Coherence of Coalition Governments Across Types of Parliamentarism*

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Abstract

We know that the difference between positive and negative parliamentary systems is associated with different kinds of coalitions in terms of their majority/minority status, but next to nothing is known about the political characteristics of coalitions under these two systems. Yet, it has been suggested that the two systems provide fundamentally different bargaining environments that should have an impact on the relative political coherence of coalitions. The objective of this paper is to evaluate if this difference is actually there and attributable to the difference in type of parliamentarian. Preprocessing the data through matching is used in an attempt to control for the differences between the types of parliamentarism that might also have an impact on the relative political coherence of coalitions. Preliminary results show that negative parliamentary systems indeed seem to have relatively more coherent coalition governments than positive parliamentary systems. To clarify the exact reason for that difference, however, requires some further analysis.

1 Introduction

Although parliamentarism as the oldest form of democratic government and political parties as the crucial actors in this process have been under the scrutiny of political science since its inception(s), some important aspects with regard to both, as well as some of their joint associations, have been left unstudied. Both separately have been used as

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explanatory variables in different aspects of the process of governance. Thus we know
that negative as opposed to positive parliamentary systems go together with an increased
incidence of minority governments and the ideological positions of parties, in addition
to many other factors, help to explain why certain coalitions between parties materialise
and others do not. Little research, however, has been devoted to untangling the political
characteristics of coalitions themselves and how these might vary under different types of
parliamentarism. It is the objective of this paper to provide a tentative insight into this
problematic by looking into how the relative political coherence of coalitions varies under
the two types of parliamentarism.

The paper will proceed as follows. First, an overview will be given of the issues
of policy and ideology in party research. This will be connected to the two different
types of parliamentarism mainly through the expectation that negative parliamentary
systems might provide conditions for coalition formation where coalitions are likely to
be politically more coherent. It is the objective of this paper to look into whether this
supposed difference in fact exists. The analysis will draw on data from the European
Representative Democracy (ERD) dataset and the Manifesto Project content analysis
data on party policy positions. A novel measure of party policy difference that takes into
account the full content of party manifestos and avoids some of the issues of the RILE left-
right index, the only other measure suitable by its scope for this purpose, is elaborated.
It is shown how this measure can be used for the analysis of political difference in sets
of parties, like the coalition, opposition or the party system as a whole. Thereafter, the
difference in coherence across parliamentarisms will be assessed by first pre-processing the
data through matching to ensure that instances of coalition formation under the two types
of are as similar as possible with regard to key characteristics of the party system and
government that might otherwise influence the relative coherence of coalitions. The results
of the analysis indicate that coalitions indeed tend to be more coherent under negative
parliamentarism.

2 Politics Across Institutions: Parties and Parliamentarisms

Party politics became prominent in the analysis of party systems and behaviour mostly
from the 1970s onwards. Thus the political characteristics of parties had become central
in the by now classic works by Sartori (2005), Robertson (1976) von Beyme (1985) and
numerous works afterwards on party systems, coalition formation and other issues. The pursuit of policy, in addition to vote and office seeking, is seen not only as one of the fundamental objectives of political parties (Strom and Müller 1999), but also central to our understandings of the functioning of democracy through such concepts as representation and accountability (Urbinati and Warren 2008; Andeweg and Thomassen 2005; Lupia and McCubbins 2000; Strom, Müller, and Bergman 2003). In this context it is somewhat surprising that the role of party policy has received relatively little attention in cross-country studies of party behaviour in government. Party policy has been used as an independent variable in studies on coalition formation (for an overview, see Martin and Stevenson 2001) and various aspects of the life-cycle of governments (Strom, Müller, and Bergman 2008). Yet the political characteristics of governments, especially coalition governments, where party policy differences can be expected to play an especially important role, have been left relatively unstudied.

