Bargaining complexity and the duration of government formation:
evidence from Flemish municipalities

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# Bargaining complexity and the duration of government formation: Evidence from Flemish municipalities

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**Abstract** Government formation processes have attracted a substantial amount of scholarly attention. Yet, only few scholars try to explain the duration of government formations. This article extends the latter literature by examining the relation between the complexity of the bargaining environment and the duration of government formations at the local government level. We show that increased bargaining complexity - reflected in parties' ideological similarity, a larger number of potential bargaining partners, and an election result allowing for a larger set of mathematically feasible governments - is associated with longer bargaining delays.

**Keywords** Coalition formation · Ideology · Political party · Policy preferences · Local government

## 1 Introduction

Elections play a key role in the process of democratic governance. They not only provide voters an opportunity to hold incumbents accountable for past policy choices, but also determine the relative power of political parties during the next legislative period. Nonetheless, although elections shuffle the cards, they usually leave a number of ways to form a government (notably in non-majoritarian electoral systems). Hence, parties generally have to enter into negotiations aiming to form a viable government within the constraints set by the election outcome. As illustrated by the 541-days government formation process in Belgium after the 2010 elections (**?**), this need not always be a straightforward assignment.

While a vast literature studies government formation processes and the characteristics of the ensuing (coalition) governments, to the best of our knowledge only four published studies try to explain the duration of government formations. Diermeier and van Roozendaal (**?**) find that uncertainty about other parties' preferences is a critical factor behind longer government formation processes, while Martin and Vanberg (**?**) show that bargaining complexity increases the time required to form a government. Golder (2010) attempts to unite both findings by showing that bargaining complexity matters only when uncertainty among political actors is high. This is confirmed by Laver and Benoit (**?**), who likewise illustrate that more complex

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legislative party systems are linked to significantly longer government formation delays when uncertainly is higher.

In this article, we extend this literature in two main ways. First, we provide the first analysis of the duration of government formation processes at the local government level. Although "understanding coalition formation at the local level is not the same as understanding national coalition formation", Bäck (2003: 462) shows that "the same type of variables (e.g., size, policy and institutional variables) could be used to predict coalitions at both levels of government, indicating that the study of local coalitions can increase our understanding of coalition formation in general". Moreover, lower levels of government provide a setting comprised of a large number of jurisdictions within a more homogeneous institutional setting (**???**), which is beneficial for the analysis since, unlike existing cross-national studies, it implies we can effectively treat such institutional elements as given.

Our second contribution relates to the introduction of a broader set of measures for bargaining complexity, such as the number of feasible minimal winning coalitions, population heterogeneity, and the size of the largest party. We thereby argue that an election result allowing for a larger set of mathematically feasible governments adds bargaining complexity by increasing the number of outside options, whereas a more heterogeneous local population increases the complexity of the bargaining environment due to the presence of a broader diversity of public policy preferences (**?**). Both elements are expected to lead to longer bargaining delays. The size of the largest party arguably simplifies coalition formation when this party reaches a comfortable majority, but might make the bargaining process more difficult when no absolute majority is won (**?**).

Our empirical analysis concentrates on the 2012 Flemish municipal elections, following which we collected information about the duration of government formations (i.e. our dependent variable). The results indicate that bargaining complexity, as reflected in larger ideological diversity and the number of feasible minimal winning coalitions, is associated with a longer time required to form a government. The seat share of the largest party increases bargaining delays when this party fails to obtain a majority position, but decreases government duration when it does obtain a majority within the local council. This result suggests a potential 'winner's curse' in non-majoritarian electoral systems: i.e. leading parties without a (clear) majority position in the local parliament need more time to convince their future governing partners to join forces with them.

In the next section, we discuss existing theories on government formation processes, and derive empirically testable hypotheses. Section 3 presents the dataset and operationalization of our key dependent and independent variables. This is followed by the empirical analysis, and a concluding discussion.

