

## **Topic: Choosing the ‘Working’ Partners: Preconditions and Outcomes of Coalition Building Under MMP Electoral System**

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### **Abstract**

Countries using the Mixed Member Proportional (MMP) electoral system, which has the proportional feature in common with Proportional Representation (PR) systems, tend to have multi-party systems that have two dominant parties and a few small parties in their national legislatures. Previous comparative politics literature on coalition formation patterns often puts MMP countries under the PR category. Nevertheless, the difference in the design of these two systems and their resulting slightly distinct versions of party systems may have differing impacts on the coalition choices of the governing parties. This research is conducted under a quantitative approach in order to demonstrate the statistical correlations of coalition building. It tests the hypothesis that under the MMP system, centrist parties will more often join in coalition governments than in pure PR systems. In addition, parties that are involved in coalition bargaining are more restrained in their policy priorities than in their coalition votes or in office-seeking behavior in comparison with parties in PR countries, which will more likely form a ‘working’ rather than ‘talking’ government. The outcome of this research should trigger further debates regarding the distinctions between MMP and other electoral systems used by democratic countries.

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The existence of representative democracy is in no small part based on the development of the electoral systems, which have often neglected by the public regarding their importance and influence. Among the variety of electoral systems across democratic countries, some tend to be more majoritarian such as first past the post (FPTP), while others are more consensus-oriented models, especially the proportional representation (PR) system. Variations on the design of particular electoral systems, such as district magnitudes, remainder formulas, and minimum threshold, can also lead to different forms of democracy building. In general, many observers often against FPTP due to its cause of seriously disproportionate results, whereas some groups oppose PR due to the split of power as well as its potential to create unstable coalition governments. Given these criticisms, it must be seen that a mixture of these two types of systems would be able to avoid the drawbacks of both sides while combining their benefits together.<sup>1</sup>

Political scientists always try to find the optimal combinations that can best reflect democracy in practice, but whether a mixed system could be the best of both world, remains debatable in practice, since it also has the risk of causing the reversed effect of absorbing the disadvantages of both systems, too. The creation of a new hybrid system alters the impacts of relevant electoral factors that are important to take into account for the democratic development of a state. Mixed Member Proportional (MMP) is one of the mixed systems, that it resembles more of the PR system. One of the results it adopts from PR is the formation of coalition governments. Due to the chance for smaller political parties to get into the government, it is highly possible to result in a multi-party system.<sup>2</sup> In addition, the MMP system also incorporates the FPTP element through the Single Member District (SMD) plurality winners. This part of the

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<sup>1</sup> Matthew Soberg Shugart, and Martin P. Wattenberg. *Mixed-member electoral systems: the best of both worlds?* (Oxford: Oxford University Press, 2001), 10.

<sup>2</sup> Andrew Reynolds, et al., *Electoral system design: the new international IDEA handbook*. (Stockholm: International Institute for Democracy and Electoral Assistance, 2012), 95-103.

mechanism, like countries using FPTP, normally results in two powerful big parties in the legislature. Combining these two elements together, it is common that either of the dominating large parties cannot secure 50% of the seats in the legislature. In most cases, those parties have to rely on the support from smaller parties in order to form the majority coalition, but sometimes they can also cooperate with their major opponents and form a grand coalition that could pass legislation more smoothly.

One of the benefits of the PR system is that it encourages like-minded groups to work together to form of coalition governments. Conversely, it is possible that the necessity of forming majoritarian coalition governments due to the electoral system design may also push the parties having distinct ideologies cooperate with each other, which enhances the strength and legitimacy of the coalition through the reflection of compromise and consensus. Many existing comparative literature study coalition-building theories based on the government composition of the national legislature in PR countries, whereas the few countries that using MMP system, such as Germany, New Zealand, and Bolivia, are generally studied under the category of PR system. Thus, the primary intention of this research project is to find the influence of the MMP system on the coalition building patterns and how such patterns are different from the PR system.

The paper will start with a literature review on the effects of MMP on the government and the party systems in addition to a few coalition-building theories. Follows by this section will be a section on the method of research in this paper. Afterwards the paper will present the findings with a short concluding remark. The main hypothesis will be tested in this paper is that under the MMP system, centrist parties on the left-right political spectrums will be in the coalition governments more often in countries with MMP system than with pure PR systems. In addition, parties that are involved in coalition bargaining are more restrained by their policy priorities than by office-seeking purpose in comparison with parties in PR countries,

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which will more likely form a ‘working’ rather than ‘talking’ government.

