Bridging the Gap

Do Ideological Differences Determine Whether Center-Right Parties Cooperate with the Radical Right?

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This thesis investigates potential government cooperation between radical right-wing parties and center-right parties in Western Europe. First, the accuracy of open minimal range theory, a coalition theory that asserts that the ideological distance between parties determines which parties will form a coalition, is tested on the basis of a comparison to other coalition theories' accuracy. Second, this thesis contributes to the longstanding academic debate on the dimensionality of political competition by exploring whether open minimal range theory proves to be more accurate if a two-dimensional model of political competition is used instead of a one-dimensional model. The findings demonstrate that open minimal range theory is more accurate than other coalition theories in predicting potential government cooperation with the radical right. In general, policy-oriented coalition theories, which take into account ideological considerations, are much more successful in predicting formation processes than office-oriented theories, which do not do take into account policy. The one-dimensional model of political competition proves to be more accurate than the two-dimensional model, calling into question the assertion that political competition nowadays takes place along more than one dimension.

Keywords: radical right-wing parties; coalition formation theory; government formation; party competition; political dimensionality

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1. Introduction

Radical right-wing parties have become increasingly successful electorally in Western Europe from the 1990s onward. From the breakthrough of the Danish People's Party (DF, *Dansk Folkeparti)* in 1997 to the Austrian Freedom Party's (FPÖ, *Freiheitliche Partei Österreichs)* recent electoral upset in the 2016 Austrian presidential election, radical right-wing parties' emergence and success has drastically altered political party systems across Western Europe. In many countries, government cooperation between center-right parties and radical right-wing parties has taken place. In other countries, however, center right-wing declined to form such coalitions. Radical right-wing parties' inclusion in governments does not necessarily correspond with their amount of electoral support. The radical right-wing Finns Party (PS, *Perussuomalaiset)*, for instance, received 19.1% of the seats in the 2011 Finnish parliamentary election and did not engage in government cooperation, whereas the Danish People's Party (DF, *Dansk Folkeparti)* obtained but 12.6% of the seats in the 2010 Danish parliamentary election yet did subsequently engage in government cooperation. This begs the question: why are radical right-wing parties sometimes accepted as partners for government cooperation in some cases, while being rejected in other cases?

The aim of this thesis is twofold. First, in order to answer the aforementioned question, this study tests the validity of open minimal range theory, a theory based on the idea that the ideological distance between parties determines which parties will form a coalition. It does so by comparing open minimal range theory to four other coalition theories. Second, this thesis explores whether cases of coalition formation provide insight in the dimensionality of Western European party systems, juxtaposing a one-dimensional and a two-dimensional model of party competition against each other. Thereby, it aims to contribute to the longstanding academic debate on this question (Kriesi et al. 2006; Van der Brug & Van Spanje 2009).

The research question, which will be expounded on in a separate section, is formulated as follows: "Does the ideological gap between parties explain the variation in government cooperation outcomes between center-right parties and radical right-wing parties in Western Europe?" Center right-wing parties are parties that identify as liberal, agrarian, conservative or Christian Democratic. Radical right-wing parties are nationalist anti-establishment parties that are characterized by nativism, authoritarianism and populism (Mudde 2007, 16-22). Government cooperation is defined as a form of inter-party cooperation that is necessary to uphold a majority for a government and its core policies. It does not require that radical right-

wing parties be officially part of a government. The ideological gap is the distance between parties on one or multiple political dimensions.

This thesis argues that center-right parties include a radical right-wing party in government cooperation if this party is ideologically closer than other parties. It is the ideological distance that decides which parties are included in a government. The coalition with the smallest ideological range consisting of the least possible partners, while still having a parliamentary majority, will eventually be formed. However, the ideological distance between parties can be measured in several ways. Most research on radical right-wing parties' inclusion in governments has used a one-dimensional model (De Lange 2012, 902). This thesis investigates whether calculating parties' ideological positions on the basis of a two-dimensional model leads to more accurate findings by comparing the results of a one-dimensional model to those of a two-dimensional model. If one of the models proves to be more accurate than the other model, this could deepen insight in the dimensionality of party competition in Western Europe.

The findings of this study confirm that open minimal range theory is more successful in explaining the variation of government cooperation outcomes between the center right and the radical right than other coalition theories. However, the theory is fallible too: in some cases, it makes wrong predictions. One can conclude that the ideological gap cannot explain all cases, but plays an important role in many coalition formations. More importantly, coalition theories that take into account ideological considerations are much more successful at predicting the variation of government cooperation outcomes than coalition theories that do not do so. In regard to the dimensionality of political competition, the results of this study convey that the one-dimensional model of political competition is more successful in predicting government cooperation with the radical right than the one-dimensional model. On the basis of this thesis, the assertion that political competition in Western Europe nowadays takes place along two dimensions, as put forward by Kriesi et al. (2006, 921), among others, cannot be supported.

2. Literature

2.1 Coalition theory

Various approaches have been employed in studying government cooperation between the center right and the radical right. A distinction can be made between two such approaches. On the one hand, some scholars assume that mainstream parties treat radical right-wing parties differently than other parties because of radical right-wing parties' alleged specific

characteristics, most importantly the idea that they would pose a threat to liberal democracy (Mudde 2004, 541). On the other hand, approaches on the basis of "coalition formation theory" assume that, all else being equal, mainstream parties treat radical right-wing parties similar to other parties (Dodd 1976, 40; De Lange 2012, 901).[1] This study falls in the latter category: open minimal range theory assumes that radical right-wing parties might constitute a specific party family, yet other parties treat radical right-wing parties exactly the same as non-radical-right parties, all else being equal. It is the ideological gap of a potential coalition between a radical right-wing party and center right-wing parties that determines whether government cooperation between these parties will take place. Dodd's "coalition formation theory" assumes that "there are no a priori constraints which circumscribe or inhibit the negotiation and coalition between any two parties" (Dodd 1976, 40). In reality, however, some parties *are* a priori excluded from government cooperation; still, "coalitionability" of all parties is assumed to be the standard (Laver & Schofield 1990, 201; De Lange 2012, 901).

Within coalition theory, one can look at coalition formation from an office-seeking perspective and from a policy-seeking perspective. The office-seeking perspective assumes that parties seek to maximize their relative weight in the coalition (De Lange 2012, 902-903). From this assumption, several theories are derived. *Minimal winning theory* entails that parties seek to form governments without actors that are unnecessary for upholding a majority, which maximize the government's total weight without delivering any benefits (De Swaan 1973, 51-52). Most governments that are formed are minimal winning coalitions. However, this theory is not sufficiently specific: it often predicts that multiple combinations of parties would be minimal winning coalitions but fails to explain why one of these potential coalitions is eventually formed (De Lange 2012, 902). Therefore, two more specific theories have been put forward. First, *minimum size theory* predicts that the minimal winning coalition with the smallest number of seats will be formed: thereby, parties maximize their relative weight in the coalition by diminishing the number of seats occupied by other coalition parties (Riker 1962, 42-43). Second, *bargaining proposition theory* predicts that the minimal winning coalition with the smallest number of parties will be formed (Leiserson 1970, 90).

The policy-seeking perspective assumes that parties enter coalitions in order to realize their preferred policies. In order to do so, they cooperate with parties that are closest to them in terms of ideological distance. From this perspective, two specific theories have been put

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[1] From this point onward, the terms "coalition formation theory" and "coalition theory" will be used interchangeably.

forward. *Minimal connected winning theory* predicts the formation of minimal winning coalitions that are ideologically "closed", which means that all coalition partners are adjacent on a policy scale (Axelrod 1970, 170). *Minimal range theory* predicts that the coalition with the smallest amount of "ideological diversity" between the two potential government partners that are ideologically furthest away from each other will be formed (De Swaan 1973, 71-74). It exists in a closed version, which predicts the formation of the minimal connected winning coalition with the smallest ideological range, and in an open version, according to which the coalition does not have to consist of parties that are connected: the minimal winning coalition with the smallest ideological range will be formed.

De Lange (2012) uses both policy-oriented theories and office-oriented theories and looks at the formation of ten governments in which center parties cooperated with radical right-wing parties. Her findings underpin that government cooperation between center right parties and radical right-wing parties, indeed, takes place because of office-seeking and policy-seeking behavior of center right parties (De Lange 2012, 914). Minimal winning theory, minimal connected winning theory and minimal range theory all predict many of the cases in which government cooperation with the radical right took place. However, De Lange did not take into account cases in which cooperation did not take place, even if she states that minimal range theory "seems particularly well placed to distinguish (…) between situations in which [radical right-wing parties] join government coalitions and situations in which they are not able to realize their office aspirations, because it hardly ever predicts the inclusion of [radical right-wing parties] in government coalitions when this has not occurred" (De Lange 2012, 904).[2] Because of the fact that she did not take into account such cases, this assertion is worth researching and forms the basis of this study's examination of the accuracy of open minimal range theory. In order to find out whether this theory is truly "particularly well-placed" to distinguish between cases in which government cooperation with the radical right takes place and cases in which such cooperation does not take place, the accuracy of open minimal range theory is compared to the accuracy of other theories, using the same cases.

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[2] De Lange does not provide a source for this statement, although she does mention that between 1981 and 2008 there have only been three cases in which minimal range theory predicts the formation of a government yet such a government was not formed (2012, 916). It is also not clear whether she uses open minimal range theory or closed minimal range theory when she mentions and uses minimal range theory.

2.2 The dimensionality of party competition

There is much discussion about the number of dimensions along which political competition in Western European party systems takes place. Earlier research on radical right-wing parties' inclusion in governments, for instance by De Lange (2012), often solely employed a general left-right dimension. However, Kriesi et al. find that political competition in Western European countries is increasingly shaped by another dimension. They characterize the new political dimension as one between the "winners and losers of globalization" and argue that this is the case because the process of globalization creates a conflict between those who benefit from this process and those who mainly experience its downsides (2006, 921). On similar grounds, Kitschelt and McGann identify a division between "authoritarianism" and "libertarianism" (1995, 85-87). Hooghe, Marks and Wilson label this dimension "GAL/TAN", where GAL stands for "Green/alternative/libertarian" and TAN for "traditional/authoritarian/nationalism" (2002, 976).