## 2 Theoretical background and hypotheses

### 2.1 Theoretical background

To the best of our knowledge, Diermeier and van Roozendaal (**?**) were the first to assess the duration of cabinet formation processes using a dataset of thirteen Western multi-party democracies. Because bargaining delays are incompatible with game-theoretic models of negotiations under complete information, they conduct their analysis in the spirit of non-cooperative bargaining models under incomplete information. Formation times are shown to covary with the degree of uncertainty about other parties' preferences, all else equal (**?**). Because the degree of such uncertainty cannot be measured directly, the empirical analysis relies on two proxies. The first is whether coalition bargaining takes place after an election (relative to government negotiations in-between elections). The intuition is that elections reshuffle the cards, which increases uncertainty about other parties' preferences. The second proxy is the electoral defeat of the previous cabinet, which increases uncertainty about new possible power constellations. Both proxies provide empirical support for the idea that formation times covary with the degree of uncertainty.

Martin and Vanberg (**?**) subsequently raised the possibility that difficulties in coalition negotiations

may be linked to so-called policy discrepancies (or 'bargaining complexity'). This is operationalised via (i) the number of parties in the governing coalition and (ii) the ideological divergence between these parties (**?**). An intuitive argument for the inclusion of ideology is that a coalition government can only take office when all parties ratify the agreement, which is easier when the agreement is close(r) to the ideal policy of all parties involved. The number of parties in the governing coalition is introduced because it is easier to reach an agreement among a smaller number of parties. Based on data from 10 West-European democracies, Martin and Vanberg (**?**) find that ideological divisions in the incoming administration result in longer cabinet negotiation processes. The number of parties in the incoming administration are linked to increases the duration of bargaining, but this effect (unexpectedly) reverses with very large coalitions.

In an attempt to unify these findings, Golder (**?**) examines both 'uncertainty' and 'bargaining complexity'. She identifies bargaining uncertainty as the main driving force behind delays in government formation, whereas bargaining complexity - approximated by the number of legislative parties and their ideological differences - only has a conditional effect: i.e. it increases delay when there is uncertainty (i.e. in post-election periods), but has no effect under complete information (i.e. in inter-election periods) (**?**). Laver and Benoit (**?**) take a similar positoin, and differentiate between five different classes of legislative party systems, which are associated with different levels of complexity. Their empirical results are in line with the conjecture that there are significantly longer formation delays in more complex legislative party systems. However, A similar effect is not observed for inter-electoral - rather than post-electoral - government formation negotiations, which is consistent with earlier findings by Golder (**?**).

As noted by Laver (**?**) and Bäck (**?**), most coalition theories have been developed for, and empirically tested using data from, national coalition governments. This is also true for all the above mentioned analyses on coalition formation duration. Clearly, this is potentially problematic when new theories are tested on the data that inspired them in the first place (**?**). One potential solution is to change the level of empirical analysis and study coalition formation in local government - as suggested by, among others, Bäck (**??**) and Munkøe (**?**). Still, the validity of such approach evidently rests on the extent to which theories about the (delays in the) formation of national governments in parliamentary democracies can be applied to the local government level.

The main issue, originally raised by Laver et al. (**?**), is the absence in many countries of a local government as an equivalent for the national cabinet. In Norway and Sweden, for instance, local governments can best be "characterized as assembly government systems, using a proportional representation rule when appointing the executive committee" ((**?**); see also Bäck (**?**), Tovmo (**?**)). However, this issue does not arise in our analysis of Flemish municipalities. These are governed through a parliamentary system, such that the coalition formation process is conducted in essentially the same way as a parliamentary democracy at the national level (more details in section 3 below). Given this similarity, we can develop our main hypotheses from the existing literature on national parliamentary systems, and assess them using a large set of cases within one political system.

2.2 Hypotheses

As our empirical analysis focuses exclusively on post-election bargaining processes, we concentrate on factors related to bargaining complexity. Our first hypothesis - taken from Martin and Vanberg (**?**) - relates to the effect of ideological divergence. The idea, as discussed above, is that the bargaining process should be more expeditious when the involved parties are ideologically proximate. Operationalizing such proximity using a simple ideological left-right scale, this effectively leads to the following hypothesis.

