’ we rely on the ‘Bicameralism Index’ introduced by Heller and Branduse (2014). The index is intended to capture the formal prerogatives of second chambers to affect the content of legislation and the policy outcomes simply based on their institutional characteristics. This measure considers whether the second chamber can veto all legislation, only a subset of bills, or simply delay passage (reporting for how many days in the latter case). The final score combines this information with an adjustment in case the veto power of the upper chamber can be overridden. We let the index vary from 0 to 100, with 100 indicating a second chamber with formal legislative powers substantially equal to those of the lower house and 0 representing upper houses with a purely ceremonial role. In our sample, the most influential second chambers (a score of 100) can be found in Italy, the Netherlands, Belgium (before 1995), and Sweden (before 1970).<sup>14</sup> The least influential is the Spanish *Senado*, with a score of 9.2.

The ‘Bicameralism Index’ captures the ability of second chambers to influence policy independently from partisan concerns. However, when the composition of the upper house mirrors that of the lower one, even the most influential second chamber becomes redundant. For this reason, we include in our model a variable measuring the level of ‘partisan incongruence’ between the two chambers. We measure partisan incongruence using the Duncan Index of Dissimilarity (Duncan and Duncan 1955). Incongruence is defined as follows:  $0.5 * \sum_{i=1}^n |UpperShare_i - LowerShare_i|$ ,

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a wider set of covariates on the same group of countries analysed by Golder – found that bicameralism *per se* does not have any significant impact on the length of the government formation process.

<sup>14</sup> Bicameralism index for Belgium (before 1995) and Sweden (before 1970) is based on our own computation following Heller and Branduse (2014) coding scheme.



where *UpperShare* and *LowerShare* are the seat share of party *i* in the upper and lower chamber respectively (for similar measures see: Heller 2001; Druckman and Thies 2002). To compute the index, we completed the ERDDA data with information about the composition of the second chamber when missing.<sup>15</sup> Our measure ranges from 0 to 100, with 0 indicating that the seat share of each party is the same between the two chambers and 100 representing the hypothetical case when the party systems and seat distributions in the upper and lower houses completely differ.

The existing literature explains the variations observed in the duration of the bargaining process in terms of two main variables: uncertainty and complexity of the bargaining environment. In their seminal work, Diermeier and van Roozendaal (1998) acknowledged that under the assumption of complete information, rational bargaining is incompatible with delays. Game-theoretical models suggest that in equilibrium the first proposal is made immediately and it is always accepted by the other negotiators. This prediction sharply contrasts with real-life records which show, as displayed in Figure 1, a wide variation in the length of the formation process within and across countries. However, game theoretical models still constitute a useful tool for the study of bargaining delays provided that the assumption of complete and symmetric information is relaxed. The formation time thus reflects the uncertainty about key parameters in the bargaining environment. In the absence of complete information, a *formateur* does not know what combination of government policies and ministerial portfolios would constitute a satisfactory offer to other negotiators. Therefore, uncertainty presupposes a higher number of interactions in the form of offers and counter-offers to reveal parties' preferences, resulting in protracted negotiations. Following previous studies, we capture the impact

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<sup>15</sup> ERDDA provides data on the composition of the second chamber only for Belgium (until 1999), Czech Republic, Poland, Romania and Sweden. According to the German Basic Law, the state governments – and not the parties – are represented in the second chamber, the *Bundesrat*. Consequently, we are aware that our data about bicameral incongruence are less accurate for Germany than for other countries and that they probably overestimate or underestimate the actual incongruence. To check whether or not our results are particularly sensible to the German case, we replicate our analysis excluding Germany. Results do not change if compared to those reported in the next section.

of uncertainty employing a dummy variable which codes as one the formation processes starting immediately after a general election ('Post-election Status').<sup>16</sup>