Coalition government as a phenomenon is pertinent to parliamentary democracy with minority situations (Strom 1990, p. 24), where no single party has enough control over the legislature to govern on one’s own and thus parties are forced into cooperation with one-another. There is a fundamental difference, however, in terms of how these minority situations can play themselves out. Parliamentary democracy in the broadest sense comes in two types – positive and negative parliamentarism, a difference which came under scrutiny also relatively late in the history (of the study) of parliamentarism (Bergman 1993b; Bergman 1993a). This distinction was brought into political science by Torbjörn Bergman, who borrowed it from Swedish parliamentary debates over the issue (Bergman 1993a, p. 287) and refers to a fundamental distinction in how governments come into office. The basic difference between the types is that “in countries with positive parliamentarism, a new government must win a vote of investiture by a majority” while “in countries with negative parliamentarism [...] there is no vote in the parliament before a new government assumes power” (ibid., p. 287). In the latter the parliament can bring the government down instead of bringing it into office.

The distinction between the two types of parliamentarism has since been used, like party policy, as an independent variable in the analysis of various kinds of government characteristics. Thus it has been used in models predicting aspects of coalition bargaining, the existence of coalition agreements, coalition formation, portfolio allocation disproportionality, the number of cabinet ministers, government termination and durability (Strom,
Müller, and Bergman 2008) among others. The clearest associations of this characteristic of parliamentarism, however, seem to have been with minority governments, shorter government formation periods (Bergman 1993a) and a lower share of parliament seats by government parties (Bergman 1993b, p. 61). Under negative parliamentarism, where a government can take office without passing an explicit vote of investiture in parliament, coalition negotiation periods tend to be shorter and the prevalence of coalitions between parties that do not hold a majority in the parliament tend to be remarkably higher. It has also been noted that minority coalitions have the lowest cabinet duration (Lijphart 1999, p. 137) and thus one could assume an association between type of parliamentarism and cabinet duration.

In addition to the structural characteristics of governments, however, what should also be kept in mind is that these two types of parliamentary systems constitute presumably two very different kinds of bargaining environments for parties in the coalition formation process. This is also something that was noted by Bergman in his study of the parliamentary debates over negative parliamentarism in Sweden, but can be expected to hold for other countries as well. Namely, he notes that the ease of government formation was an argument that was used in favour of negative parliamentarism when it was debated and that it was pointed out that positive parliamentarism can force majority coalitions to form where parties are very different from each other politically (Bergman 1993a, p. 294). This claim – that coalitions under positive parliamentarism are likely to be less politically coherent, because diverse parties are forced to coalesce – is empirically testable, but to the knowledge of the author, this is something that has thus far not directly been looked into. Yet, this is a claim that could also have wider implications to the understanding and evaluation of the functioning of representative democracy. Concepts of representation and accountability presume that there is a flow of policy preferences from the electorate through the parties into government decisions. Coalition formation is a crucial moment in this flow – if parties cooperate with politically most similar parties in designing government policy according to what was promised to the electorate during the elections, the link between individual voter choices and government output is stronger. If parties coalesce with more different instead of more similar parties, it can be argued that they then give support to policies that are diverging from their own and thus the link between what their voters could expect at elections on the basis of the party’s policy platform and what eventually gets implemented by the government is weaker.
This issue of the political coherence of coalitions and its supposed difference between types of parliamentarism could thus potentially relate to wider concerns over the substantive functioning of representative democracies. In this context it is the objective of this paper to look into the problematic and try to evaluate, on the basis of available data about party policy and government characteristics, whether there is a difference in the political coherence of coalitions in positive and negative parliamentary systems. Before, however, we turn to the specifics of the analysis, a few more general issues need to be clarified about the measurement of party policy differences.

3 Measuring Political Differences Between Parties

3.1 Party Policy Data and the Evaluation of Political Difference

Data about the political characteristics of parties has traditionally been obtained from three sources – survey data (expert or mass), textual data (party platforms, speeches of politicians) or party behavioural data (roll call voting). Each of these has its advantages and drawbacks, which also have implications for the analysis to be conducted in this paper.