Proponents of the idea of two-dimensionality argue as follows. First, parties compete on the basis of a socio-economic left-right dimension, along which parties that advocate more government intervention are placed on the left and parties that advocate less government intervention are placed on the right. Second, a new socio-cultural dimension has emerged over the past decades (Hooghe, Marks & Wilson 2002, 976).[3] Across Western Europe, new themes that are not of a solely economic nature have gained prominence on the political agenda, such as European integration, the environment and immigration. A fundamental notion behind the idea of this new political dimension is that parties' stance on these "new" issues is coherent, which means that parties in favor of more environmental regulation are supportive of the process of European integration and of fewer restrictions on immigration.

However, the idea of the two-dimensionality of Western European party systems has not gone uncriticized. Van der Brug and Van Spanje (2009, 309) argue that voters' preferences are indeed structured along both an economic and a socio-cultural dimension, but that party competition still takes place on a one-dimensional basis. According to them, the existing left-right division between parties has subsumed the aforementioned new political issues. Environmentalism, for instance, is associated with and championed by the political left,

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[3] According to Kriesi et al. (2006), competition in Western European party systems was already organized along both an economic and a socio-cultural dimension before the emergence of GAL/TAN-related issues. They hold that these issues have not created a new dimension, but simply transformed the already existing socio-cultural dimension. This idea is theoretically compatible with Hooghe, Marks and Wilson's conceptualization of the GAL/TAN dimension, which also takes into account "traditional" issues that are (partly) of a socio-cultural nature, such as defense policy. It is beyond the scope of this study to examine whether GAL/TAN issues constitute a new dimension or have transformed an existing dimension.

whereas right-wing parties have come to support more restrictive immigration policies. Van der Brug and Van Spanje question Kriesi's methodology, which uses content analysis of newspaper editorials in order to estimate parties' positions. On the basis of expert surveys, Van der Brug and Van Spanje find that Western European party systems are still structured one-dimensionally. Given the results of their study, it is good to be wary of the caveats of assuming that political competition takes place along two dimensions, for this might not necessarily be the case.

In comparing the accuracy of open minimal range theory to the accuracy of other theories, this study employs a one-dimensional model to examine whether several coalition theories can predict both cases of cooperation and cases of non-cooperation: this one-dimensional approach is in line with most existing research. However, given the ongoing scientific dispute on this issue, it also seems relevant to compare the accuracy of a one-dimensional model to the accuracy of a two-dimensional model. For this reason, the second part of this study explores whether a two-dimensional model is more accurate in predicting the outcomes of coalition formation processes than a one-dimensional model. There are ample grounds to assume so, not only because radical right-wing parties' emergence is often explained on the basis of this new dimension, but also because "ideological gaps" between center right-wing parties and radical right-wing parties on the GAL/TAN dimension might provide an explanation for cases in which center-right parties do not cooperate with radical right-wing parties. Does cooperation not occur because radical right-wing parties are too far on the TAN (traditional/authoritarian/nationalism) side of the socio-cultural dimension compared to center-right parties? Or have radical right-wing parties been too enthusiastic in applying the "new winning formula" and shifting to the left on the *economic* dimension, thereby moving too far away from center-right parties and creating a large economic ideological gap with these parties? (De Lange 2007, 411) The explorative second part of this study, in which the accuracy of a one-dimensional model of political competition is compared to the accuracy of a two-dimensional model, is solely conducted on the basis of open minimal range theory.

It is expected that a two-dimensional model provides a more sophisticated view on the ideological gap between center right parties and radical right parties than a one-dimensional model. In a one-dimensional model, vast differences between center right parties and radical right-wing parties can cancel each other out and make the ideological gap seem smaller than it is. The hypothetical example in table 1, using a one-dimensional left-right model from 0 (far left) tot 10 (far right), can explain this. On the issue of privatization of state companies, radical right-wing party X holds the centrist position 5 while center right party Y has a neoliberal

orientation and holds position 9. On immigration, radical right-wing party X holds the extreme position 9 and center right party Y holds position 5. In this case, the average score of both parties will be 7. Despite the fact that the parties have a clearly different orientation on both issues, the ideological gap between the two parties will be 0. This example shows that a one-dimensional model might predict government cooperation between the center right and the radical right even if the ideological gap is, in reality, rather large.

Table 1: One-dimensionality

	Privatization	**Immigration**	**Left-right placement**	**Ideological gap with center right**
Radical right party X	5.0	9.0	7.0	**0.0**
Center right party Y	9.0	5.0	7.0	*n/a*
Left-wing party Z	4.0	4.0	4.0	**3.0**

The ideological gap between the center right and the radical right is 0.0. The ideological gap between the center right and the left is 3.0. On the basis of this one-dimensional model, assuming that the center right has a majority with either the left or the radical right, the center right would choose to cooperate with the radical right.

By contrast, table 2 displays that by employing a two-dimensional model (with scales from 0 to 10 on the economic left-right and the socio-cultural GAL/TAN dimensions) in which privatization is considered an economic issue and immigration a socio-cultural issue, the ideological dissimilarities between the center right and the radical right are taken into account. In the two-dimensional model, the ideological gap between two parties is measured on the basis of the Pythagorean theorem: $a^2+b^2=c^2$ (Benoit & Laver 2007). The difference between the two parties on the left-right dimension constitutes a^2, the difference on the GAL-TAN dimension constitutes b^2. The square root of c^2 is the ideological distance between the two parties. In the above example, employing a two-dimensional model leads to a different prediction: on the basis of this model, in which the ideological gap between two parties is measured on the basis of the Pythagorean theorem, the ideological gap between the center right and left-wing party Z is smaller than the gap between the center right and the radical right. Therefore, it is expected that a coalition between the center right and the left be formed.

Table 2: Two-dimensionality

	Privatization	Immigration	Left-right placement	GAL/TAN placement	Ideological gap with center right
Radical right party X	5.0	9.0	5.0	9.0	$(4^2)+(4^2) =$ 32. $\sqrt{32} =$ 5.7 Total: **5.7**
Center right party Y	9.0	5.0	9.0	5.0	*n/a*
Left-wing party Z	4.0	4.0	4.0	4.0	$(5^2)+(1^2) =$ 26. $\sqrt{26} =$ 5.1 Total = **5.1**

The ideological gap between the center right and the radical right is 5.7, based on a difference of 4.0 on both the left-right and the GAL/TAN dimension. The ideological gap between the center right and the left is 5.1, based on a difference of 5.0 on the left-right dimension and 1.0 on the GAL/TAN dimension. On the basis of this two-dimensional model, assuming that the center right has a majority with either the left or the radical right, the center right would choose to cooperate with the left.

In short, while a one-dimensional model has often proved to be useful in studying radical right-wing parties' inclusion in coalitions, it also seems fruitful to include a two-dimensional model and juxtapose it against the one-dimensional model. By doing so, potential problems with the one-dimensional model can be highlighted and insight can be gained in the factors that determine whether center-right parties include the radical right. An additional, empirical advantage of employing both models is that differing outcomes between the two models, with one model proving to be more accurate than the other, might indicate that this model best reflects the dimensionality of party competition in Western Europe.

3. Research question, methodology and case selection

The research question of this study is as follows: "Does the ideological gap between parties explain the variation in government cooperation outcomes between center-right parties and radical right-wing parties in Western Europe?" The independent variable is the ideological gap, conceptualized as the distance between parties on one or two political dimensions. A small gap indicates small policy differences between parties. This gap is calculated on the basis of the distance between the parties in a potential coalition that are ideologically furthest away from each other: this difference constitutes the ideological gap of a potential coalition.[4] The

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[4] In the two-dimensional model, the parties that are ideologically furthest away from each other can be different on the two dimensions. Consider the following example. A potential coalition consists of parties A, B and C. Party A has position 7.0 on the left-right dimension and position 5.5 on the GAL/TAN dimension. Party B has position 6.0 on the left-right dimension and position 6.5 on the GAL/TAN dimension. Party C has position 8.0

dependent variable is the variation in government cooperation outcomes between center-right parties and radical right-wing parties. The two potential outcomes are cooperation with the radical right and non-cooperation with the radical right.

The main proposition of this study is that if the ideological gap of a coalition between the radical right and the center right is smaller than the ideological gap of a coalition between the center right and other parties, government cooperation between the center right and the radical right will take place. On the other hand, if the ideological gap of a coalition between center-right parties and other parties is smaller than the gap of a coalition between center-right parties and radical right-wing parties, center-right parties will choose not to engage in government cooperation with the radical right. Because of the fact that governments generally need parliamentary majorities or at least cannot survive if a parliamentary majority opposes them, this study defines *potential formation processes* as formation processes in which the center right and the radical right have a majority of seats in parliament. If this is not the case, government cooperation between the center right and the radical right will not take place, at least not without the inclusion of parties that are not center right. It is important to note that open minimal range theory does not exclude the possibility of radical right-wing parties engaging in government cooperation with non-center-right parties. However, in Western Europe this has not happened yet.[5] Moreover, the logic of policy-oriented coalition theory dictates that radical right-wing parties will not be likely to form a coalition with non-right-wing parties, since the ideological gap between the radical right and such parties is generally large.[6] Therefore, I limit myself to studying government cooperation between the radical right and the center right in this thesis. Nevertheless, cooperation between the radical right and non-center-right parties could happen in the future and fits within the framework of open minimal range theory.

First, this study compares open minimal range theory to other coalition theories, arguing that center-right parties will engage in government cooperation with radical right-wing parties

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on the left-right dimension and position 7.5 on the GAL/TAN dimension. On the left-right dimension, parties B and C are furthest away from each other, amounting to an ideological gap of 2.0, whereas on the GAL/TAN dimension, parties A and C are furthest away from each other, also amounting to an ideological gap of 2.0. The total ideological gap of the coalition is the square root of $(2^2)+(2^2)=8$. $\sqrt{8}=$ **2.8**.