**Hypothesis 1** *The duration of the coalition formation process is shorter when parties are ideologically close.*[1]

Theoretically, it is important to distinguish at this point between (a) the bargaining time used during one attempt at government formation and (b) the overall duration of the government formation process, possibly involving sequential bargaining rounds. These are two distinct issues. In the former case, it seems natural to assume that, ceteris paribus, bargaining time increases with ideological distance between the discussion partners. In the latter case, it is natural to assume that early bargaining attempts are more likely to occur among ideologically close parties and subsequent attempts involve parties that are ideologically further removed. Even though changing circumstances between subsequent bargaining rounds mean that later bargaining rounds need not take longer than earlier ones (even despite the larger ideological distance), a longer overall government formation process and more ideologically diverse coalitions will tend to arise when more attempts have to be engaged in. Clearly, the latter process induces the joint determination of bargaining time and ideological distance within the final government coalition. We will return to this in the empirical analysis.

Our next hypothesis builds on the idea that political fragmentation induces bargaining complexity, which in turn can lead to delays in government formation (**???**). The line of argument here closely mirrors the key notion underlying power- or size-oriented coalition formation theories. These indeed maintain that the formation of a majority government generates positive utility for the participating parties, and that each of these parties should receive at least some share of this utility. Evidently, dividing this cake may well become more difficult when more parties are involved. This leads to our second hypothesis:

**Hypothesis 2** *The duration of the coalition formation process is shorter when political fragmentation is lower.*

Obviously, ideological diversity and political fragmentation are only two possible factors affecting the complexity of the bargaining environment. Golder (2006, 196) suggests another factor: namely, the possibility that "multiple parties choose to coordinate their electoral strategies rather than run for office alone". When parties in such a pre-electoral agreement together reach an absolute majority in the election, one might expect that any bargaining delay will be minimal. However, the opposite effect could materialize when the pre-electoral coalition fails to obtain a majority. In such situation, bargaining delays may be exacerbated by the necessity to include parties that were not a member of the pre-existing agreement (and may not be forgiving about this exclusion), or because some parties opt to renege on the pre-electoral agreement. The effect of a pre-electoral agreement is therefore not unambiguous, but may depend on the electoral outcome these parties jointly achieve.

**Hypothesis 3** *The duration of the coalition formation process is shorter when a pre-electoral agreement exists between parties that jointly obtain a majority position.*

Finally, on a more aggregate level, the complexity of the political environment often mirrors the social and/or economic complexity of the local population. For instance, Jottier et al. (**?**) describe how population heterogeneity (in social as well as economic terms) in Flemish municipalities makes politicians less cognizant of the concerns of their inhabitants. In other words, larger municipalities or cities with a more heterogeneous population are more difficult for politicians to understand. One might expect that this results in more complicated bargaining situations, leading to greater delay in government formation.

**Hypothesis 4** *The duration of the coalition formation process is longer when the population is more heterogeneous.*

The hypotheses listed above by no means comprise every conceivable factor affecting bargaining delays. For instance, disagreements between leaders or representatives of different parties during past administrations might lengthen negotiations due to lingering distrust between them. Reversely, bargaining can be easier when parties have previously cooperated successfully. Another influence in a local context

might be directives from parties' national headquarters. That is, local party officials might be coerced into cooperating with (or dissociating themselves from) certain parties for strategic national considerations. We abstain from formulating such hypotheses in more detail due to a lack of available data, and leave these as interesting avenues for future research.

## 3 Data and empirical analysis

Belgian municipalities are governed through a parliamentary system with a legislative branch (the local council) and executive branch (the local government). Municipal elections take place on the second Sunday of October under a fixed electoral cycle of six years, whereby eligible citizens cast their ballot to elect local councillors using a system of Proportional Representation. The composition of the local government (i.e. the College of Mayor and Alderman) is subsequently determined by the party or parties holding a majority position in the council. These parties decide upon, and formally appoint by majority vote, the mayor and alderman, which are exclusively selected from among their councillors.