Party policy data from expert surveys (e.g. Bakker et al. 2012; Benoit and Laver 2006), which ask experts to position parties on political or ideological scales, although being relatively easy to obtain and thus cheap, has a limited time-frame as it is valid only to ask experts to evaluate current positions of parties. Thus, although expert surveys have developed a certain foundational status among party policy measures as they are often used to cross-validate other measures (Benoit and Laver 2006, p. 75, Lowe et al. 2011), they are inapplicable for analyses that would extend across time into the past for which no expert evaluation was produced.

Another source of information about the political positions of parties has been the voting behaviour of members of parliament. Data on roll-call votes, for which it is public information how each member of parliament voted, has been used to determine how different parties are from each other politically (Benoit and Laver 2006, pp. 69-71). This has been used especially in the context of the United States and it has been noted that this kind of data does not give a valid picture of party policy positions in the case of multi-party systems with coalition governments (ibid., p. 70), because in such cases parties often vote along coalition lines, despite what their independent political positions outside of that coalition might be. Thus, also this kind of data is not suitable for the current
This leaves only textual data, the only source of information that is valid for the analysis of party policy positions over time (for a most recent justification along these lines, see Volkens et al. 2013a). Party manifestos are regular statements of party policy that are attributable to the whole party (Budge and Farlie 1985, pp. 272-273; Robertson 1976, p. 72), the only message that is in full control of the party (ibid., p. 12) and that is available over an extended period of time. Thus they are the only source of information that is suitable for the purposes an analysis extending over a wider span of time. Although several methods for computerized content analysis exist that could be applied or adapted to the evaluation of party policy differences (e.g. Slapin and Proksch 2008), the only currently available source of data that could be used for this purpose is the human coded party manifesto dataset (Volkens et al. 2013b), which now covers more than 50 countries over a period of more than half a century.

However, there are several issues with the manifesto data, some of which can be overcome and some which just have to be acknowledged in the interpretation of the data until a better alternative is available. It has been noted that the manifesto content analysis data might suffer from a lack of inter-coder reliability (Mikhaylov, Laver, and Benoit 2012) – different coders disagreeing with each other on how to determine the categories for each policy statement contained in party manifestos. This indeed might be an issue for this kind of data, especially in the context where the manifestos are coded only be one coder as is the case for the dataset. This will inevitably leave some uncertainty in terms of how reliable the data is. On the other hand, several drawbacks have also been noted specifically for the RILE left-right index of the dataset, which is the most widely used measure of party policy difference that has been developed on the basis of the dataset. The index assumes that a single left-right dimension is definitive of policy spaces and that the meaning of left and right is the same in all countries and over time. The latter assumptions are needed in order to make the interpretation of the values of the index possible across countries and time. There is, however, ample evidence that the meaning of left and right changes over time (e.g. Huber and Inglehart 1995), that the RILE index is not able to adequate represent the policies of parties in numerous cases (Klingemann et al. 2006, Chapter 4, Dinas and Gemenis 2010; Gemenis and Dinas 2010; Pelizzo 2003) and that the assumptions it makes about the left-right political space are only vaguely there, or in the case of post-communist countries not at all (Mölder 2013). It should also be added
that the RILE index is based only on half of the coding categories of the manifesto coding scheme and does not therefore encompass the complete political profile of a party, even if it were a valid measure otherwise. The use of this index is thus problematic, especially for an analysis across time and for East and West European countries, where the meaning of left and right differs. Fortunately, it is possible to use the unaggregated manifesto data to propose a better alternative that will avoid many of these issues and is thus likely to be a more valid measure of party policy difference. This is something that will be elaborated in more detail in the next section of the paper, before turning to the actual analysis of the difference in the political coherence of coalition governments across the two different types of parliamentarism.

3.2 Measuring Political Difference as Programmatic Overlap

As was noted above, textual data is the only kind of data that is suitable for analysing party policy over a wider span of time and countries and that party manifests are the best, although not perfect, documents for this purpose. Therefore, raw manifesto content analysis data is suited for evaluating the political differences between parties, at least as far as available data sources are concerned. The most recent version of the dataset 2013b (Volkens et al. 2013b) covers 55 countries, 638 elections 923 parties and 3679 instances of coded documents. This is the maximum extent for which it is possible to calculate the measure of programmatic overlap that is proposed here.