[5] Except for Switzerland, where the radical right-wing Swiss People's Party (SVP, *Schweizerische Volkspartei)* is in government with both center right and non-right-wing parties. However, Switzerland is a special case because of the fact that the parties that engage in government cooperation remain the same after each election. The country has a political system that does not allow for good comparisons with other Western European political systems: the system is *assembly independent*, which means that the government is elected by parliament, but cannot be removed by parliament (Shugart & Carey 1992, 26).

[6] Though more so on the basis of one-dimensional models than on the basis of two-dimensional models.

if minimal winning coalitions with radical right-wing parties have a smaller ideological gap (meaning that the parties are ideologically closer to each other) than minimal winning coalitions with other political actors. The underlying assumption is that parties are policy seeking. Government cooperation with ideologically close partners increases parties' chances to implement their preferred policies. Therefore, parties will form coalitions with the smallest policy range. If the ideological gap of a coalition between the radical right-wing party and the center-right party is larger than the ideological gap of a coalition between the center right and other parties, the center-right party will engage in government cooperation with these other parties. This is even the case if the radical right-wing party is technically ideologically adjacent to the mainstream party in the party system (table 3 displays a hypothetical example of such a case). After all, if there is a large ideological gap between two adjacent parties, while non-adjacent parties are ideologically closer to a certain party, open minimal range theory expects cooperation with these non-adjacent parties to be more beneficial for this party.

Table 3: Hypothetical example of the rationality of coalitions with non-adjacent parties

Party	Left-right (0-10) ideological placement	Ideological gap with center right	Percentage of seats
Socialist Left	1.2	4.3	12
Green Party	3.7	**1.8**	25
Social Democrats	4.4	1.1	10
Christian Democrats	5.5	*n/a*	28
Radical Right Party	9.2	**3.7**	25

The Christian Democrats can only form a minimal winning coalition with the Radical Right Party or with the Green Party. The gap between the center right Christian Democrats and the Radical Right Party (3.7) is larger than the gap between the Christian Democrats and the Green Party (1.8). In this case, the Christian Democrats would prefer to form a coalition with the non-adjacent Green Party (without including the Social Democrats; the coalition, after all, has to be minimal winning) instead of forming a coalition with the adjacent Radical Right Party. This shows that open minimal range theory does not require parties to be adjacent. The coalition does not have to be "connected"; the minimal winning coalition with the smallest policy range will be formed.

By applying open minimal range theory, insight can be gained about parties' motives to form coalitions with radical right-wing parties. If open minimal range theory proves to have a high explanatory value, this would indicate that mainstream parties are policy-oriented when forming coalitions. It would also indicate that radical right-wing parties are not treated

differently than other parties in the coalition formation process: if radical right-wing parties are not included because of their "ideological extremism", it is not because they are radical right-wing parties, but because of the large ideological gap between the radical right-wing party and the center-right. Because of the fact that this study treats radical right-wing parties as similar to other parties, any findings might also be relevant for coalition formation theory in general.

This study is conducted on the basis of the *comparative method*, employing the *most similar systems design*. The unit of analysis is the potential coalition formation process between the center right and the radical right. The cases included in this study resemble each other in almost all aspects, except for the outcome of the formation process: in some cases cooperation between the center right and the radical right did take place, in other cases this did not occur. The most similar systems design is used because almost all "background variables" of the potential formation processes are similar, except for the dependent variable – in some instances there has been cooperation, in other instances cooperation did not occur – and the independent variable, namely the ideological gap (Lijphart 1971, 685-687). Because the geographical scope of the analysis extends to party systems across Western Europe, the "small N problem", which comparative studies often have to overcome, does not pose a problem to this study: sixteen cases in six countries have been selected, rendering the findings of this study reliable and generalizable.

The methodology of the first part of this thesis is largely based on a study by De Lange (2012). She researched whether various coalition theories were able to predict cases in which a coalition between center-right parties and radical right-wing parties was formed. In two respects, this study goes one step further: it explicitly *tests* open minimal range theory, and it also takes into account cases in which *no* coalition with the radical right was formed. Put differently, De Lange studied whether coalition theories applied to *actual* coalitions between the radical right and the center right, whereas this thesis studies whether coalition theories can predict the outcome of formation processes in cases where the radical right and the center right could *potentially* form a coalition, including cases where a coalition between the center right and the radical right was ultimately not formed. The percentage of coalitions predicted correctly by open minimal range theory is compared to the percentage of coalitions predicted correctly by other theories. By including cases where government cooperation did not take place, this thesis's methodology differs from De Lange's methodology. In order to compare the accuracy of open minimal range theory to the accuracy of other coalition theories, I therefore calculate the accuracy of four other coalition theories for the same cases as used for open minimal range theory, allowing for the best comparison between the theories. By

juxtaposing open minimal range theory against other coalition theories and studying whether it is more accurate than these theories, the central question can be answered: is it the ideological gap between parties that determines whether cooperation will take place? In line with existing research, I do so by using a one-dimensional model.

Second, after comparing the accuracy of open minimal range theory to the accuracy of other theories on the basis of the one-dimensional model, this thesis employs both a one-dimensional and a two-dimensional model in order to explore whether the assumption that the two-dimensional model is more accurate than the one-dimensional model holds water. I compare the accuracy of the two models and then proceed to analyze, on a case-by-case basis, why both of the models sometimes failed to correctly predict the outcome of coalition formation processes. In doing so, this study "looks beyond the percentages and the figures" and seeks to provide more insight in the advantages and disadvantages of both models.

In six states, this thesis examines all government formation processes in which the center right and the radical right obtained a majority. The theory tested in this study, open minimal range theory, is a specification of minimal winning theory, which requires that "coalitions that are not winning are excluded from consideration" (De Swaan 1973, 71). Therefore, only potential coalitions with a parliamentary majority are taken into account. The starting point is 1999, when the radical right-wing Austrian Freedom Party (FPÖ, *Freiheitliche Partei Österreichs*) engaged in government cooperation with the center right, the first radical right-wing party to do so (Duncan 2010, 337-338).[7] The six countries included are as follows: Austria, Denmark, Finland, the Netherlands, Norway and Sweden.[8] These countries are exemplary for Western Europe for several reasons. They are all parliamentary democracies, as is the norm in Western Europe. Moreover, in all these countries, strong radical right-wing parties have emerged and won at least 5 percent of the parliamentary seats, leaving center-right parties with the choice whether to cooperate with the radical right or with other parties. In all of these systems, maintaining a parliamentary majority is necessary for governments to stay in

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[7] Unfortunately, this excludes the Austrian cases of 1986, 1990, 1994 and 1995, in which the FPÖ and the ÖVP also obtained a majority. De Lange (2012, 916) states that in the cases of 1986 and 1990 government cooperation would have been minimal winning, but does not mention where she obtained the data on the left-right placement of these parties. Because of the fact that I do not seem to be able to obtain these data either, I exclude them.

[8] In Norway, the center right and the radical right received a parliamentary majority in 2001 too, and subsequently formed a coalition. However, data for the 2001 Norwegian case were not available; at that time, the CHES dataset only included EU member states. Therefore, only the 2013 Norwegian case is included.

office.[9] However, in none of these countries, radical right-wing parties have a specific regionalist or secessionist agenda.[10] Such a focus, which is country-specific and not inherent to radical right-wing parties' outlook, would potentially influence outcomes in terms of coalition participation and hinder the possibility to generalize any findings. The cases included in this study are displayed in table 4.

Table 4: Formation processes included in this study

Country	Cases
Austria	**1999**, **2002**, 2006, 2008
Denmark	**2001**, **2005**, **2007**, **2015**
Finland	2011, **2015**
Netherlands	**2002**, 2003, **2010**
Norway	**2013**
Sweden	2010, 2014

Years in bold font indicate that a coalition with the radical right was formed. Years not in bold font indicate such a coalition was not formed, despite center right and radical right-wing parties having a parliamentary majority.

In cases where a coalition with the radical right was formed, I calculate whether open minimal range theory would predict the formation of this coalition, or that the formation of another coalition would be predicted. In cases where no coalition with the radical right has been formed, I also calculate whether open minimal range theory would predict the formation of a coalition with the radical right, or whether the coalition that was eventually formed would be more logical on the basis of open minimal range theory.[11] In all cases, both with in the one-dimensional model and in the two-dimensional model, the ideological gap of a coalition with the radical right is juxtaposed against the ideological gap of a coalition without the radical right that has the smallest ideological gap: only if the gap of a coalition with the radical right is smaller, such a coalition will be formed.

To determine parties' ideological positions, I use the Chapel Hill Expert Surveys (CHES). Together with election manifesto analysis, expert surveys like CHES are often used

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[9] The Swiss *assembly-independent* political system diverges too much from the Western European norm to be included: the Swiss government is elected by parliament, but cannot be removed by parliament (Shugart & Carey 1992, 26).

[10] As opposed to the Belgian Flemish Interest (VB, *Vlaams Belang*) and Italian Northern League (LN, *Lega Nord*) parties, which are regionalist/separatist.

[11] De Lange (2012, 916) notes that until 2008, there have only been three instances in which coalitions with the radical right would be predicted by minimal range theory, yet have not been formed. This is an indication of the value of minimal range theory. However, in many countries, radical right-wing parties' strength has increased considerably since 2008, so it seems fruitful to study this again and see whether minimal range theory still explain why coalitions with the radical right are not formed. It is also worth noting that De Lange did not use open minimal range theory.

in order to measure the ideological distance between parties. As De Lange (2012, 903) points out, expert surveys "come with a certain weight and legitimacy, give a timely account of a party's positions, are quick, easy and comprehensive, and generate highly comparable and standardized data". The CHES surveys, conducted by Steenbergen and Marks in 1999, by Hooghe et al. in 2002 and by Bakker et al. in 2006, 2010 and 2014, provide an estimate of Western European parties' positions on a number of variables, including "left-right general", "left-right economy" and "GAL/TAN". The survey prior to the formation process is used to determine parties' ideological positions: for instance, Danish parties' positions in the 2001 general election are based on the 1999 expert survey. The two-dimensional model consists of a left-right economic axis and a GAL/TAN socio-cultural axis: the variables are named "left-right economy" and "GAL/TAN" in the CHES dataset. The one-dimensional model uses solely a left-right axis, which is all-encompassing and includes themes that would be on the GAL/TAN axis in the two-dimensional model. Here, the CHES variable "left-right general" is used.