The strategic foundations of Diermeier and van Roozendaal's model exclude other potential alternative explanations for bargaining delays. However, even assuming complete information about actors' preferences, the government formation process becomes more problematic as the complexity of the bargaining environment increases. Martin and Vanberg (2003) identify two main sources of complexity: the ideological range of the government that emerges from negotiations and the number of parties involved in the bargaining process. According to the authors, the ideological diversity of the coalition that will form makes harder for party leaders to evaluate which kind of proposals should be acceptable or not, while the number of parties that the coalition contains hinders a stable agreement that is good enough for all the coalition members. This brings Martin and Vanberg to conclude that bargaining delays are better explained by complexity rather than by uncertainty. Following Golder (2010), we add to our model two more variables measuring the level of complexity in the bargaining environment: the 'effective number of parliamentary parties' (Enpp) and 'polarization'.<sup>17</sup> The former is computed using the standard formula proposed by Laakso and Taagepera (1979). The latter is based on the equation presented in Bergman et al. (2008, p. 112) and it is estimated starting from parties' left-right placements provided by the MARPOR Project (Volkens et al. 2016).

Following previous studies, we also include two control variables. The first one considers whether the formation process is characterised by 'positive parliamentarism', i.e. if the government that eventually forms must pass a vote of confidence (in one or both chambers) before taking office. The second one checks for government formation processes that involve a 'majority situation'. In these cases, the party controlling an absolute majority of seats can form a government without

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<sup>16</sup> Curini and Pinto (2016) re-examine the role of uncertainty in bargaining delays in the Italian case, showing that it plays an important part not only immediately after elections but also in the inter-electoral period.

<sup>17</sup> Following Golder (2010, p. 6), we include variables that match with the whole formation process and which are not related to the government that ultimately forms. This is because in many cases the full formation process is characterized by numerous bargaining rounds, which include a variety of alternative potential coalitions.

negotiating with other parties. Our argument is grounded on the assumption that bicameralism introduces an institutional constraint on the government formation process when upper houses can influence policy. As noted above, second chambers do not usually play a direct role in the negotiations for the new cabinet since in most countries governments only need to retain the confidence of the lower house. For this reason, the existence of a majority party and all the measures associated to the complexity in the bargaining environment are investigated only in relation to the lower chamber.<sup>18</sup>

Table 1 provides information on descriptive statistics for all the variables included in our analysis.

**Table 1 – Descriptive statistics for the main independent variables.**

Variable	Mean	SD	N
Post-election Status	0.54	0.50	275
Enpp	3.70	1.46	275
Polarization	14.83	8.81	275
Positive Parliamentarism	0.68	0.47	275
Majority Situation	0.13	0.34	275
Bicameralism Index	70.28	36.82	275
Incongruence	19.28	17.33	275

#### 4. Analysis and Findings

We test our hypothesis using a series of Cox’s partial likelihood survival models. The central concept in survival analysis is the hazard rate  $h(t)$  which is the probability that an event occurs at a particular point in time, conditional to the fact that it has not occurred yet. In our analysis, the event of interest is the successful achievement of an agreement between coalition partners to form a government. The hazard rate has two components. The first is the set of covariates that are hypothesised to systematically affect the timing of an event. The second is the baseline hazard rate, which indicates the underlying probability of the event occurring over time when the vector of all covariates is zero

<sup>18</sup> As a majority party might still need an ally in the upper chamber if it does not control a bicameral majority of seats, we re-run our analyses after checking whether or not the majority party in the lower chamber (if present) also controls a majority in the upper chamber. We also replicate measures of complexity for the second chamber. None of these measures is significant and their inclusion does not change our main results. Data are available upon request.

(Box-Steffensmeier and Jones 2004). In Table 2 we report the results of the four models we have estimated. In all of them the coefficients are expressed as proportional hazard estimates, with positive and negative values indicating, respectively, an increased or a decreased risk to reach a successful agreement over government formation. Consequently, a positive coefficient means that increases in the variable of interest reduce the duration of the bargaining, while a negative coefficient implies that higher values of the related variable delay government formation. Once exponentiated, the coefficients can be interpreted as hazard ratios. All the models are estimated employing shared frailties to control for unobserved characteristics at the country level (mainly institutional), which may systematically affect the bargaining duration.<sup>19</sup>

Model 1 explores the impact of symmetry and congruence in bicameral systems on government's formation duration, keeping under control the effect of uncertainty and complexity in the bargaining environment. Model 2 aims at testing Golder's (2010) argument that both uncertainty and complexity matter in the bargaining process, but in a conditional way: while