If a party election manifesto represents the overall programmatic position of a party and the content analysis of manifestos as provided by the manifesto data gives the breakdown of a manifesto across different policy positions, then the overlap in the overall policy profiles of parties can be estimated in two related ways, depending on how many parties are simultaneously under focus. For any party pair, it is possible to calculate the sum of the absolute differences between each of the 56 coding categories in the dataset. This would give a measure of programmatic overlap – how much the political statements of parties in their manifestos overlap with respect to the policy categories they refer to. Such a measure can be scaled to range from 0 to 100 and be interpreted as a measure of how much the manifestos of any two parties overlap.

Such a measure of pairwise overlap can easily be aggregated to sets of parties, like the party system as a whole or parties that form a coalition or that are left in the opposition. For each party in the set, it is possible to first calculate pairwise overlaps with all other
parties in the set. Taking the mean of such pairwise measures for each party in the set will give a measure of how much on average each party in the set has programmatically in common with other parties in the set. The weighted average of such overlaps in the set would give a measure of how much political overlap or coherence there is among parties in the set. Weighting on the basis of either seat or vote shares, which both reflect the relative importance or power of a party, is important, because it can be assumed that average overlaps of larger parties with other parties matter more for party interaction than the average overlaps of minor parties in the set. This will be elaborated more technically in the next section of the paper.

Substantively and methodologically, such a measure is in many ways more valid for two reasons. First, it is calculated on the basis of whole manifestos of parties and not just a select set of categories that are not likely to cover the whole of its content. Second, this measure does not depend on a priori assumptions about the content of ideological dimensions on which party difference is evaluated. It does depend on the coding scheme of the manifesto dataset, but makes no assumptions about the content of the political difference between parties and is thus more valid for cross country and over time analysis for which the content of the underlying ideological dimensions like left or right are likely to differ for different countries or points in time.

4 Data and Design of Analysis

4.1 Data and Measures

The current paper is based on data drawn from latest available versions at the time of writing of the European Representative Democracy Data Archive (ERD) (Andersson, Bergman, and Ersson 2014) and Manifesto Project for Political Representation (MAR-POR) (Volkens et al. 2013b). The former contains information on 640 governments from 29 countries in Europe. The latter, as it is published, has information on 55 countries, more than 600 elections and 900 parties. The analysis will focus only on post-election instances of coalition formation, i.e. coalitions that were formed immediately after elections and not in the middle of a parliamentary term. The reason for this is the following – it can be assumed that the political profiles of parties change and since election manifestos give information on profiles of parties only at the moment of election, they are pertinent only for coalitions that are formed at that moment. Keeping this restriction in mind, and
cleaning the manifesto data, we are left with 226 instances of coalition formation from 26 countries. The full list of cases is brought out in the appendix List of Cases.

The measure for party policy difference that was described in the previous section is calculated in the following way:

- For pairs of parties:
  \[ O = \frac{200 - \sum_{i=1}^{56} |c_i^{p1} - c_i^{p2}|}{2} \]  
  \( O \) denotes the overlap between a pair of parties and can be straightforwardly interpreted as the proportion of overlap between two manifestos. \( p_1 \) denotes the first party, \( p_2 \) denotes the second party and \( c_i \) refers to the proportions of manifesto of a party that was devoted to each of the 56 policy positions defined in the manifesto coding scheme.

- For sets of parties:
  \[ C = \sum w \times \bar{\bar{o}} \]  
  \( C \) denotes the coherence of a set of \( n \) parties, \( w \) is a vector of length \( n \) of party weights calculated on the basis of the relative seat shares of the parties within the set and \( \bar{\bar{o}} \) is a vector of length \( n \) of average overlaps for parties within the set with all other parties in the set.