To provide insight into the predictive power of open minimal range theory, the results, expressed as the percentage of coalitions predicted correctly, are compared to those of four other coalition theories that were used by De Lange's 2012 study: minimal winning theory, minimal connected winning theory, bargaining proposition theory and minimum size theory (De Lange 2012, 905).[12] This thesis tests the explanatory power of open minimal range theory by comparing it to the accuracy of other coalition theories, which serve as an indicator of whether open minimal range theory is relatively successful or relatively unsuccessful in correctly predicting formation outcomes.

If the explanatory value of open minimal range theory proves to be higher than the accuracy of all the other coalition theories, one can conclude that the ideological gap is an especially good indicator of whether a coalition with the radical right is formed. If the explanatory value of open minimal range theory is higher than 50% but not higher than the best-performing other coalition theory, this would indicate that the ideological gap plays a role, but that it is not necessarily a better explanation than those provided by other theories. If the explanatory value of open minimal range theory is below 50%, it fails to predict the majority of cases; therefore, one can conclude that the ideological gap might play a role, but is not a particularly important determinant of whether cooperation will take place.

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[12] These theories are explained in subsection 2.1 of this study.

The comparison between the two dimensions is of a more explorative nature; therefore, no such benchmarks have been included here. Instead, in this section the thesis researches the advantages and disadvantages of both models by distinguishing between cases that are predicted correctly by both models, cases that are predicted correctly by only one of the models and cases that are predicted wrongly by both models.

4. Results

This section is structured as follows. First, the findings of the comparative analysis between open minimal range theory and other coalition theories on the basis of the one-dimensional model, displayed in table 5, are discussed. Second, the findings of the explorative comparison between the one-dimensional model and the two-dimensional model on the basis of open minimal range theory, which are presented in table 6, are analyzed. In both tables, "predicted" and "not predicted" refer to the accuracy of the prediction of the theories. If government cooperation with the radical right did not take place, yet one of the theories or models predicted that such cooperation would take place, "not predicted" means that the coalition theory or model of dimensionality has failed to predict that no cooperation would take place. It does *not* mean that the theory or model has (successfully) predicted that government cooperation with the radical right would not take place. It is important to note that "predicted" or "not predicted" pertain to the formation of a government with the radical right. The question that lies at the root of these tables is therefore: "Did this theory or this model successfully predict whether cooperation with the radical right would eventually take place?" If one of the theories or models predicts that a government with the radical right will not be formed, and a government without the radical right that, for other reasons, cannot be explained by the theory or model is formed, the theory or model still succeeded in predicting that government cooperation with the radical right would not take place. However, even if the prediction might in that case be correct, the formation of a government that cannot be explained by a theory does, of course, pose real problems to the validity of this theory or model, and potentially even calls into question the validity of coalition theory as a whole. After all, the logic behind coalition theory does not distinguish between potential cooperation with the radical right and any other type of government cooperation. Such cases will be discussed in the dimensionality-related second part of this section. The calculations for all the 16 cases are included in the appendix.

4.1 Coalition theory

As displayed in table 5, the total accuracy of open minimal range theory is 68.8%.[13] Thereby, in this study, it is the theory most successful in predicting whether cooperation with radical right-wing parties will take place. The second most accurate theory is minimal winning theory, which proves to be accurate in 62.5% of the cases. Minimal connected winning theory successfully predicts 56.3% of the cases, whereas the two other theories are clearly less accurate. It is remarkable that open minimal range theory appears to be inaccurate in cases where no cooperation with the radical right takes place: in all cases without cooperation except for one, the theory predicts that cooperation would take place. This contradicts De Lange's assertion that minimal range theory "hardly ever predicts the inclusion of [radical right-wing parties] when this has not occurred" (2012, 904). By contrast, open minimal range theory is highly successful in predicting that cooperation will take place when it *does* occur. While minimal winning theory appears to be almost as accurate as open minimal range theory, one should keep in mind that in every case, many coalitions can be minimal winning coalitions; by contrast, open minimal range theory solely predicts the formation of one coalition in every case. Therefore, it is more of a feat for open minimal range theory to be this accurate.

Minimum size theory is clearly the weakest of the theories. By predicting the formation of the minimal winning coalition with the smallest number of seats, it fails to take into account policy considerations. Its accuracy, while already low, is inflated because of the fact that in four cases it happens to predict correctly that no cooperation would take place. Bargaining proposition theory has a similar problem: by not taking into account ideology and predicting the formation of the minimal winning theory with the smallest number of parties, it often follows that a coalition between two large, potentially adversarial parties should be formed. As with minimal size theory, its accuracy is inflated by predicting "correctly" cases in which no cooperation would take place, even if the coalition eventually formed was not the coalition that the theory predicted.

In conclusion, open minimal range theory is the most accurate theory in this study. In general, the coalition theories that take into account ideological considerations, i.e. open minimal range theory and minimal connected winning theory, are remarkably more accurate than the theories that do not do so. The two worst-performing theories, minimum size theory and bargaining proposition theory, do not take into consideration policy. Not taking into account policy considerations yet often accurate, minimal winning theory is an exception to

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[13] On the basis of the one-dimensional model.

this pattern. However, a disadvantage of this theory is that it can be imprecise, as multiple combinations of parties are minimal winning coalitions. Since open minimal range theory proves to be the most accurate theory, it appears that the ideological gap plays a role in determining whether a coalition with the radical right is formed; therefore, the main proposition of this study cannot be rejected on the basis of the results. In general, theories that take into account both office considerations and ideological considerations, such as open minimal range theory and minimal connected winning theory, seem to be the most accurate coalition theories in explaining cooperation between the radical right and the center right.

Table 5: Results by case

Case	Government cooperation with radical right	Open minimal range theory	Minimal winning theory	Minimum size theory	Minimal connected winning theory	Bargaining proposition theory
Austria 1999	Yes	Predicted	Predicted	Predicted	Predicted	Predicted
Austria 2002	Yes	Predicted	Predicted	Not predicted	Predicted	Predicted
Austria 2006	No	Not predicted	Not predicted	Not predicted	Not predicted	Not predicted
Austria 2008	No	Not predicted	Not predicted	Predicted	Not predicted	Predicted
Denmark 2001	Yes	Predicted	Predicted	Not predicted	Predicted	Not predicted
Denmark 2005	Yes	Predicted	Predicted	Not predicted	Predicted	Not predicted
Denmark 2007	Yes	Predicted	Predicted	Not predicted	Predicted	Not predicted
Denmark 2015	Yes	Predicted	Predicted	Not predicted	Predicted	Not predicted
Finland 2011	No	Not predicted	Not predicted	Predicted	Predicted	Not predicted
Finland 2015	Yes	Predicted	Predicted	Not predicted	Not predicted	Predicted

Netherlands 2002	Yes	Predicted	Predicted	Not predicted	Not predicted	Predicted
Netherlands 2003	No	Predicted	Not predicted	Not predicted	Predicted	Predicted
Netherlands 2010	Yes	Predicted	Predicted	Predicted	Predicted	Predicted
Norway 2013	Yes	Predicted	Predicted	Not predicted	Predicted	Not predicted
Sweden 2010	No	Not predicted	Not predicted	Predicted	Not predicted	Predicted
Sweden 2014	No	Not predicted	Not predicted	Predicted	Not predicted	Predicted
Total accuracy		11 out of 16 (68.8%)	10 out of 16 (62.5%)	6 out of 16 (37.5%)	9 out of 16 (56.3%)	6 out of 16 (37.5%)
Accuracy in cases with cooperation		10 out of 10 (100%)	10 out of 10 (100%)	2 out of 10 (20%)	8 out of 10 (80%)	5 out of 10 (50%)
Accuracy in cases without cooperation		1 out of 6 (16.7%)	0 out of 6 (0%)	4 out of 6 (66.7%)	1 out of 6 (16.7%)	1 out of 6 (16.7%)

This table displays the findings of the comparison between open minimal range theory and other coalition theories, all on the basis of the one-dimensional model.

4.2 The dimensionality of party competition

As displayed in table 6, the one-dimensional model proves to be more accurate than the two-dimensional model. Potential explanations for the two-dimensional model's lower accuracy are discussed in the final section. This subsection first sheds light on the three cases that were predicted wrongly by both models. Subsequently, cases of failure of one of the models are analyzed; lastly, the cases predicted successfully by both models are discussed.

Table 6: Results by case

Case	Government cooperation with radical right	One-dimensional model	Two-dimensional model
Austria 1999	Yes	Predicted	Predicted
Austria 2002	Yes	Predicted	Predicted
Austria 2006	No	Not predicted	Not predicted
Austria 2008	No	Not predicted	Not predicted
Denmark 2001	Yes	Predicted	Predicted
Denmark 2005	Yes	Predicted	Not predicted
Denmark 2007	Yes	Predicted	Not predicted
Denmark 2015	Yes	Predicted	Not predicted
Finland 2011	No	Not predicted	Not predicted
Finland 2015	Yes	Predicted	Predicted
Netherlands 2002	Yes	Predicted	Predicted
Netherlands 2003	No	Predicted	Not predicted
Netherlands 2010	Yes	Predicted	Predicted
Norway 2013	Yes	Predicted	Predicted
Sweden 2010	No	Not predicted	Predicted
Sweden 2014	No	Not predicted	Predicted
Total accuracy		11 out of 16 (68.8%)	9 out of 16 (56.3%)
Accuracy in cases with cooperation		10 out of 10 (100%)	7 out of 10 (70%)
Accuracy in cases without cooperation		1 out of 6 (16.7%)	2 out of 6 (33.3%)

This table displays the findings of the comparison between the one-dimensional model and the two-dimensional model, both on the basis of open minimal range theory.