Empirical evaluation of our four hypotheses relies on data from the municipal elections that took place on 14 October 2012 in 307 out of 308 Flemish municipalities[2]. In the remainder of this section, we first discuss our dependent variable (i.e. the duration of government formation). Then, in section 3.2, we present information on Flemish political parties' ideological diversity. Section 3.3 subsequently discusses the methodological approach, presents the remaining independent variables, and summarises the results of the empirical analysis.

### 3.1 Measuring the duration of government formation

Choosing the starting point of the government bargaining process is straightforward as this can be equated with Election Day (i.e. 14 October 2012). Determining the end of the process, however, is less obvious at the municipal level. For instance, the swearing-in ceremony in Belgian, and thus also Flemish, municipalities takes place on the first council meeting of the calendar year following the election, and thus is independent of when the government was actually formed. Also, due to administrative procedures the council vote confirming the new mayor can take place many weeks (or even months) after the bargaining process has been concluded. This leaves us with the date of the public announcement that the parties have reached an agreement to form a new municipal government. Specifically, we take the date of the new government's announcement in the media (minus one day to allow for publishing delays). Because any publishing delay may differ across media sources, we thereby relied on articles from two newspapers (Het Nieuwsblad and De Standaard) that are owned and operated by Corelio and share editorial content. To the best of our knowledge, no announced coalition subsequently failed to form. However, our dataset does not include information on the stability and the duration of the coalition after it has been formed. Such analysis falls outside the scope of the present work (see Munkøe (**?**) for an explicit assessment of such instability in the local government formation process in Denmark).

There is a large concentration of observations in the first week after the election. No less than 93% of Flemish municipalities (or 287 out of 307 municipalities) knew their new government within one week. The distribution is illustrated in figure 1. This swift bargaining might reflect the existence of pre-electoral agreements, which are quite common in Flanders (**?**). Nevertheless, it does not take away the fact that some municipalities took quite a while to forge a new local government. There are, for instance, a small number of extreme cases where the bargaining process took more than one month (i.e. eight observations). Three of these (i.e., Antwerp, Wemmel and Denderleeuw) will be excluded in much of the analysis below, as the bargaining delays in these municipalities were clearly driven by ideosyncratic circumstances. In Antwerp, the negotiations took 56 days due to very strong personal differences between the leaders of the two main political blocs, neither of which managed to obtain sufficient electoral support on its own. In

**Fig. 1** Distribution of the announcements of coalition agreements
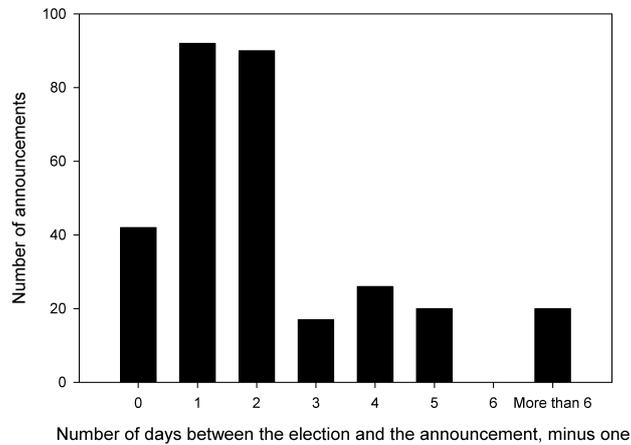


Wemmel (136 days) and Denderleeuw (128 days), the two main parties (or cartels) obtained an identical number of seats. In both cases, however, the only remaining seats were occupied by either the extreme right party Vlaams Belang (in Denderleeuw) or the francophone nationalists (in Wemmel). As both these parties are traditionally excluded from government power by the remaining parties, very difficult and lengthy negotiations ensued.