On the basis of these, it is possible to calculate the political coherence in sets of parties, like the coalition, the opposition and the party system as a whole. It should be kept in mind that the coherence of the coalition and the opposition are relative measures and can thus only be evaluated relative to a benchmark. In this case the political coherence of the party system as a whole at the moment of elections is used as the benchmark. Coalition coherence divided by party system coherence will thus give a measure of how much more coherent the coalition is as opposed to the whole system. If politically similar parties coalesce, the coalition will be more coherent than the system as a whole (values of the relative measure greater than 1) and likewise, if politically dissimilar parties coalesce, the coalition will be less coherent than the system as a whole (values of the measure less than 1). This will be the variable of interest for the following analysis of positive and negative

\[ ^1 \text{For some elections in several countries, like Italy, Ireland, Portugal and some others, the manifesto dataset contains information not on the manifestos of individual parties, but only on alliances, where all parties are attributed the same positions. This might not reflect the actual political situations in the party systems and thus such cases are removed from the dataset.} \]
parliamentary systems and the difference between them will be analysed as described in the next section.

4.2 Design of Analysis

On the most basic level, the current analysis would reduce to comparing the means for the relative coherence of coalitions for the two types of parliamentarism. However, it is not as straightforward as that. Countries and political systems differ in multiple ways and thus the two groups of countries are not directly comparable. They differ in party system fragmentation, the proportions of majority and minority coalitions, number of coalition members, electoral volatility and many other characteristics that might have an impact on coalition coherence. Just comparing the means of two groups could thus give potentially invalid results, because these differences were not taken into account.

The standard way to deal with this issue would be to construct a linear model with relative coalition coherence as the dependent variable, type of parliamentarism as a dummy independent variable and the possible relevant characteristics across which the two groups might differ as control variables. This, however, makes a myriad of assumptions about the distribution of the variables and the functional form of the relationship, that are almost definitely not met and especially with regard to the latter, cannot simply be assumed or tested for in any straightforward way. Fortunately there is a non-parametric way to alleviate the fact that the two groups might be fundamentally different called matching.

The problem with observational as opposed to experimental studies is that for the former, the “variables that affect the response may be distributed differently across treatment groups” and so have an undesired impact on the treatment effect (Diamond and Sekhon 2013, p. 933). Matching (Ho et al. 2007) is a form of non-parametric preprocessing of data that is implemented in R (R Core Team 2013) in the package MatchIt (Ho et al. 2011). It allows for a straightforward implementation of various different matching methods. The purpose of matching is to if not eliminate then at least to reduce any potential relationship between the variable that defines the two groups, which is (following the conventions of experimental research design) called the ‘treatment’ variable and possible ‘control’ variables with minimum bias or inefficiency (Ho et al. 2007, p. 211). This method can work according to two different principles – the sample can be reduced to only those cases that have the same values or distributions on the control variables, which is in most cases not feasible, because such matches do not exist. Or cases in the two groups can be weighed
(some discarded and some counted more than others) so that the application of the weights in subsequent analysis will ensure that the two groups are as similar as possible on the selected control variables in terms of their means or distributions. The current analysis will use matching to pre-process the data so that the instances of coalition formation will be as similar as possible with regard to certain characteristics of the party system, which might otherwise have an impact on the political coherence of coalitions. Only thereafter the differences between the two groups will be compared.

5 Does Type of Parliamentarism Make a Difference?

Before we turn to the analysis of difference of coalition coherence between parliaments, it would be useful to take a general look at the key variables.

Figure 1: Type of Parliamentarism

Figure 2: Coalition Coherence

Figure 1 shows how the countries that are included in the analysis are divided between positive (red) and negative (blue) parliamentarisms. Figure 2 shows us the average relative overlaps of coalitions (darker green indicating more overlap) that have formed in the countries that have been included in the analysis. One can see that for most countries, the coalitions that form tend to be more coherent than the party system as a whole and only in four countries the case was the opposite – coalitions were on average less coherent.