Cases of failure of both models: Austria and Finland

Two cases are illustrative of the inherent limitations to coalition formation theory. In Austria 2006 and 2008, the radical right-wing FPÖ had engaged in government cooperation in the previous government, which had led to heavy electoral losses for the party. FPÖ leader Jörg Haider had left the party in 2005, founding the BZÖ (*Bündnis Zukunft Österreich*, Alliance for the Future of Austria) and replacing the FPÖ in the coalition with the center-right ÖVP. Following the 2006 election, ÖVP and BZÖ lost their parliamentary majority. While ÖVP, FPÖ and BZÖ would technically have had a parliamentary majority in 2006 and 2008, and

while the ideological gap between ÖVP, FPÖ, and BZÖ would have been smaller than the ideological gap between ÖVP and SPÖ, personal issues and rows prevented the three parties from cooperating (Luther 2009, 1056-157).

In many respects, the Dutch case of 2003, predicted correctly by the one-dimensional model, is similar. The CDA-LPF-VVD government, formed in 2002, proved to be short-lived. After only 87 days in office, center right CDA and VVD decided to give up on the coalition due to the scandals and conflicts within the coalition and the radical right LPF (Andeweg & Irwin 2009, 24). Therefore, and given the fact that the LPF was decimated in the 2003 election (receiving only 8 seats; the party had won 26 seats in the previous election), it was logical for VVD and CDA not to include the LPF in a new government, even if the ideological gap between VVD-CDA and LPF would still have been smaller than the ideological gap between VVD-CDA and the social liberal D66 party, with which a coalition was eventually formed. Still, the one-dimensional model technically managed to correctly predict this case, because a coalition between CDA and PvdA, without the radical right, would have had a smaller ideological gap. However, the CDA-VVD-D66 coalition eventually formed had a larger ideological gap than a potential coalition with the radical right. This indicates that neither the models of dimensionality nor the coalition theories in this study seem to be able to take into account factors that pertain to personal relationships, the perceived success or failure of former similar coalitions, or electoral defeats. Meanwhile, as illustrated by the aforementioned three cases, these factors prove to be relevant in politics time and again. This is a serious limitation to the models and coalition theories used in this study, and, for that matter, to any model or theory that is solely based on parties' ideological positions.

In the case of Finland 2011, both models predicted that a coalition with the radical right be formed, yet this did not happen. An oversized coalition was formed, leaving only two parties in opposition. The coalition included Socialists, Greens, Social Democrats, Conservatives, Christian Democrats, and the Social Liberal party of the Swedish-speaking minority. It excluded the Center Party (rooted in agrarian liberalism) and the radical right-wing Finns Party. Negotiations between the National Coalition Party, the Social Democratic Party and the Finns Party did take place after the 2011 election. This coalition would have been minimal winning, but both the one-dimensional and the two-dimensional model predict the formation of a different coalition with the Finns Party, namely one consisting of the Social Democratic Party, the Center Party and the Finns Party, excluding the National Coalition Party.

However, the Finns Party declared to leave the negotiating table over a single issue: bailing out Eurozone member states (Arter 2011, 1294).[14] Radical right-wing parties are often characterized by their opposition toward the process of European integration, and Portugal's proposed bailout package was perhaps the most hotly debated topic in the run-up to the election (Arter 2011, 1285). The differences between the National Coalition Party and the Finns Party on the topic of European integration are taken into account in both models, yet only as one out of many variables that together comprise the left-right dimension (in the one-dimensional model) and the GAL/TAN dimension (in the two-dimensional model). However, neither model takes into consideration the fact that parties do not necessarily attach the same importance to all political issues. On the basis of the idea that radical right-wing parties have primarily emerged in order to change the status-quo on (some) GAL/TAN issues, one might assume that the Finns Party attaches more importance to the GAL/TAN issue of European integration than the center-right, economy-oriented National Coalition Party. This could explain why both models sometimes fail to predict whether cooperation between the center right and the radical right will take place.

In short, the Austrian cases of 2006 and 2008 are predicted wrongly by both models because of the inherent limitations to coalition theory, which does not take into account factors such as personal relationship, electorally strategic incentives or the dynamics of public opinion. In the Finnish case, electorally strategic incentives may have played a role too, but the failure of the two-dimensional model also seems to point toward a more specific problem, namely that parties have certain policy priorities and do not attach the same importance to all issues or to issues on both political dimensions.

Failure of the two-dimensional model: the Danish cases

The two-dimensional model accurately predicts 70% of the cases with cooperation and 33.3% of the cases without cooperation, thereby doing better than the one-dimensional model in cases where cooperation does not take place and clearly worse in cases where cooperation does take place. Apart from the three cases discussed in the previous subsection, the two-dimensional model fails to predict four other cases, three in Denmark and one in the Netherlands.

In three out of four cases where government cooperation between the Danish radical right and center right occurred, the two-dimensional model does not predict such cooperation.

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[14] One must, however, be cautious in concluding that it was truly only this issue that caused the Finns Party to leave the negotiating table: while party leader Timo Soini declared so, other motives or issues, such as electoral considerations, could have played a role in this decision too.

Meanwhile, in all four Danish cases, the one-dimensional model successfully predicts that government cooperation with the radical right would take place. What is the cause of the two-dimensional model's failure? For the 2001 case, the two-dimensional model successfully predicts that the center right will opt for cooperation with the radical right DF (*Dansk Folkeparti*, Danish People's Party). In 2005, this is not the case anymore. It appears that DF shifted to the left between 2001 and 2005 on the economic axis (from 7.3 to 6.1) while shifting to the right on the GAL/TAN axis (from 8.0 to 8.9), which, in both cases, meant moving away from the center right Liberal Party (*Venstre*). Meanwhile, the Liberal Party had moved in the opposite direction on the GAL/TAN axis (from 5.6 to 4.9). In later elections, DF shifted even more to the left economically, from 6.1 in 2005 to 4.8 in 2007 and 4.5 in 2015. What made the center right cooperate with DF despite all this?

A potential explanation for the model's failure goes as follows. It might be the case that the center-right parties focused on implementing their preferred set of policies on the left-right dimension, whereas the radical right attached more importance to implementing its preferred policies on the GAL/TAN dimension. The increasing saliency of issues related to immigration and European integration has contributed to the emergence of DF as a relevant political force in Danish politics (Andersen 2003, 6-8). Indeed, the tightening of immigration policies was widely considered the main achievement of DF in the first government DF supported (Andersen 2003, 4). Therefore, it could be argued that DF placed focus on implementing its preferred policies on the GAL/TAN axis. Meanwhile, the center-right Liberal Party and Conservative People's Party have historically formed the economically right-wing alternative to the Social Democrats (Skidmore-Hess 2003, 90-91). As noted by Skidmore-Hess (2003, 106), the center right-wing parties have sought to "weaken the state's role as protector of social welfare" in the coalition with DF. Thus, it seems that the following "transaction" could have been at the root of Danish government cooperation between the center right and the radical right: the Liberals and Conservatives would implement most of their preferred policies on the economic dimension, which DF did not find as relevant as the GAL/TAN dimension. Meanwhile, DF would implement most of its preferred policies on the GAL/TAN dimension (most notably the tightening of immigration regulations), which Liberals and Conservatives did not find as relevant as the economic dimension. This could explain the fact that a large ideological gap between the Liberals and DF on the economic dimension did not deter the Liberals from engaging in government cooperation with DF. Just as in the Finnish case, it appears that the Danish radical right has different policy priorities than the Danish center right, which influences its strategic choices. However, in order to conclude so, more research would

be needed. For the model, this conclusion would imply that the two dimensions are not equally important to all political parties; hence, the ideological gap should be measured differently.

Failure of the one-dimensional model: Sweden

The one-dimensional model is most successful in predicting whether cooperation with the radical right will take place, having an impressive accuracy of 68.8%. Interestingly, it predicts that cooperation would occur in 15 out of 16 cases. As noted before, De Lange's remark (2012, 904) that minimal range theory is "particularly well placed" to distinguish between cases in which government cooperation will or will not take place because "it hardly ever predicts the inclusion of [radical right-wing parties] in government coalitions when this has not occurred" can certainly not be proved right on the basis of the one-dimensional model, because in five out of six cases where government cooperation did not occur, the one-dimensional model predicts that cooperation would take place. On the other hand, the one-dimensional model manages to predict all cases in which government cooperation did take place.

Apart from the cases discussed in the above part of this subsection, the one-dimensional model solely failed to predict two Swedish cases. For both 2010 and (particularly) 2014, the one-dimensional model displays a much smaller ideological gap between the center right parties and the radical right-wing Sweden Democrats (SD, *Sverigedemokraterna*) than between center right parties and left-wing parties. Such cooperation, however, did not take place, and the two-dimensional model, which successfully predicted non-cooperation, provides a plausible explanation for this: the center-right Moderate Party (M, *Moderata Samlingspartiet*) and, in particular, the Liberal People's Party (F, *Folkpartiet Liberalerna*)[15] hold centrist to left-wing positions on the GAL/TAN dimension, whereas the Sweden Democrats have a far-right score on this axis: 8.3 in 2010 and 9.2 in 2014, rendering the ideological gap between the center right and the Sweden Democrats larger than the ideological gap between the center right and other parties. It seems that the Swedish cases prove correct the hypothetical examples in support of the two-dimensional model laid out in tables 1 and 2. The Sweden Democrats are placed far to the right on the GAL/TAN axis and at a centrist position on the economic axis, whereas the Moderate Party and the Liberal People's Party are placed far to the right on the economic axis and at a centrist or left-wing position on the GAL/TAN axis. Therefore, these parties have a similar position in the one-dimensional model, which incorrectly predicts that government cooperation between the center right and the radical right would take place. In

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[15] This party is named The Liberals (L, *Liberalerna*) nowadays.

short, the Swedish cases truly prove the value of employing a two-dimensional model. While it is true that the two-dimensional model predicts correctly fewer cases than the one-dimensional model, calling into question the usefulness of a two-dimensional model, the Swedish cases prove that the theoretical advantages of employing a two-dimensional model can be observed in reality.