## 3.2 Independent variables

Our first hypothesis relates the duration of the bargaining process to parties' ideological discrepancy. A standard approach to quantify this relies on a one-dimensional 'left-right' scale. To measure parties' positions, we exploit information obtained from a six-yearly survey of local political parties organised as part of a collaborative project involving several Belgian universities (**?**). The survey is directed at the presidents and/or spokesmen of the local factions of national parties or the presidents and/or spokesmen of local parties that are only active within one municipality (or a limited number thereof)[3]. Specifically, we use answers on the question asking respondents to locate their party on an 11-point ideological scale between 0 (Left) and 10 (Right). Table 1 provides the average results for the six parties active in most Flemish municipalities[4]. This indicates that the political spectrum is populated on the left by Groen! and Sp.a. On the far right of the spectrum we find Vlaams Belang. Table 1 also presents some information on dispersion of the parties' positioning by the presidents and/or spokesmen of the local factions. The standard deviation provides the most reliable image for the dispersion of the responses, which was overall quite modest. The minimum and maximum values over all responses, for each respective party, showed greater dispersion due to a limited number of outliers[5].

The average positions in table 1 enable us to determine the ideological distance between any set of two or more parties. Obviously, the largest distance of 7,1 can be found between the two parties located at both extremes of the political spectrum. The smallest distance is between Open VLD and N-VA. Within our sample, the average of the ideological distance between the two most extreme parties in the local council is 4.32, with a standard deviation of 2.28. Under hypothesis 1, we would expect that an increase in the maximum observed ideological distance between political parties obtaining local representation is associated with a longer time to conclude the bargaining process.

Apart from ideological diversity, our model includes a number of additional variables to address our remaining three hypotheses. With respect to hypothesis 2, we include two measures of political fragmen-

**Table 1** The average position of Flemish parties on the left-right scale

| Name | Political orientation | Position | Standard deviation | Minimum | Maximum |
|------|----------------------|----------|--------------------|---------|---------|
| Groen! | Environmentalists | 2,2 | 1,1 | 0 | 7 |
| Sp.a | Social democrats | 2,6 | 1,6 | 0 | 8 |
| CD&V | Christian democrats | 5,4 | 1,0 | 3 | 9 |
| Open VLD | Liberal democrats | 6,6 | 1,3 | 3 | 10 |
| N-VA | Flemish nationalists | 6,7 | 1,2 | 3 | 10 |
| Vlaams Belang | Extreme-Right | 9,3 | 1,1 | 6 | 10 |

tation. Our first operationalisation follows Diermeier and van Roozendaal (**?**) and measures the effective number of parties with representation in the local legislature[6]. While this intends to capture the higher number of alternative coalition possibilities in more fragmented political settings, it is clearly an imperfect approximation. Hence, our second measure more directly counts the number of minimal winning coalitions (MWC) that is feasible given the distribution of seats across the various parties in the municipality[7]. As both measures intend to capture similar effects, models 1 to 5 in table 2 include them either jointly (in models 1 to 3) or separately (in models 4 and 5).

For hypothesis 3, we include an indicator variable equal to 1 when at least one respondent for a certain municipality indicated that a pre-electoral agreement existed in this municipality, 0 otherwise. It should be noted that we only have access to information regarding the existence of a pre-electoral agreement (which occurs in 123 municipalities); we unfortunately do not know the parties involved, nor whether this agreement actually was validated after the election[8]. With respect to hypothesis 4, we include two proxies for the heterogeneity of the local population previously employed in Jottier et al. (**?**): namely, the size of the population and the income inequality in the municipality[9]. Finally, we control for the seat share of the largest party in the municipal council. This is an important control since it is at least conceivable that the size of the largest party simplifies coalition formation when this party reaches a comfortable majority - though it might also make the bargaining process more difficult when no absolute majority is won (see also Laver and Benoit (**?**)). To capture this potential break point in the effect of a largest party's size at a seat share of 50%, we also include an indicator variable equal to one when the largest party obtains a majority of the seats as well as the interaction of this indicator variable with the largest party's seat share. In line with Laver and Benoit (**?**), we expect a positive effect for the seat share of the largest party until this share reaches 50%, and a negative effect afterwards.