### **Literature Review: MMP as the ‘Mid-Way’ Approach**

As an outcome of combining the “plurality principle” of the FPTP system and the “proportional principle” of the PR systems, various versions of mixed-member electoral system have been developed across the world. Due to the difference in seat allocation formula, some countries using the mixed system, such as Italy or Hungary, achieve more majoritarian results, whereas others have a more proportional design of the system. In a standard model of the mixed system, half of the legislature should be elected through single-member districts by plurality winner, and the other half is supposed to be elected through party-list PR, whether open or closed list, and seats from the list are allocated proportionally to the parties.<sup>3</sup> Also, Shugart defined the mixed system in general as a multi-tier system, under which the single-member district is the nominal tier and the party list is the list tier. Among all the variations, if there is a linkage between the nominal and list tier, it means that the seats of a party gained from the list tier can be influenced by the nominal tier. This is defined as the Mixed Member Proportional system, which serves as one of the sub-branches of the mixed systems.<sup>4</sup>

Under the MMP system, the overall allocation of the parliamentary seats of a party is determined based on the proportion of votes it gained on the party list side of the ballot. The reason that there exists a linkage between the nominal and the list tier is due to a distinctive feature of the MMP system, i.e. compensatory seats. The purpose of adding compensatory seats is to avoid the disproportionality caused by the nominal tier. If a party wins more seats from the nominal tier than the list tier, the exceeding amount is called the overhanging mandates, which the parties are allowed to keep. In order to guarantee the proportionality of seats in the parliament, compensatory seats are often added to parties that are

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<sup>3</sup> Shugart, *Mixed-member electoral systems the best of both worlds?*, 9.

<sup>4</sup> *Ibid.*, 12-18

disadvantaged from the overhanging mandates of the other parties.<sup>5</sup> This is beneficial for the small parties to get more representatives into the parliament if the large parties are overly dominating the nominal tier. On the other hand, it causes problems of expanding the size of the parliament in order to satisfy each party.

Following the traits of the PR system, most of the MMP systems impose a threshold for a party to get on the party list. The invention of a threshold was based on a perceived lesson from the fragile Weimar Republic, and thus the Federal Republic of Germany set up the 5% threshold system in 1949, which was followed by other MMP countries with some technical variations. The thresholds effectively keep the very small parties away from entering the legislature and thus guarantee a certain stability of the government.<sup>6</sup>

### **Correlation between Electoral and the Party System**

In practice, different electoral systems will lead to the different party systems. In the case of the MMP countries, they have multiple parties in the legislature, regardless of the power dynamic among the parties in the government. According to the Duverger's rule, plurality winner systems, e.g. FPTP in single-member districts, are more likely to result in two-party competition and one-party governments, whereas the PR systems tend to lead to the multi-party system, regardless of the shared seats of each party in the parliament.<sup>7</sup> Duverger's claim was based on qualitative analysis, which is based on voters' "psychological" mentality regarding the 'wasted vote' and the "mechanical" effect under which small parties are doomed to be underrepresented in plurality winner systems.<sup>8</sup> These two factors tend to lead to a concentration of vote by two large "electoral" parties.

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<sup>5</sup> Ibid.

<sup>6</sup>Michael Gallagher and Paul Mitchell. *The politics of Electoral Systems*. (Oxford: Oxford University Press, 2009), 210-212.

<sup>7</sup> Rein Taagepera and Matthew Shugart, *Seats and Votes: the Effects and Determinants of Electoral Systems*, (Yale University Press, 1991), 50.

<sup>8</sup> Ibid., 51.

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Lijphart recognized Duverger's "sociological law", which refers to his proposition that plurality winner method generally leads to a two-party system. Adding on Rae's hypothesis that all electoral systems can produce disproportionality while reducing the effective number of parliamentary parties, and that the effect is stronger in plurality and majority winner system than in PR system,<sup>9</sup> Lijphart showed that there exists a negative correlation between the effective number of parliamentary parties and electoral disproportionality by using empirical data from thirty-six democracies, including MMP countries like Germany and New Zealand.<sup>10</sup> This outcome suggested that in comparison with pure PR system, which causes less disproportionality, plurality or majority winner systems do in fact tend to reduce more effective number of parties in the parliament. The nature of a multiparty system often leads to coalition building of the national government, since rarely one party can gain absolute majority of the seats in the parliament.<sup>11</sup>

### Coalition Formation Theories

William Riker's Minimum Winning Coalition Principle (MWC) is one of the earliest theories on coalition building. Treating votes gained by the parties as a type of cost in terms of being in the coalition, Riker proposed that politicians should form coalitions with the smallest necessary total number of votes of winning and no larger.<sup>12</sup> For Riker, forming coalition is a zero sum game with a fixed prize, which is divided by the winning coalition and divided among its members.<sup>13</sup> However, multiple empirical tests on Riker's theory have shown that MWC predicted least amount of coalitions correctly in comparison with other coalition theories. In addition, later evidences from

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<sup>9</sup> Arend Lijphart, *Patterns of Democracy*. (Cumberland: Yale University Press, 1999), 165-166.

