Abstract:
Consecutive political crises in Belgium during the periods 2007-2008 and 2010-2011 demonstrated the importance of coalition formation and the necessity for a good understanding of this process. Belgium, other countries alike, is run by a caretaker government in those periods between an election and the inauguration of the new government. Because such periods are generally not considered as beneficial to a country, government formation processes and the characteristics of the ensuing (coalition) governments have attracted a substantial amount of scholarly attention. Despite the many efforts that have been made, gaps remain in the theoretical framework. A first shortcoming is the limited number of scholars who try to explain the duration of government formations. Secondly, the majority of multidimensional models assume that all policy dimensions are viewed as equally important, and that this is true for all parties. Another limitation is the adherence to the Euclidean distance function. The employment of alternative distance functions has received very limited, if any, attention. These three challenges are the focus of this dissertation. There are certainly many other gaps in the framework of spatial coalition formation theory, but these fall outside the scope of the present work.

The initial analysis presented in this dissertation examines the duration of coalition formations at the municipal level. Using a unique new dataset of parties’ ideological self-placement and policy preferences, a novel measure of the complexity of the bargaining environment is developed. It shows that strong similarity in the bargaining parties’ ideology or political priorities significantly reduces the time required to form a coalition. A more heterogeneous local population and an election result allowing for a larger set of mathematically feasible governments are shown to be associated with longer bargaining delays. The seat share of the largest party increases bargaining delays until it reaches 65%, but decreases thereafter.

The second contribution examines the impact of three factors on the ability to predict political coalitions of spatial coalition formation models: (1) inclusion of issue saliences, (2) choice of distance function and (3) choice of solution method. Issue saliences quantify the relative importance that parties attribute to different policy dimensions. The second factor is the distance function that is used to calculate the difference between two parties’ positions. The classical application employs the most commonly used Euclidean distance in combination with the gravity center as consensus estimate. This is not the case in the consistent distance application, where the selection can be made between three functions: Euclidean, squared Euclidean and rectangular. The chosen function also determines the consensus estimate. These first two factors are often neglected in existing coalition formation models. The three functions in the consistent distance application and the classical application, each either unweighted or weighted with issue saliences, give us eight possible combinations to apply in four solution methods. These solution methods
are determined by different criteria by which to rank potential coalitions and subsequently determine the (set of) optimal coalition(s).

An empirical application including 28 democracies illustrates the impact that these factors have on the predictive power of the spatial coalition formation models. The factor with the most important impact on the predictive power is the chosen solution method. Overall, the inclusion of issue saliences or the choice of distance function do not appear to have a significant influence on the predictive power. However, these factors do have significant interaction effects with the solution methods. For some methods, although not all, the issue saliences and distance function can have a significant influence on the model’s performance.

The inquiry into coalition formation procedures incorporates two properties that are not often found in other coalition formation models: the choice between different formation paths and constrained consensus positions. Most coalition models are based on the simultaneous procedure, where all parties negotiate together in a single stage. This is not the case in the step-by-step procedure, which considers the possibility that not all parties are included in the initial stages of the negotiations. The stage in which the various parties enter the negotiations determines the formation path. The model also imposes radii, which limit the positions that could be acceptable as a consensus to the various parties.

There are two often overlooked aspects that may affect the procedures: issue saliences and distance selection. Again, the classical application is initially employed to implement issue saliences. We compare the results when all saliences are equal, to the salience-weighted case. The consistent distance application is also implemented in combination with the coalition formation procedures, allowing the choice between three functions. The impact of choosing one of the eight possible configurations, together with the influence of the procedure and radii, is examined with the help of both numerical and empirical applications.

The results indicate that both the distance function and the inclusion of issue saliences can have a considerable effect on the prediction of the optimal coalition and the procedure or path through which it is formed.

Finally, the twofold generalization of issue saliences and distance selection to probabilistic spatial voting indexes is presented. The calculation of voting power is combined with the consensus estimation through the classical application of the consistent distance application, both either weighted or unweighted with issue saliences. Empirical applications for Belgium illustrate the influence that allowing issue saliences to vary across parties and dimensions and using different distance functions can have on the voting power.