### 3.3 Empirical analysis

Our empirical analysis employs a negative binomial count model. We prefer this to the hazard (or survival) models that were used by previous authors (**???**). In principle, hazard (or survival) models require an exact - or as close as possible - measurement of time in the sense that survival must be measurable at every time interval. While this assumption is relaxed under discrete-time hazard models, our dependent variable - i.e. the number of days between the election and the announcement of the new local government - consists of discrete values with a high mass at low numbers. Such a highly skewed distribution invalidates some of the distributional assumptions of (discrete-time) hazard models, and is better suited to an analysis using Poisson or count models. Given the significant overdispersion in our dependent variable (i.e. the variance is significantly higher than the mean), a negative binomial count model is more appropriate. The results using this estimation technique are summarised in table 2.

Table 2 specifically contains five regression results. Column (1) employs the full available dataset, while column (2) excludes the three municipalities with idiosyncratic circumstances leading to extremely long bargaining periods (i.e. Antwerp, Wemmel and Dendermonde). Column (3) additionally excludes municipalities where the stated ideological position of a party by respondents to the survey of local party representatives ((**?**)) deviated more than 2 points on the 11-point left-right scale from the average ideological

**Table 2** Estimation results

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| Ideological distance | -0.051 | 0.098 ** | 0.095 ** | 0.108 ** | 0.094 ** |
| | (0.046) | (0.044) | (0.048) | (0.044) | (0.044) |
| Effective number of legislative parties | 0.179 | 0.216 * | 0.220 | - | 0.278 ** |
| | (0.161) | (0.133) | (0.145) | | (0.128) |
| Number of feasible MWC | -0.003 | 0.092 ** | 0.081 * | 0.111 *** | - |
| | (0.067) | (0.043) | (0.045) | (0.041) | |
| Pre-electoral agreement (1 = Yes) | -0.171 | -0.208 | -0.215 | -0.217 | -0.182 |
| | (0.190) | (0.156) | (0.170) | (0.156) | (0.158) |
| Size of population (log) | 0.463 *** | 0.191 | 0.221 | 0.214 | 0.211 |
| | (0.138) | (0.133) | (0.142) | (0.130) | (0.136) |
| Inequality of income | -0.001 | -0.007 | -0.010 | -0.007 | -0.005 |
| | (0.008) | (0.006) | (0.007) | (0.006) | (0.006) |
| Seat percentage of the largest party | 5.986 *** | 3.134 * | 3.268 * | 2.091 | 2.341 |
| | (2.133) | (1.772) | (1.919) | (1.116) | (1.762) |
| Largest party holds majority position (1 = Yes) | 3.688 *** | 2.476 ** | 2.312* | 2.214 ** | 1.816 * |
| | (1.282) | (1.129) | (1.195) | (1.116) | (1.105) |
| Seat percentage of the largest party | -7.865 *** | -4.189 * | -3.970 * | -3.579 * | -3.109 |
| * Seat percentage of the largest party | (2.462) | (2.184) | (2.320) | (2.145) | (2.155) |
| Local party in municipality (1 = Yes) | -0.279 | -0.067 | -0.078 | -0.013 | -0.007 |
| | (0.189) | (0.160) | (0.173) | (0.155) | (0.160) |
| Likelihood ratio ( $\chi^2$ ) | 41.71 *** | 41.39 *** | 40.89 *** | 39.55 *** | 36.45 *** |
| N | 280 | 277 | 245 | 277 | 277 |

Note: Dependent variable = the number of days that were needed to reach a coalition agreement. Estimation method is negative binomial count model. The table shows the non-standardized estimated coefficient, standard deviation between brackets. *** significant at 99% level, ** at 95% level, and * at 90% level. Column (1) employs the full available dataset, while column (2) excludes the three municipalities with idiosyncratic circumstances leading to extremely long bargaining delays (i.e. Antwerp, Wemmel and Dendermonde; see main text for details). Column (3) additionally excludes municipalities where the stated ideological position of a party by respondents to the survey of local party representatives ((**?**)) deviated more than 2 points on the 11-point left-right scale from the average ideological position of that party across all survey respondents. Finally, columns (4) and (5) repeat column (2) without either the 'Effective number of legislative parties' or the 'Number of possible MWC'.

position of that party across all survey respondents. Finally, columns (4) and (5) repeat column (2) without either the 'Effective number of legislative parties' or the 'Number of possible MWC'.