<sup>10</sup> *Ibid.*, 169

<sup>11</sup> Lijphart, 91-92.

<sup>12</sup> Silviu Guiășu, and Mircea Malița, *Coalition and Connection in Games: Problems of Modern Game Theory Using Methods Belonging to Systems Theory and Information Theory*, (Oxford: Pergamon Press, 1980), 27.

<sup>13</sup> Schofield Laver and Norman Michael, *Multiparty Government: The Politics of Coalition in Europe*, (New York: Clarendon Press, 1990), 40.

Western European countries have proven the unreliability of Riker's theory because there have been many cases of oversized coalitions occurred.<sup>14</sup> Sened criticized Riker's MWC Principle as a n-person constant-sum-games, under which no coalition can last long due to the disputes over the fair share of side-payments, i.e. office distribution or policy implementation.<sup>15</sup> Nevertheless, Riker's theory illustrate the "office-seeking" priority of political parties, which means that parties try to maximize their control over political office benefits, i.e. the governmental and sub-governmental appointments.

In contrast, De Swaan counters Riker's "office-seeking" theory by emphasizing the "policy-seeking" purpose of political parties in his coalition formation model. He suggests, "...the parliamentary game is, in fact, about the determination of major government policy."<sup>16</sup> Western European countries, it has been shown that there are growing competitions among political parties that focus on the content of the party-political agenda, which affects the policy priority of different political parties.<sup>17</sup> The salience on policy-orientation is also affected by the vote-seeking purpose of the party. According to Riker's Dominance Principle, it is much more advantageous for a political party to draw attention to an issue where there is a conflict with other parties, and where it has the electorate on its side.<sup>18</sup> Regarding coalition building outcome, Blockmans and Guerry conclude that under the condition of complete and symmetric information with rational bargaining, parties' preferences of coalition partner can be changed by weighting salience of their policies, which influence their maneuvering spaces on the ideological and coalition

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<sup>14</sup> Craig Volden, and Clifford J. Carrubba, "The Formation of Oversized Coalitions in Parliamentary Democracies." (*American Journal of Political Science* 48, no. 3, 2004), 521.

<sup>15</sup> Itai Sened, "A Model of Coalition Formation: Theory and Evidence." (*The Journal of Politics* 58, no. 2, 1996), 368.

<sup>16</sup> Abram De Swaan, *Coalition Theories and Cabinet Formations: A Study of Formal Theories of Coalition Formation Applied to Nine European Parliaments after 1918*, (Amsterdam: Elsevier Scientific Pub, 1973), 88.

<sup>17</sup> Christoffer Green-Pedersen, "The Growing Importance of Issue Competition: The Changing Nature of Party Competition in Western Europe." (*Political Studies* 55, no. 3, 2007): 607.

<sup>18</sup> *Ibid.*, 610.

consensus estimation model.<sup>19</sup> Meanwhile, a couple other theories such as the Crombez Proposal Power Theory and Carrubba and Volden's Logrolling Theory have all implied that the end of coalition formation is a way of achieving desired policy outcomes.<sup>20</sup>

With policy priority in place, there are different models designed for the choice of coalition partners. Straffin Jr. proposed that since parties would like to see its policies implemented, they would want to join a coalition with other parties whose values and ideological positions are close to its own.<sup>21</sup> This coincides with Axelord's Minimum Connected Coalition theory, which proposes that while parties use the office to seek policy goals, its utility increases as the variance in policy positions among the governing parties decrease.<sup>22</sup> However, the Logrolling theory that came up by Carrubba and Volden suggested that on the basis of passing policies in the parties' greatest salience, the coalition proposing party, would incorporate more than one small parties even though they may have opposite political ideologies on the Left-Right political spectrum, thus to minimize the 'blackmailing potential' of the small parties.<sup>23</sup> In this case, the consequence of such coalition would be the pass of desired bills of all the parties in the government, and a stable logrolling coalition is created. Similarly, Merschon also suggested that ideological differences are necessary for coalition bargaining since it serves as an office bargaining constraint.<sup>24</sup>

Even from empirical evidence, the coalitions formed in PR countries are not necessarily always from the same side of the political spectrum. In addition, in order to form an efficient government, party polarization, i.e. the ideological distance between the two-party blocs, need to reach a certain level to guarantee the

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<sup>19</sup> Tom Blockmans, and Marie-Anne Guerry, "Coalition Formation Procedures: The Impact of Issue Saliences and Consensus Estimation." (*Group Decision and Negotiation* 25, no. 3, 2015), 497-498.