Predicted by both models: seven cases

The two models prove to be very successful in the Austrian cases of 1999 and 2002, even showing the same picture in regard to the direction in which parties move. When comparing these two cases, both models reveal a clear rightward shift of the center right Austrian People's Party (ÖVP, *Österreichische Volkspartei*) and the radical right-wing Austrian Freedom Party (FPÖ, *Freiheitliche Partei Österreichs)*, who had been in a coalition since 1999, and a shift to the left of the opposition Austrian Social Democratic Party (SPÖ, *Sozialdemokratische Partei Österreichs*) and Greens (*die Grünen*). On the basis of both models, the ÖVP's choice to engage in a new round of government cooperation with the FPÖ, which was decimated in the 2002 election, seems rational.

While predicted by both models, the 2002 case of the Netherlands raises questions with regard to the two-dimensional model. The center right People's Party for Freedom and Democracy (VVD, *Volkspartij voor Vrijheid en Democratie*) and the radical right-wing Pim Fortuyn List (LPF, *Lijst Pim Fortuyn*) hold almost the same positions on both dimensions. The VVD has a score of 8.0 on the economic axis and 5.6 on the GAL/TAN axis, while the LPF is at 8.1 on the economic axis and 5.4 on the GAL/TAN axis, rendering the ideological gap between VVD and LPF extremely small (0.3). This indicates negligible ideological differences. However, during the campaign, VVD leader Hans Dijkstal voiced his staunch disagreement with Fortuyn on issues related to immigration and multiculturalism, and in the 1998-2002 second "Purple" government Dijkstal had been more left-wing on these issues than his predecessor Frits Bolkestein, leaving an electoral void to the right of the VVD (Irwin & Van Holsteyn 2003, 45). In short, while the VVD and the LPF might have had similar *aggregate* positions on the GAL/TAN dimension, their views on the highly salient issue of immigration seemed much more divergent. This underpins the conclusion already drawn on the basis of the Danish and the Finnish cases, namely that radical right-wing parties attach much more importance to certain GAL/TAN issues, such as European integration and immigration, than to other GAL/TAN issues. Center right parties, however, often hold different positions on

issues paramount to radical right-wing parties, which can thwart potential government cooperation even if the parties' GAL/TAN scores show a small ideological gap.

The models accurately predict government cooperation in the 2010 Dutch case. Remarkably, the one-dimensional model conveys very clearly why the Christian Democratic Appeal (CDA, *Christen Democratisch Appèl*) was divided on cooperation with the radical right-wing Party for Freedom (PVV, *Partij voor de Vrijheid*) yet eventually opted for such cooperation: the ideological gap between CDA and PVV was 0.1 smaller than the ideological gap between CDA and PvdA. The two-dimensional model, however, calculates the exact same GAL/TAN position (7.1) for both PVV and CDA, while both parties have a very different focus. This problem with the large scope of the GAL/TAN dimension becomes even clearer when comparing the PVV to the ChristianUnion (CU, *ChristenUnie*), a small Orthodox Protestant party: the PVV's positions are 5.2 (economic dimension) and 7.1 (GAL/TAN dimension), whereas the CU's positions are 5.0 (economic dimension) and 7.4 (GAL/TAN dimension). The ideological gap between the two parties would be 0.5. However, while the PVV has this high GAL/TAN score because of its views on immigration, multiculturalism and European integration, the CU is considered right-wing on this axis because of its socially conservative positions, for instance regarding abortion and euthanasia (Hooghe et al. 2002; Bakker et al. 2006; 2010; 2014).

This points at a bigger problem with the GAL/TAN dimension, not solely pertaining to the Dutch cases. While the GAL/TAN dimension implies a certain cohesion between parties' viewpoints on this axis, this does not necessarily have to be the case in reality. If this dimension lacks internal cohesion, a small ideological gap between parties on the GAL/TAN axis can be misleading. In many cases, Christian or conservative parties have high TAN scores that diminish the ideological gap between Christian or conservative parties and radical right-wing parties, but the supposed similarities on the GAL/TAN dimension do not mean that these parties are ideologically close on the same GAL/TAN issues. Moreover, many Christian or conservative parties appear to hold very different positions than radical right-wing parties on GAL/TAN issues salient to radical right-wing parties, such as European integration (Hooghe et al. 2002; Bakker et al. 2006; 2010; 2014). Apart from the Dutch CDA and CU, other such cases include the Finnish and Swedish Center Party, the Finnish Christian Democrats and the Norwegian Christian People's Party. This is a serious weakness of the GAL/TAN dimension, raising the question whether it accurately reflects the ideological gap between parties.

5. Discussion and conclusion

The research question of this study was formulated as follows: "Does the ideological gap between parties explain the variation in government cooperation outcomes between center-right parties and radical right-wing parties in Western Europe?" The results of this study reveal that open minimal range theory is more accurate than any other coalition theory and that the ideological gap is indeed often a successful predictor of whether cooperation between the radical right and the center right occurs. The main conclusion of the comparative analysis of coalition theories, however, should be that policy-oriented coalition theories, such as open minimal range theory, are much better at predicting whether cooperation with the radical right will take place than office-oriented theories.

The one-dimensional model has proven to be more successful in predicting formation processes than the two-dimensional model. While the one-dimensional model predicts correctly 68.8% of the cases, a figure resembling De Lange's 70% in a study not taking into account processes in which cooperation with the radical right would eventually not take place, the two-dimensional model predicts just over half the cases correctly with an accuracy figure of 56.3%. That said, both models have their drawbacks. Three out of sixteen formation processes are predicted wrongly by both of the models; two of these, the Austrian cases, cannot be explained by any model in the field of coalition theory, clearly showing the limitations of this rational choice-based approach. Ultimately, other variables than ideology, such as personal relationships, public perception and electorally strategic factors, are at play too. It is also unable to explain historically rooted patterns of cooperation, such as Finnish oversized coalitions and Danish "bloc politics" – for instance, the idea of a Danish coalition consisting of both the Liberals and the Social Democrats, predicted by open minimal range theory in three cases, would be considered ludicrous (Green-Pedersen & Hoffmann Thomsen 2005, 156-159). At the same time, one should avoid the pitfall of rejecting the hypothesis of this study on the basis of the existence of some deviant cases: while such cases do weaken the probabilistic hypothesis, they do not necessarily render the theory useless (Lijphart 1971, 686).

The models used in this study have advantages and disadvantages. By aggregating parties' positions on material and immaterial issues, the one-dimensional model fails to explain certain cases. It predicts that government cooperation would occur in 15 out of 16 cases, providing a wrong prediction in five out of six cases where cooperation did not take place. The two-dimensional model failed more often than the one-dimensional model. The inclusion of the GAL/TAN dimension proved to be both a blessing and a curse. On the one hand, it was

useful in explaining two Swedish cases that the one-dimensional model could not explain, and, hence, in showing the limitations of the usefulness of the one-dimensional model. On the other hand, the composition of the GAL/TAN dimension appears to be problematic for the very same reasons as the one-dimensional model proved to be problematic: it is composed of variables that are sometimes wholly unrelated to each other, thereby jeopardizing the accuracy of the ideological gap eventually predicted. Moreover, several cases suggest that radical right-wing parties are especially interested in changing the status-quo on GAL/TAN issues that are commonly associated with these parties, such as immigration, while being far more willing to compromise on other GAL/TAN issues and economic issues. However, more research on this subject would be needed in order to conclude so. Another potential criticism of the two-dimensional model is that it classifies issues as either economic or GAL/TAN, whereas many issues, such as immigration, have both economic and socio-cultural aspects in reality; distinguishing between these aspects can be difficult.

Because of the fact that the one-dimensional model proves to be more accurate than the two-dimensional model, the assertion that political competition in Western Europe takes place along two dimensions cannot be supported on the basis of this study. Still, one should be careful in stating that Van der Brug and Van Spanje were right in stating that voters' preferences might be two-dimensional, yet political competition still takes place along one dimension. First, the comparison between the two models of dimensionality was of an explorative nature; if the "second", socio-cultural dimension were to be operationalized differently, results could be markedly different. Second, one should not forget that the two-dimensional model proved to be valuable in the Swedish cases, which were predicted incorrectly by the one-dimensional model. It could very well be possible that in some party systems, competition *does* take place along two dimensions. Still, the results of this thesis provide support for the idea that employing a one-dimensional model might have its drawbacks, yet is in many cases the best option.

It is important to note that there are alternative explanations for the variation in government cooperation outcomes with the radical right. Some factors not taken into account by the ideological gap, or, indeed, by coalition theory as an approach, might play a role in center-right parties' considerations in regard to such cooperation. For instance, parties with a fascist past that have moderated their views over time and are now "ordinary" radical right-wing parties in terms of policy positions, such as the Sweden Democrats, may still be viewed differently both by the public and by other parties from radical right-wing parties that were founded only recently and have no history of views that are considered "beyond the pale", such as the Danish People's Party (Rydgren 2004, 496). The ideological gap between the radical

right and the center right might be similar in these cases, but the general perception of a party could be very different, influencing actors' decisions. This could be studied on the basis of discourse analysis in newspapers and surveys or interviews among politicians. Moreover, it could be a radical right-wing party's discourse instead of its actual policy positions that center-right parties consider too problematic for cooperation. For instance, when the leader of the Dutch radical right-wing PVV made his followers chant that they wanted "fewer Moroccans", a spokesperson of the center-right VVD declared that because of this statement, no cooperation between the two parties would take place anymore, including government cooperation, until the PVV would retract it (Van Outeren 2016). Yet, the ideological gap between the VVD and the PVV had not changed; it can therefore not explain the VVD's shift in attitude toward cooperation with the PVV. A third alternative explanation could be that some center right parties are more internally divided than others on the subject of government cooperation with the radical right, which might not be reflected in these party's ideological positions.