For the countries where there have been changes to the system, like Finland and Italy, the predominant form of parliamentarism during the period of analysis is displayed.
than the party system as a whole. This seems to suggest that as far as election manifestos are concerned, the parties in most European countries that end up governing together are also more similar to each other programmatically than they are with the party system as a whole (and thus also by implication more similar between each other than they would be with parties that are left in the opposition).

The next two figures show the distribution of the variables of interest. On Figure 3 we can see the distribution of overlaps for both the coalition and the opposition, as well as the party system as a whole. It can be seen that the coherence of coalitions is shifted towards greater overlap on the right, indicating that they are more likely to be more coherent than both the opposition and the party system as a whole. Figure 4 shows how relative coherence differs for positive and negative parliamentarisms. Two things should be noted here. First, the modal value for both types of systems shows that the most common situation is where the coherence in the coalition is around 5% greater than in the party system as a whole. Second, the difference between the distributions seems to come from the margins – there are a few cases of positive parliamentary countries where coherence is much lower and a few cases among negative parliamentary countries where the coherence is much higher than around the modal values where both distributions overlap. This might suggest that a few exceptional cases drive the difference in coherence between the two systems. However, it should be noted here that this is a comparison where possible contextual variables of the party system have not been taken into account. This is what we turn to next in this paper.

The European Representative Democracy (ERD) dataset (Andersson, Bergman, and Ersson 2014) provides a wide range of variables that could be used as controls for the current purpose. An essential element in such a design is to keep in mind that one must not
control for variables that are even to some extent a consequence of the ‘treatment’ variable (Ho et al. 2007, p. 202). One might perhaps imagine several possible associations between the contextual variables that are outlined here and the outcome variable (associations that would have to be ‘controlled’ for), however, it would be quite hard to argue how positive or negative parliamentarism as the treatment could have an effect on or be caused by the controls listed below. If this were not the case, ‘controlling’ for them would also account for some of the possible treatment effect that we are interested in. Keeping this in mind, the analysis of the current paper will use the following control variables from the ERD dataset:

- **Effective number of parliamentary parties** (ENP). It has been noted that the role of distribution of seats and bargaining power is what determines the government formation process (Bergman et al. 2003, p. 148). Therefore, this is probably the first measure that should be included to control for the differences between the two groups. ENP is a measure of party system fragmentation (Taagepera 2007) and is highly correlated with other measures also included in the ERD like the absolute number of parliamentary parties, largest party seat share or bargaining power fragmentation. This correlation is due to the fact that all measure in one way or another the number of parties in the system. The latter are therefore nor included in this analysis as controls, although they are included in the ERD.

- **Cabinet seat share**. Cabinet seat share largely determines the strength of the coalition and varies notably for minority and majority governments. For the latter, however, there is as noted above a systematic difference between positive and negative parliamentary systems. Therefore, a variable for cabinet seat share is included as a control variable.

- **Number of cabinet parties**. The more parties are included in a set, the more likely it is that their policies diverge and thus that the coherence of the set is smaller. Positive parliamentary countries have a higher average number of cabinet parties. Hence this is included here as a control variable.

- **Prime Minister cabinet powers**. This variable (for more, see Strom, Müller, and Bergman 2003, p, 183-194) indicates how much control the prime minister has over other cabinet members. In the current case positive parliamentary countries clearly have a higher average for this measure.
• **Cabinet bargaining duration.** The duration of the coalition formation process tends to be longer under positive parliamentary systems. Being an important indicator of the bargaining environment, this variable is included as a control.

• **Total cabinet electoral volatility.** Electoral volatility (Pedersen 1979) is an important indicator of party system overall stability and is therefore included as the last control variable. Cabinet electoral volatility here refers to the total volatility of cabinet parties.

As was mentioned above, there are several possible methods for matching. The current analysis will use genetic matching (Diamond and Sekhon 2013; Sekhon and Grieve 2012) as the method that is able to provide the best overall improvement in the balance, i.e. similarity in terms of control variables, of cases between the two groups – the criterion that is recommended for choosing between different methods of matching (Ho et al. 2007, p. 216). Genetic matching is implemented in the R package MatchIt (Ho et al. 2011) through the Matching (Sekhon 2011; Diamond and Sekhon 2013; Sekhon and Grieve 2012) and rgenoud packages (Mebane, Jr. and Sekhon 2011; Sekhon and Mebane, Jr. 1998).