The results in table 2 show that the ideological distance between the bargaining parties has the expected positive association to the duration of the bargaining process - at least once we exclude the three municipalities with extremely long bargaining delays due to idiosyncratic local circumstances (columns 2 to 5). This result confirms the relation that was formulated in hypothesis 1, and is in line with Martin and Vanberg (**?**) and Golder (**?**) at the national level. A governing majority forms after fewer bargaining days when the parties elected into the local council are ideologically closer. Reversely, a larger ideological divide between the parties represented in the local council is associated with longer bargaining delays.

Hypothesis 2 also gains empirical support. The effective number of legislative parties has a positive relation to bargaining delays in all models, though it often remains statistically insignificant at conventional levels. Our inclusion of a more direct measure of the number of potential bargaining outcomes - i.e., the number of feasible MWCs - initially appears more successful. The number of feasible MWCs is indeed positively and statistically significantly related to longer bargaining delays in columns 2 and to 3. Nonethelss, from columns 4 and 5, we can see that the effective number of legislative parties and the number of feasible MWCs capture broadly similar effects. Indeed, removing either from the estimation equation strengthens the coefficient estimate and statistical significance of the other. Clearly, however, column 4 presents a better overall model fit compared to column 5 (as indicated by the $\chi^2$ statistic in the bottom row of table 2), which indicates that the number of feasible MWCs appears the most appropriate operationalisation of political fragmentation induced bargaining complexity. If the election outcome allows more different possibilities to assemble a majority government, it takes significantly longer for parties to reach an agreement. We take this as an indication that increasing the number of 'outside options' increases bargaining complexity (**?**).

Table 2 also illustrates that the bargaining delay decreases when there is a pre-electoral agreement (in

line with hypothesis 3 and Golder (**?**)). Still, while the sign of the coefficients is robustly negative across all five models, the estimates never reach statistical significance at conventional levels. Hypothesis 4 also fares poorly in our sample. The (logarithm of the) size of the population has the expected positive association with the duration of the government formation process, but rarely reaches statistical significance at conventional levels. Furthermore, the coefficient estimates for income inequality remain very small and statistically insignificant. In other words, increased population heterogeneity does not appear to be linked to longer local government negotiations. Similarly, the results in the bottom row of table 2 indicate that a local party gaining representation in the municipal council has no statistically significantly association with the number of days needed to conclude the government formation process. Finally, table 2 provides substantial evidence that the size of the largest party, measured as a percentage of the total number of seats, has a non-linear effect with a strong break at a seat share of 50%. In line with expectations, the size of the largest party in the municipality is associated with a longer duration of coalition formation when the largest party fails to obtain a majority position. However, when the largest party does capture a majority of the seats, its size has a negative relation to bargaining delays. This negative relation is likely to derive from th efact that parties with a sufficiently large majority generally quickly decide to form a one-party government. The initial positive effect, however, suggests that a leading party without a majority position needs more time to convince its future governing partners. This implies a potential 'winner's curse' in which large parties without a (substantial) majority position in the council may face tougher coalition negotiations.

## 4 Conclusions and further research

In this article, we analysed the duration of coalition formations at the local government level, thereby employing a unique new dataset on Flemish municipalities after the elections of 14 October 2012. Our analysis is the first to focus on local governments, which provides an opportunity to study a large number of simultaneous government bargaining processes within a homogeneous institutional framework; see also Bäck (**??**). As such, we complement, and extend, the four existing investigations at the national level (**????**).

Our analysis shows that increased bargaining complexity is associated with longer government formations. More specifically, we first of all find that governments form faster in municipalities where the politicall parties elected into the local council are ideologically closer. Similarly, the number of alternative coalitions (MWCs) allowed for by the election outcome has a strong effect on bargaining delays. An increase in the number of such 'outside options' tends to significantly increase the number of days needed to reach an agreement. Finally, we find that the size of the largest party is associated with longer bargaining delays when this party fails to secure a majority position, but shorter delays when it does obtain a majority in the council.