**Table 2 – Determinants of the duration of the government formation process in 12 bicameral systems.**

	(1)	(2)	(3)	(4)
Post-election Status	-1.474** (0.156)	-1.194* (0.468)	-2.059** (0.260)	■
Enpp	-0.106+ (0.062)	-0.052 (0.077)	-0.108+ (0.062)	-0.240* (0.102)
Polarization	0.005 (0.008)	-0.001 (0.012)	0.004 (0.008)	0.002 (0.013)
Positive Parliamentarism	-0.709+ (0.428)	-0.770+ (0.440)	-0.669 (0.431)	-2.986** (0.755)

<sup>19</sup> We made a further check by including in the models some of these institutional characteristics, such as semi-presidentialism (France and Poland) or the continuation rule (Sweden), without relevant changes in the results. Therefore, we opted for a more parsimonious specification.

Majority Situation	0.304 (0.204)	0.298 (0.203)	0.255 (0.204)	0.204 (0.285)
Bicameralism Index	-0.017** (0.006)	-0.017** (0.006)	-0.016** (0.006)	-0.025* (0.011)
Incongruence	-0.022 <sup>+</sup> (0.012)	-0.021 <sup>+</sup> (0.012)	-0.019 (0.012)	-0.042* (0.018)
Incongruence X Bicameralism Index	0.001** (0.000)	0.001** (0.000)	0.001** (0.000)	0.001* (0.000)
Post-election X Enpp	▣	-0.107 (0.098)	▣	▣
Post-election X Polarization	▣	0.009 (0.015)	▣	▣
Post-election X ln(Time)	▣	▣	0.268** (0.080)	▣
<i>AIC</i>	2419.631	2422.072	2407.482	1107.005
<i>BIC</i>	2448.565	2458.240	2440.033	1127.985
<i>N</i>	275	275	275	148
<i>Time at risk (days)</i>	9667	9667	9667	7732

Standard errors in parentheses. The Breslow method is employed for handling ties.

<sup>+</sup> $p < 0.1$ , \* $p < 0.05$ , \*\* $p < 0.01$

uncertainty always produces delays, complexity should matter especially when uncertainty is sufficiently high.<sup>20</sup> We include therefore interactions between the variable capturing uncertainty and the covariates related to complexity. However, none of these interactions is statistically significant, proving that Golder's hypothesis does not survive when data include only bicameral systems. In Model 3 we replicate Model 1, accommodating the violation of the proportional hazards assumption for the impact of the 'Post-election Status'.<sup>21</sup> The standard solution consists in interacting this variable with the natural log of the time at risk. Finally, in Model 4 we replicate Model 1, excluding inter-

<sup>20</sup> The impact of uncertainty and complexity was also examined by De Winter and Dumont (2008), who found empirical evidence for both arguments. See also Ecker and Meyer (2015) for a more recent analysis underlying the differences in the duration of the government formation process across Eastern and Western European countries.

<sup>21</sup> Cox regression analysis conventionally presupposes what is called the proportional hazards assumption. Violation of this assumption can lead to false inferences about a variable's substantive and statistical significance. We check for the violation of the proportional hazard assumption using individual and global tests of scaled Schoenfeld residuals (Box-Steffensmeier, Reiter and Zorn 2003).

electoral governments from the analysis. The bargaining process over the formation of an inter-electoral government may (informally) start well before the official end of the incumbent one. Consequently, researchers cannot be fully confident that their data about bargaining delays are reliable as in the case of inter-electoral governments they can systematically underestimate the actual length of negotiations. Moreover, it has been underlined that only few inter-electoral replacements involve a real change of the political status quo represented by the incumbent cabinet. Most of the time, inter-electoral replacements can be classified as continuity replacements meaning that almost nothing has changed in comparison to the incumbent cabinet (Fernandes and Magalhães 2016). For all of these reasons, Model 4 includes only post-election cabinets to check the robustness of our results.