Genetic matching (‘genetic’ referring to the search algorithm that is used to determine the best balanced solution) is a non-parametric iterative method that minimizes the discrepancy between the distributions of control variables by using weights (Sekhon 2011, p. 1-3). This means that some cases are disregarded and some cases are ‘counted’ more or less than one time. Genetic matching minimizes generalized Mahalanobis distance\(^3\) (ibid., p. 6)\(^\text{(Diamond and Sekhon 2013, p. 934)}\) weighing propensity scores\(^4\) and the selected covariates by comparing the means and/or empirical cumulative distribution functions of the covariates between the groups (ibid., p. 34).\(^5\)

Since the method works by matching the ‘treated’ group against cases in the ‘control’ group by assigning weights of one to the former and variable weights to the latter, leaving some of the cases in the control group unmatched, the results can slightly differ, depending on which category is processed as the control and which as the treated group. Thus,

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\(^3\)Mahalanobis distance is a measure of “the multivariate distance between individuals in different groups” (Diamond and Sekhon 2013, p. 934).

\(^4\)A propensity score is the “conditional probability of assignment to treatment given the covariates” (ibid., p. 933), which is used to match cases from treatment and control groups so that ‘assignment’ to either group is conditionally independent of the propensity score.

\(^5\)The current paper uses the fit.func=qqmax.max option for minimizing the maximum differences in the empirical QQ plots of the control variables of the two groups.
the process in the analysis of this paper will be carried out twice, once with positive parliamentarism as the control group and once as the treated group.

The following table shows the improvements in balance. It displays the standardised difference in means (difference between the means divided by the SD of the control group) for matched and unmatched data as well as the mean unstandardised difference in the empirical QQ plot. It can be seen that for all variables (except for ENP when positive parliamentarism is the control) balance between the two groups is improved, be it measured by the difference in means or in differences in empirical distributions. In some cases the improvement in balance is rather substantial, in some only marginal. Therefore, it must be concluded that although the two groups of countries are certainly made more similar through this process, the difference is far from being eliminated. This is something that should be taken into account when analysing the results below.

### Table 1: Improvements in Balance

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<th>Difference in means</th>
<th>eQQ mean</th>
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<td>Unmatched</td>
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<td>0.050</td>
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<td>0.452</td>
<td>0.084</td>
<td>0.827</td>
<td>0.727</td>
</tr>
<tr>
<td>Cabinet bargaining dur.</td>
<td>0.098</td>
<td>0.087</td>
<td>13.50</td>
<td>13.47</td>
</tr>
<tr>
<td>Cabinet electoral vol.</td>
<td>0.380</td>
<td>0.019</td>
<td>4.695</td>
<td>2.359</td>
</tr>
<tr>
<td><strong>Total matched N</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>148</strong></td>
</tr>
</tbody>
</table>

Genetic matching functions by providing case weights to as many control cases as possible and necessary to achieve a more balanced overall set of cases on the control variables across the two different types of parliamentarism. Using these weights, it is now possible to calculate the difference in means between the two groups. This is done by fitting
a linear model with the dichotomous variable identifying the type of parliamentarism (treated category is coded as 1) as an explanatory variable and specifying the model to use the weights identified by matching. The model is run both with and without the control variables that were included in matching. The following table shows the difference between positive and negative parliamentarism for unmatched and matched data. ‘Unmatched’ refers to the models run on the matched data without using the matching weights. pp=1 and pp=0 indicate whether positive parliamentarism was coded as treatment (1) or control (0).