It is, however, important to keep in mind also the limitations of our analysis. One such limitation is that all coalition formations in our sample took place following an election. This by construction excludes factors related to post-electoral uncertainty about other parties' preferences from our analysis (**?**). It may therefore be of interest in further research to move attention to a country where local-level governments can face, for instance, no-confidence votes, such as to allow combining post-election data with inter-election government formation (**?**).

A more general question raised by our results is why ideologically dispersed coalitions form at all, if ideological diversity increases bargaining complexity. One potential explanation might be that Flemish local politicians appear to have a very strong preference for MWCs. These form in the very large majority of cases, even when they are ideologically more dispersed than other potential coalitions. A second, more speculative, possibility is that some coalitions are formed to avoid a continuation in power of the Christian-democratic CD&V, which has been traditionally the dominant party in local politics in much of Flanders. As CD&V is a centrist party, coalitions without it tend to be ideologically more dispersed. A more in-depth

investigation of the relative explanatory power of these various possibilities is unfortunately not possible with our dataset, but is an interesting avenue for further research.

## Notes

[1] An alternative viewpoint is that ideologically proximate parties are likely to pursue the same pool of voters. This could lead to intense (and possibly antagonistic) campaigning where such parties target each other, which might make subsequent negotiations between them more difficult. While we follow the existing literature in the formulation of our hypothesis, it is obviously an empirical question which argument carries the day.

[2] The only exception is Herstappe, which, with only 70 eligible voters, is by far the smallest municipality in Flanders. Since only one party list containing a number of candidates exactly equal to the number of available seats intended to contest the election, no municipal election was organized.

[3] The information obtained from individual municipalities is not made public, such that strategic positioning by the presidents and/or spokesmen of the local parties is unlikely to create measurement concerns here.

[4] An accurate estimate of the ideological position of any given party requires a sufficient number of respondents from that party. This naturally excludes purely local parties that are only active in one or very few municipalities. To retain such parties, we set local parties' ideological position to the unweighted average across all other parties (i.e., 5.45). Note also that pre-electoral coalitions between parties are coded as the unweighted mean ideological position of the parties involved.

[5] Conservatively defining extreme differences as more than two points on the 11-point ideological left-right scale, there are a few extreme cases for each party: 2 for GROEN, 6 for SP.a, 8 for CD&V, 9 for N-VA, 7 for OpenVLD and 4 for Vlaams Belang. Hence, only 36 out of more than 1200 survey respondents (i.e., less than 3%) deviate more than two points from the opinion of his/her partisan colleagues. We return to this below

[6] Golder (**?**) and Laver and Benoit (**?**) use the absolute number of legislative parties rather than the effective number employed by Diermeier and van Roozendaal (**?**). While we follow Diermeier and van Roozendaal (**?**), all results are unaffected by using the absolute number of legislative parties. Note also that we do not include the number of parties in government, which was used by Martin and Vanberg (**?**), as this variable is endogenous to the outcome of government formation negotiations.

[7] We count MWCs rather than all possible non-null coalitions because these are by far the most common type of coalition in Flanders. To illustrate this, we collected data on all coalitions formed following every municipal election between 1976 and 2012. Of the 1299 coalitions formed in this period, 82,1% was a MWC, ranging from 74,5% following the 2000 municipal elections to 86,9% after the 1988 local elections. In 2012, 81,2% of actually formed coalitions were MWCs. Note also that we correct this count for the presence of the cordon sanitaire around the Vlaams Belang, which prohibits all democratic parties in Belgium to enter into coalition or collaborate with this party (**?**). This prohibition naturally reduces the number of realistic coalitions. Still, this reduction obviously becomes less important when the size of this Flemish nationalist party is smaller (**?**).

[8] Note also that this information is missing for 28 municipalities.

[9] The indicator of inequality is given by: Inequality $= \frac{Q_3 - Q_1}{Q_m} * 100$, where $Q_3$ the income for the top of the third quartile; $Q_1$ the income of the top of the first quartile; and $Q_m$ the median income.