Our hypothesis states that partisan incongruence between the two chambers should shorten bargaining duration when the influence of the upper house on policy-making is sufficiently high. The statistically significant interaction between ‘Incongruence’ and ‘Bicameralism Index’ across all the four models corroborates the existence of a conditional relationship between these variables regardless the set of observations employed in the analysis (the whole dataset or only post-election cabinets). For the sake of comparison with previous works dealing with bargaining delays, in what follows we comment the results from Model 3, which is based on the whole dataset.<sup>22</sup>

We rely on graphical representation to clarify the interpretation of this relationship (Brambor, Clark and Golder 2006). The black solid line in Figure 2 represents the average marginal effect of one unit increase in partisan incongruence on formation duration, plotted against each value of the ‘Bicameralism index’. The dashed lines represent the 95 per cent confidence intervals. When the confidence intervals are both below or above the zero line the effect is statistically significant. As predicted, incongruence starts to reduce the duration of the bargaining process (i.e. it has a positive

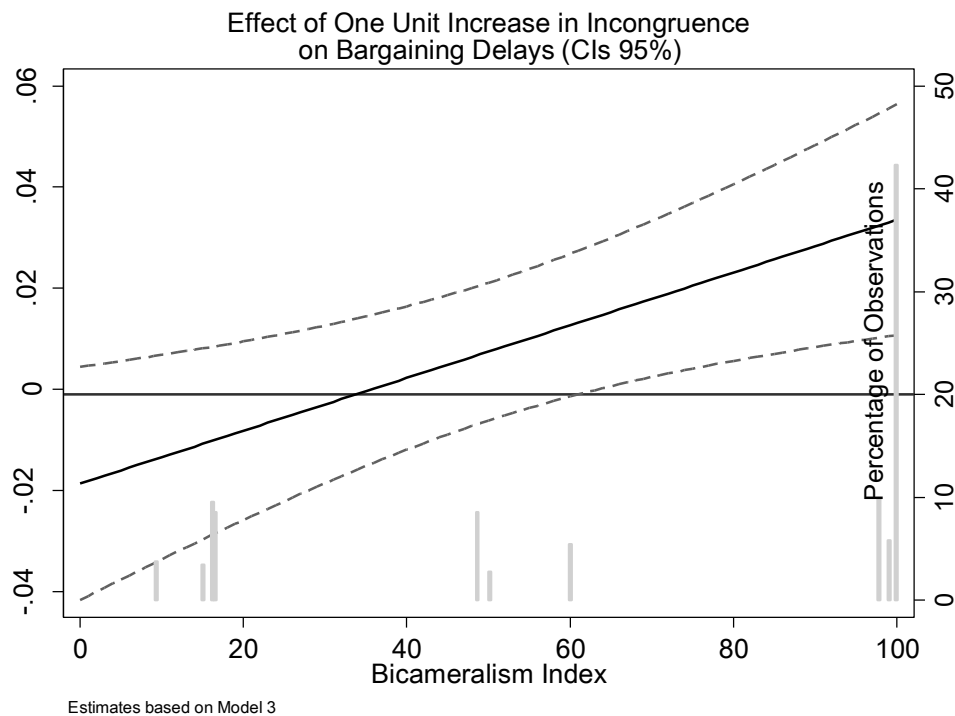
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<sup>22</sup> Excluding Model 4, which is based on a different set of observations, a quick look at the values of the Akaike and Bayesian Information Criteria (AIC and BIC) suggests that Model 3 fits our dataset far better than Models 1 and 2.

marginal effect) when the ‘Bicameralism Index’ is higher than 63. Such threshold, according to the histogram superimposed to Figure 2, means that our conjecture is valid for about 60 per cent of the government formation processes included in our analysis, which are essentially clustered in six countries: Belgium (before 1995), Germany, Italy, the Netherlands, Sweden (before 1970) and Romania. The latter country represents a good example of how bicameral incongruence may shorten bargaining delays in presence of a strong second chamber. The Romanian *Senat* has almost the same prerogatives of the lower house but at the same time a very different composition, with an average dissimilarity index of 52 during the 1991-2012 period. On average, the bargaining processes over the formation of the 16 cabinets included in our sample lasted 18 days.