All in all, one can conclude that the ideological gap explains a majority of cases in which government cooperation between the radical right and the center right can take place, being an excellent predictor of whether such cooperation occurs. However, there are multiple cases it cannot explain, and another policy-oriented coalition theory – minimal connected winning theory – proved to be almost as accurate as open minimal range theory. Future research in the field of government cooperation between center-right parties and radical right-wing parties could focus on the role that issues such as immigration and European integration, which radical right-wing parties deem more important than other issues, play in government formation processes. Such issues are at the heart of radical right-wing parties' identities as nativist, authoritarian and populist. One could, for instance, calculate the ideological gaps between center-right parties and radical right-wing parties on these issues to test whether they determine the outcomes of government formation processes. Moreover, scholars of coalition theory could take into account party size within the framework of open minimal range theory. On the basis of the theory as employed in this study, party size plays only a limited role. However, if, for example, a Liberal and a Conservative party are extremely close ideologically, yet barely miss out on winning a parliamentary majority, it might be more beneficial in terms of policy for the Liberal Party to try and include a small, ideologically distant party (a Green party, for instance) and widen the policy range of the coalition instead of entering a grand coalition with the equally large Social Democrats and missing out on the opportunity to cooperate with the ideologically close Conservatives, even if the ideological gap of a Liberal-Conservative-Green coalition would theoretically be larger than the gap of a Liberal-Social Democratic government.

If a coalition theory is used for such research, it is strongly recommended to employ a policy-oriented theory that takes into account the ideological distance between parties: the results of this study firmly point at the accuracy of such theories. Outside the field of coalition theory, the validity of the aforementioned alternative explanations could be studied. In any case, scholars of cooperation between the center right and the radical right will not suffer from "small N"-related problems anytime soon: radical right-wing parties' increasing electoral success makes it likely that many ideological gaps will be bridged in the near future.

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Appendix: Results by case and model

Austria 1999, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
Sozialdemokratische Partei Österreichs (SPÖ)	4.0	35.5
Freiheitliche Partei Österreichs (FPÖ)	7.9	28.4
Österreichische Volkspartei *(*ÖVP*)*	6.2	28.4
Die Grünen – Die Grüne Alternative (GRÜNE)	2.9	7.7
Ideological gaps	- ÖVP-FPÖ: 1.7 - ÖVP-SPÖ: 2.2	
Prediction	Cooperation with radical right takes place, **correct**	

Austria 1999, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
SPÖ	4.2	4.0	35.5
FPÖ	6.4	7.2	28.4
ÖVP	6.2	6.5	28.4
GRÜNE	3.0	2.0	7.7
Ideological gaps	• ÖVP-FPÖ: 0.6 • ÖVP-SPÖ: 3.2		
Prediction	Cooperation with radical right takes place, **correct**		

Austria 2002, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
ÖVP	7.0	43.2
SPÖ	3.8	37.7
FPÖ	8.6	9.8
GRÜNE	2.8	9.3
Ideological gaps	• ÖVP-FPÖ: 1.6 • ÖVP-SPÖ: 3.2	
Prediction	Cooperation with radical right takes place, **correct**	

Austria 2002, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
ÖVP	7.6	8.3	43.2
SPÖ	3.4	3.3	37.7
FPÖ	7.3	9.0	9.8
GRÜNE	2.8	1.4	9.3
Ideological gaps	- ÖVP-FPÖ: 0.8 - ÖVP-SPÖ: 6.5		
Prediction	Cooperation with radical right takes place**, correct**		

Source seat percentage: Nohlen & Stöver 2010, 220. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Austria 2006/2008, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats 2006	Percentage of seats 2008
SPÖ	3.8	37.2	31.1
ÖVP	7.0	36.1	27.9
GRÜNE	2.2	11.5	10.9
FPÖ	9.7	11.5	18.6
Bündnis Zukunft Österreich (BZÖ)	8.8	3.8	11.5
Ideological gaps	- ÖVP-FPÖ-BZÖ: 2.7 - ÖVP-SPÖ: 3.2		
Prediction 2006	Cooperation with radical right takes place, **incorrect**		
Prediction 2008	Cooperation with radical right takes place, **incorrect**		

Source seat percentage: Nohlen & Stöver 2010, 220. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Austria 2006/2008, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats 2006	Percentage of seats 2008
SPÖ	2.8	3.5	37.2	31.1
ÖVP	6.8	7.7	36.1	27.9
GRÜNE	2.6	0.8	11.5	10.9
FPÖ	4.8	9.7	11.5	18.6
BZÖ	6.0	8.8	3.8	11.5
Ideological gaps 2006 and 2008	- ÖVP-FPÖ-BZÖ: 2.8 - ÖVP-SPÖ: 5.8			
Prediction 2006	Cooperation with radical right takes place, **incorrect**			
Prediction 2008	Cooperation with radical right takes place, **incorrect**			

Source seat percentage: Nohlen & Stöver 2010, 220. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Denmark 2001, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
Venstre, Danmarks Liberale Parti (V)	7.1	32.0
Socialdemokratiet (SD)	3.9	29.7
Dansk Folkeparti (DF)	8.9	12.6
Det Konservative Folkeparti (KF)	7.1	9.1
Socialistisk Folkeparti (SF)	2.3	6.9

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Radikale Venstre (RV)	5.1	5.1
Enhedslisten (EL)	1.0	2.3
Kristeligt Folkeparti (KrF)	5.4	2.3
Ideological gaps	• V-DF-KF: 1.8 • V-SD: 3.2	
Prediction	Cooperation with radical right takes place, **correct**	

Source seat percentage: Nohlen & Stöver 2010, 556. Greenlandic and Faroe Islands seats are not taken into account in all Danish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Denmark 2001, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
V	7.7	5.6	32.0
SD	3.4	5.0	29.7
DF	7.3	8.0	12.6
KF	7.3	6.0	9.1
SF	2.1	2.6	6.9
RV	3.9	3.4	5.1
EL	1.0	2.3	2.3
KrF	5.7	5.4	2.3
Ideological gaps	• V-DF-KF: 2.4 • V-SD: 4.3		
Prediction	Cooperation with radical right takes place, **correct**		

Source seat percentage: Nohlen & Stöver 2010, 556. Greenlandic and Faroe Islands seats are not taken into account in all Danish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Denmark 2005, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
V	7.4	29.7
SD	4.0	26.9
DF	8.9	13.7
KF	7.0	10.3
RV	5.1	9.7
SF	2.3	6.3
EL[16]	?	3.4
Ideological gaps	• V-DF-KF: 1.9 • V-SD: 3.4	
Prediction	Cooperation with radical right takes place, **correct**	

Source seat percentage: Nohlen & Stöver 2010, 556. Greenlandic and Faroe Islands seats are not taken into account in all Danish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Denmark 2005, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
V	7.9	4.9	29.7
SD	3.7	4.4	26.9
DF	6.1	8.9	13.7
KF	6.9	7.2	10.3
RV	5.3	2.5	9.7
SF	2.0	2.1	6.3

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[16] While EL obtained seats in 2001, and while the party was included in the 1999 CHES survey, its scores are missing in the 2002 CHES survey. Therefore, the ideological position of EL in the 2005 election is unknown. However, given the party's ideological position in the 1999 and 2006 surveys, it can be assumed that the party had a position to the left of SF and would be an unlikely partner for any center right coalition.

EL[17]	?	?	3.4
Ideological gaps	• V-DF-KF: 4.4 • V-SD: 4.2		
Prediction	Cooperation with radical right does not take place, **incorrect**		

Source seat percentage: Nohlen & Stöver 2010, 556. Greenlandic and Faroe Islands seats are not taken into account in all Danish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Denmark 2007, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
V	7.2	26.3
SD	4.1	25.7
DF	7.7	14.3
SF	2.3	13.1
KF	7.1	10.3
RV	4.8	5.1
EL	1.0	2.3
Ideological gaps	• V-DF-KF: 0.6 • V-SD: 3.1	
Prediction	Cooperation with radical right takes place, **correct**	

Source seat percentage: Nohlen & Stöver 2010, 556. Greenlandic and Faroe Islands seats are not taken into account in all Danish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

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[17] See footnote 16.

Denmark 2007, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
V	6.6	4.9	26.3
SD	3.6	4.1	25.7
DF	4.8	7.6	14.3
SF	2.3	2.1	13.1
KF	7.5	6.8	10.3
RV	5.8	2.0	5.1
EL	1.1	1.6	2.3
Ideological gaps	• V-DF-KF: 3.8 • V-SD: 3.1		
Prediction	Cooperation with radical right does not take place, **incorrect**		

Source seat percentage: Nohlen & Stöver 2010, 556. Greenlandic and Faroe Islands seats are not taken into account in all Danish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Denmark 2015, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
SD	4.4	26.9
DF	6.9	21.1
V	7.0	19.4
EL	1.2	8.0
Liberal Alliance (LA)	7.9	7.4
Alternativet (A)[18]	?	5.1
RV	5.7	4.6

[18] The Alternative is a party that contested in an election for the first time in 2015. It has not been taken into account by CHES in the 2014 dataset. Given its size and its left-wing profile, it seems unlikely that a coalition with a smaller ideological gap could have been formed with this party.

SF	2.9	4.0
KF	7.0	3.4
Ideological gaps	- DF-V-LA-KF: 1.0 - SD-V-RV: 2.6	
Prediction	Cooperation with radical right takes place, **correct**	

Source seat percentage: Gani 2015. Greenlandic and Faroe Islands seats are not taken into account in all Danish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Denmark 2015, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
SD	3.9	5.2	26.9
DF	4.5	8.4	21.1
V	7.3	5.7	19.4
EL	1.0	2.1	8.0
LA	9.1	2.6	7.4
A[19]	?	?	5.1
RV	6.5	1.9	4.6
SF	2.3	3.1	4.0
KF	7.6	7.2	3.4
Ideological gaps	- DF-V-LA-KF: 7.4 - SD-V-RV: 5.1		
Prediction	Cooperation with radical right does not take place, **incorrect**		

Source seat percentage: Gani 2015. Greenlandic and Faroe Islands seats are not taken into account in all Danish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

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[19] See footnote 18.