<table>
<thead>
<tr>
<th></th>
<th>Difference</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>All data (pp=1)</td>
<td>-0.041</td>
<td>0.022</td>
</tr>
<tr>
<td>Unmatched (pp=1)</td>
<td>-0.040</td>
<td>0.026</td>
</tr>
<tr>
<td>Unmatched (pp=0)</td>
<td>0.079</td>
<td>0.030</td>
</tr>
<tr>
<td>Matched (pp=1)</td>
<td>-0.074</td>
<td>0.027</td>
</tr>
<tr>
<td>Matched (pp=0)</td>
<td>0.103</td>
<td>0.031</td>
</tr>
<tr>
<td>Matched (pp=1), control variables</td>
<td>-0.076</td>
<td>0.028</td>
</tr>
<tr>
<td>Matched (pp=0), control variables</td>
<td>0.106</td>
<td>0.031</td>
</tr>
</tbody>
</table>

It can be seen that for all specifications, negative parliamentary systems are associated with higher relative coherence of coalitions. This relative coherence increases when the two groups are more balanced in terms of key characteristics of the party systems and the coalition formation context. Thus at a minimum, it can be concluded that the difference between positive and negative parliamentary systems that can be seen here is not an artefact of the differences between the two groups across the control variables. This suggests that there might indeed be a systematic difference between positive and negative parliamentary systems in terms of how politically coherent coalition governments are. Therefore the initial suggestion that positive parliamentary systems might force politically relatively dissimilar parties into coalitions might indeed be true on a more general level.

6 Summary and Discussion

This tentative attempt at analysing the difference in how parties interact with each other politically under different types of parliamentary systems has provided to a large extent results that were anticipated. The expectation noted by Bergman that negative parlia-
mentary systems provide an ‘easier’ bargaining environment and are thus less likely to force politically dissimilar parties to coalesce, seems to hold if one looks at the broad picture. Both the non-preprocessed data and the data that was preprocessed with matching show that under negative parliamentary systems coalition governments tend to form that are relatively more coherent than under positive parliamentary systems. Therefore, the most important conclusions of the paper are the following. First, it seems to be fairly clear that coalitions tend to be slightly more coherent than both the party system as a whole and than the opposition regardless of the type of parliamentary system. Second, on the most general level there is indeed a difference along the lines that was expected – politically more coherent coalitions form more often under negative parliamentary systems than under positive parliamentary systems. Third, the underlying nature of this difference, however, remains obscure and most likely demands a different kind of analysis design to unravel. Referring back to Figure 4, it seems to be the case that this difference is driven by a smaller set of cases with very high relative coherence in negative parliamentary systems and very low relative coherence in positive parliamentary systems and if these two sets would be excluded, then there would most likely not be much of a difference between the two types of parliamentarism. A more specific type of case by case analysis should therefore be undertaken for this purpose in order to analyse this set of cases that seems to drive this difference. For example, a preliminary look suggests that many of the cases of coalition formation that seem to determine the difference between the types of parliamentarism come from Iceland, which has many coalitions with very high relative coherence. Therefore, although a general analysis suggests that the difference is there despite the control variables that were considered, why this difference exists, remains unknown. Some options have been ruled out, but the reason itself remains elusive.
## Appendix A  List of Cases

<table>
<thead>
<tr>
<th>Country</th>
<th>Elections</th>
<th>Pos./neg. parl.</th>
<th>Number of coalitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>1990, 2001, 2005</td>
<td>positive</td>
<td>3</td>
</tr>
<tr>
<td>Greece</td>
<td>1989 (June), 1989 (November)</td>
<td>positive</td>
<td>2</td>
</tr>
<tr>
<td>Lithuania</td>
<td>1996, 2000, 2004</td>
<td>positive</td>
<td>3</td>
</tr>
<tr>
<td>Portugal</td>
<td>1983, 2002</td>
<td>negative</td>
<td>2</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2012</td>
<td>negative</td>
<td>1</td>
</tr>
</tbody>
</table>
References


Strom, Kaare and Wolfgang C. Müller, eds. (1999). *Policy, office, or votes?: how political parties in Western Europe make hard decisions*. Cambridge: Cambridge University Press.