For the remaining 40 per cent of observations, which are grouped in countries having second chambers with weak formal powers, incongruence does not exert any significant impact on formation duration. Substantially, a one-unit increase in partisan incongruence increments the hazard rate to end negotiations over government formation by 3.4 per cent when the ‘Bicameralism Index’ is set to its maximum value (100). Considering that our measure of divergence between the two chambers ranges from 0 to 100, this result indicates that partisan incongruence plays a relevant role in shaping the government formation process. This holds true, however, only in those countries where the upper house has strong veto powers.

**Figure 2– Average marginal effect of partisan incongruence on government duration.**



According to Model 3, the only other variable included in our model that affects formation duration is the ‘Post-election Status’. As in previous analyses in the literature, we find that increasing uncertainty – i.e. switching from an inter-election phase to a post-election one – significantly extends the length of time a government needs to form. However, the interaction with the time at risk shows that the effect of uncertainty slowly fades away as time elapses. After one day of negotiations, a government forming after an election faces a hazard rate of reaching a successful agreement 20% lower than in the inter-electoral period. After 35 days of negotiations – the average duration observed in our data – the hazard rate is reduced to 16%. These findings are consistent with the interpretation of uncertainty in the bargaining environment as a proxy for incomplete information about key parameters in the negotiations. As time passes, parties acquire information about each other, increasing therefore the possibilities of ending the bargaining process and forming the new government. In contrast, the variables related to complexity are not found to have any significant impact. Altogether, these results support the original argument of Diermeier and van Roozendaal (1998) who identify uncertainty, rather than the complexity of the environment, as the main driver of



bargaining delays. On the other hand, our results highlight the impact of partisan incongruence – when coupled with relevant institutional veto powers of upper chambers – on the process of government formation.

## 5. Conclusion

In recent years there has been a surge of attention for the implications of bicameralism on the process of coalition governments' formation. This paper focused on the impact of bicameral incongruence on the length of the government formation process, which represents a neglected area in the study of coalitions. We interpreted bicameral incongruence not only in terms of the differences in the composition of the two chambers depending on formal rules, but as a *de facto* incongruence in their partisan representation. This interpretation is grounded in the literature on bicameralism and more specifically in the veto player approach for the study of bicameral institutions. We argued that bicameral incongruence not only affects the duration of the bargaining process by acting as a constraint on the number of feasible options, but also by influencing parties' expectations about law-making in the near future. On the one hand, an incongruent second chamber reduces the overall number of viable coalitions in the government formation game, shortening the duration of the government formation process. On the other hand, incongruent chambers make the approval of government legislation harder. Anticipating this, potential coalition partners may find it irrational to spend time and resources in prolonged negotiations, which would lead to 'useless' agreements characterised by a high level of details especially when the degree of bicameral incongruence could increase – once a government has formed – because of partial renewal of the members of the upper chamber.

Using data from a broad sample of Western and Eastern European bicameral countries, this article has shown that partisan incongruence between the two chambers tends to reduce the length of the negotiation process, provided that the upper house has sufficiently formal veto powers to affect the policy-making process. This result is not in line with common wisdom – and sometimes purely

anecdotal – representations of second chambers, which are often seen as institutional bodies designed to increase the complexity of the bargaining environment. Our findings, which are to some extent counterintuitive, suggest that the impact of bicameralism on government formation can be better understood when actors' expectations about future bicameral law-making are taken into account.

Our work suggests avenues for future research. One of these is a deeper examination of the relationship between the length of government formation and the actual outcomes of this process. If bicameral incongruence shortens the process of government formation, which types of cabinet are formed after a relatively short bargaining? Do the new cabinets control a majority in both parliamentary branches? And how long do these cabinets last once in office? Although these questions have been tentatively addressed in this research, they require more accurate theoretical efforts and more systematic empirical tests. Secondly, further investigation is certainly needed regarding how partisan incongruence affects the type of coalition (minority, minimum winning or oversized) formed in the two branches. Is partisan incongruence important as such? Or is incongruence relevant only when, for instance, it prevents a cabinet supported by a majority of seats in the lower house from controlling a majority in the upper house? The present work only marginally touched these questions, that may constitute fruitful interrogatives for future research.

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