Finland 2011, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
Kansallinen Kokoomus (KOK)	7.5	22.1
Suomen Sosialidemokraattinen Puolue (SDP)	4.0	21.1
Perussuomalaiset (PS)	5.4	19.6
Suomen Keskusta (KESK)	5.7	17.6
Vasemmistoliitto (VAS)	2.2	7.0
Vihreä Liitto (VIHR)	4.6	5.0
Svenska Folkpartiet i Finland (SFP)	6.8	4.5
Kristillisdemokraatit (KD)	6.6	3.0
Ideological gaps	• PS-SDP-KESK: 1.7 • KOK-SDP-KESK: 3.5	
Prediction	Cooperation with radical right takes place, **incorrect**	

Source seat percentage: Reuters 2011. Åland seat not taken into account in all Finish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

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Finland 2011, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
KOK	7.6	4.5	22.1
SDP	3.6	4.7	21.1
PS	4.3	7.5	19.6
KESK	5.3	6.4	17.6
VAS	2.0	3.4	7.0
VIHR	4.4	2.1	5.0
SFP	7.4	4.1	4.5
KD	4.7	8.1	3.0
Ideological gaps	• PS-SDP-KESK: 3.3 • KOK-SDP-KESK: 4.5		
Prediction	Cooperation with radical right takes place, **incorrect**[20]		

Source seat percentage: Reuters 2011. Åland seat not taken into account in all Finish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Finland 2015, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
KESK	5.6	24.6
PS	5.1	19.1
KOK	7.7	18.6
SDP	4.0	17.1
VIHR	4.4	7.5
VAS	1.9	6.0

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[20] The minimal winning coalition with the smallest policy range is one between SDP, PS and KESK, excluding KOK. This outcome is therefore somewhat special, because a center-right party is excluded and government cooperation between another center right party, a radical right-wing party and a non-right-wing party is predicted.

SFP	7.4	4.5
KD	6.2	2.5
Ideological gaps	- KESK-PS-KOK: 2.6 - KESK-KOK-SDP: 3.7	
Prediction	Cooperation with radical right takes place, **correct**[21]	

Source seat percentage: Yle Uutiset 2015. Åland seat not taken into account in all Finish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Finland 2015, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
KESK	5.4	7.0	24.6
PS	4.1	9.1	19.1
KOK	8.2	4.8	18.6
SDP	3.4	3.2	17.1
VIHR	4.4	0.8	7.5
VAS	1.7	1.9	6.0
SFP	7.3	2.1	4.5
KD	5.4	9.0	2.5
Ideological gaps	- KESK-PS-KOK: 5.9 - KESK-KOK-SDP: 6.1		
Prediction	Cooperation with radical right takes place, **correct**[22]		

Source seat percentage: Yle Uutiset 2015. Åland seat not taken into account in all Finish cases. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

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[21] Like in the two-dimensional model on the basis of the 2011 election, a coalition with SDP, PS and KESK is predicted. The coalition eventually formed, however, consisted of KESK, PS and KOK.

[22] The minimal winning coalition with the smallest policy range is one between SDP, PS and KESK, excluding KOK. This outcome is therefore somewhat special, because a center-right party is excluded and government cooperation between another center right party, a radical right-wing party and a non-right-wing party is predicted.

Netherlands 2002/2003, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats 2002	Percentage of seats 2003
Christen Democratisch Appèl (CDA)	6.1	28.7	29.3
Lijst Pim Fortuyn (LPF)	8.4	17.3	5.3
Volkspartij voor Vrijheid en Democratie (VVD)	7.4	16.0	18.7
Partij van de Arbeid (PvdA)	4.0	15.3	28.0
GroenLinks (GL)	2.5	6.7	5.3
Socialistische Partij (SP)	1.6	6.0	6.0[23]
Democraten 66 (D66)	4.6	4.7	4.0
ChristenUnie (CU)	6.6	2.7	2.0
Staatskundig Gereformeerde Partij (SGP)	8.0	1.3	1.3
Leefbaar Nederland (LN)[24]	?	1.3	0.0
Ideological gaps 2002	• CDA-LPF-VVD: 2.3 • CDA-VVD-PvdA: 3.4		
Ideological gaps 2003	• CDA-LPF-VVD: 2.3 • CDA-PvdA: 2.1		
Prediction 2002	Cooperation with radical right takes place, **correct**		
Prediction 2003	Cooperation with radical right does not take place, **correct**		

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[23] Nohlen and Stöver mention a percentage of 2.7%. This is incorrect (Databank Verkiezingsuitslagen 2016).

[24] New party, not part of the CHES dataset.

Source seat percentage: Nohlen & Stöver 2010, 1415. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Netherlands 2002/2003, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats 2002	Percentage of seats 2003
CDA	6.2	6.9	28.7	29.3
LPF	8.1	5.4	17.3	5.3
VVD	8.0	5.6	16.0	18.7
PvdA	3.8	3.3	15.3	28.0
GL	1.9	1.4	6.7	5.3
SP	0.8	3.3	6.0	6.0[25]
D66	5.1	1.4	4.7	4.0
CU	5.3	8.8	2.7	2.0
SGP	6.5	9.4	1.3	1.3
LN[26]	?	?	1.3	0.0
Ideological gaps 2002	- CDA-LPF-VVD: 2.3 - CDA-VVD-PvdA: 5.5			
Ideological gaps 2003	- CDA-LPF-VVD: 2.3 - CDA-PvdA: 4.3			
Prediction 2006	Cooperation with radical right takes place, **correct**			
Prediction 2008	Cooperation with radical right takes place, **incorrect**			

Source seat percentage: Nohlen & Stöver 2010, 1415. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

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[25] Nohlen and Stöver mention a percentage of 2.7%. This is incorrect (Databank Verkiezingsuitslagen 2016).

[26] New party, not part of the CHES dataset.

Netherlands 2010, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
VVD	7.9	20.7
PvdA	3.9	20.0
PVV	8.6	16.0
CDA	6.3	14.0
SP	1.6	10.0
D66	5.0	6.7
GL	2.6	6.7
CU	5.4	3.3
SGP	7.8	1.3
Partij voor de Dieren (PvdD)	3.4	1.3
Ideological gaps	• VVD-PVV-CDA: 2.3 • VVD-PvdA-CDA: 4.0	
Prediction	Cooperation with radical right takes place**, correct**	

Source seat percentage: Van Holsteyn 2011, 413. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Netherlands 2010, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
VVD	8.3	4.8	20.7
PvdA	3.6	4.0	20.0
PVV	5.2	7.1	16.0
CDA	6.5	7.1	14.0
SP	1.5	5.2	10.0
D66	5.5	1.6	6.7
GL	3.0	1.9	6.7

CU	5.0	7.4	3.3
SGP	6.5	9.3	1.3
PvdD	3.6	3.8	1.3
Ideological gaps	- VVD-PVV-CDA: 3.9 - VVD-PvdA-CDA: 5.6		
Prediction	Cooperation with radical right takes place**, correct**		

Source seat percentage: Van Holsteyn 2011, 413. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Norway 2013, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
Arbeiderpartiet (Ap)	3.7	32.5
Høyre (H)	7.4	28.4
Fremskrittspartiet (FrP)	8.2	17.2
Kristelig Folkeparti (KrF)	5.2	5.9
Senterpartiet (Sp)	3.9	5.9
Venstre (V)	5.4	5.3
Sosialistisk Venstreparti (SV)	1.8	4.1
Miljøpartiet de Grønne (MDG)	2.5	0.6
Ideological gaps	- H-FrP-KrF-V: 3.0 - Ap-H: 3.7	
Prediction	Cooperation with radical right takes place**, correct**	

Source seat percentage: Valgresultat Norge 2013. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Norway 2013, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
Ap	3.7	4.6	32.5
H	7.8	5.3	28.4
FrP	7.7	7.3	17.2
KrF	5.2	8.2	5.9
Sp	3.6	6.1	5.9
V	5.8	3.7	5.3
SV	1.7	2.1	4.1
MDG	2.3	3.0	0.6
Ideological gaps	- H-FrP-KrF-V: 5.2 - Ap-H: 5.5		
Prediction	Cooperation with radical right takes place**, correct**		

Source seat percentage: Valgresultat Norge 2013. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Sweden 2010, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
Arbetarepartiet-Socialdemokraterna (S)	3.3	32.1
Moderata Samlingspartiet (M)	7.3	30.7
Miljöpartiet de Gröna (MP)	3.5	7.2
Folkpartiet Liberalerna (FP)	7.1	6.9
Centerpartiet (C)	7.0	6.6

Sverigedemokraterna (SD)	8.4	6.0
Vänsterpartiet (V)	1.4	4.5
Kristdemokraterna (KD)	7.1	2.5
Ideological gap	• M-FP-C-SD-KD: 1.4 • M-MP-FP-C-KD: 3.8	
Prediction	Cooperation with radical right takes place, **incorrect**	

Source seat percentage: Valmyndigheten 2010. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Sweden 2010, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
S	3.5	4.2	32.1
M	7.5	5.2	30.7
MP	3.6	2.8	7.2
FP	7.6	3.7	6.9
C	7.3	5.0	6.6
SD	5.5	8.3	6.0
V	1.2	3.1	4.5
KD	7.1	7.0	2.5
Ideological gaps	• M-FP-C-SD-KD: 5.1 • S-M: 4.1		
Prediction	Cooperation with radical right does not place, **correct**		

Source seat percentage: Valmyndigheten 2010. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Sweden 2014, one-dimensional model

Party	Left-right (gen) placement	Percentage of seats
S	3.8	32.4
M	7.4	24.1
SD	7.8	14.0
MP	3.3	7.2
C	7.2	6.3
V	1.7	6.0
FP	7.0	5.4
KD	7.5	4.6
Ideological gap	• M-SD-C-FP-KD: 0.8 • S-M: 3.6	
Prediction	Cooperation with radical right takes place, **incorrect**	

Source seat percentage: Valmyndigheten 2014. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.

Sweden 2014, two-dimensional model

Party	Left-right (econ) placement	GAL/TAN placement	Percentage of seats
S	3.4	3.6	32.4
M	7.7	4.7	24.1
SD	5.4	9.2	14.0
MP	3.5	1.6	7.2
C	7.7	3.0	6.3
V	1.4	2.0	6.0
FP	7.4	3.1	5.4
KD	7.1	7.0	4.6
Ideological gaps	- M-SD-C-FP-KD: 6.6 - S-M: 4.4		
Prediction	Cooperation with radical right does not place, **correct**		

Source seat percentage: Valmyndigheten 2014. Bold = center right party included in a potential minimal winning coalition. Italics = radical right party. Green = the preferred partner for the center right on the basis of the model.