<sup>20</sup> Craig Volden, and Clifford J. Carrubba, 523-526.

<sup>21</sup> Philip D. Straffin, and Bernard Grofman, "Parliamentary Coalitions: A Tour of Models." (*Mathematics Magazine* 57, no. 5, 1984): 261-262.

<sup>22</sup> Volden, 523.

<sup>23</sup> *Ibid.*, 526.

<sup>24</sup> Carol Merschon, "Coalition Theories and Italian Governments: The Logic of Sudden Death and Sure Resurrection." (Washington University, St. Louis W.P., 1990), 147.

party competition. Otherwise, partisan dominance can cause low government performance.<sup>25</sup> Thus, it is necessary to have cross-ideological parties in the coalition to ensure the incentive in terms of the supervision for each other's work. Nonetheless, moderate centrist parties are normally more likely to be included in the coalition.<sup>26</sup>

Another important indicator of the party system is the polarization index, which reflects the level of ideological and policy polarization of the party system. Although ideological heterogeneity is necessary for a functioning government, high polarization index of the parliamentary system may lead to limited ideological diversity in the government. According to the study done by Indridason, the polarization index has a negative correlation with the ideological composition of the coalition formation. The high polarization index tends to lead to the high congruence of government position with the median voter, thus exclude the far-end small parties from entering the coalition.<sup>27</sup> As Dalton's calculation has shown, countries with MMP system have relative smaller polarization indexes in comparison with the PR countries.<sup>28</sup> Therefore, based on the previous findings on PR system countries, this paper aims at research the potential nuanced differences, as stated in the hypothesis, on the outcome of coalition building in MMP countries due to their differences on technical design and influence on the party system.

### **Data and Methodology: Data**

The data used in this paper have three components, which are all from the previous research of electoral system specialists. First, Müller et al. summarized the detailed information of the party system and coalition governments of 17 Western European countries from

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<sup>25</sup> Rune J. Sørensen, "Political Competition, Party Polarization, and Government Performance." (*Public Choice*161, no. 3-4, 2014), 447.

<sup>26</sup> Sened, 368-370.

<sup>27</sup> Indridason, Indridi H. "Coalition Formation and Polarisation." (*European Journal of Political Research*50, no. 5, 2011), 699-701, 712-714.

<sup>28</sup> Russell J Dalton, "The Quantity and the Quality of Party Systems." (*Comparative Political Studies*41, no. 7, 2008), 907.

1945 to the end of the 1990s. Those with PR system in their national legislation are adopted in this research. Second, regarding the participation party of the centrist party in coalition governments, the data are also from the work from the same team leads by Müller. In this dataset, the centrist or median party are defined as the party has the median rank in the particular party system on the economic and foreign policy dimension, separately.

Last, the data of the policy distance of political parties on the left-right spectrum are from the analysis of the party election manifestos by Budge, et al, which positioned the political parties from -50 to +50. Spatial models of coalition formation show that political parties have ideological and policy preferences when choosing coalition partners.<sup>29</sup> Although there are no standard mechanisms to measure policy position, one of the ways to construct empirical policy scales is to analyze the content of the party election manifesto. Often parties are scaled on the simple socioeconomic left-right dimension. Most of the country experts choose to use left-right dimension as their ‘primary’ scale in the system when facing the question of party positions.<sup>30</sup> In addition, using the left-right dimension model, 80% of the coalition formed in 12 Western European countries that are using PR system from 1945 to 1987 contained the median party on the left-right scale, which suggested that the one-dimensional model can provide a systematic pattern of coalition formations.<sup>31</sup> Yet instability model may arise when using multi-dimensional models.<sup>32</sup> Therefore, this research adopts the left-right scale calculated by Budge et al. through their analysis of election manifestos for the ECPR research project.<sup>33</sup>

Based on the overlap of data from these three resources, the data of 8 countries will be used in this research, namely, Austria, Belgium, Denmark, Germany, Luxembourg, the Netherlands,

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<sup>29</sup> Blockmans, 484.

<sup>30</sup> Laver, 248.

<sup>31</sup> *Ibid.*, 113.

<sup>32</sup> Wolfgang C. Müller and Kaare Storm, *Policy, Office, or Votes?: How Political Parties in Western Europe Make Hard Decisions*, (Cambridge, 2010), 32.

<sup>33</sup> Laver, 248.

Norway, and Sweden.

## **Operationalization**

The hypotheses of this research paper can be divided into two parts:

*H1: centrist parties on the left-right political spectrums will more often tend to participate in the coalition governments in MMP countries than in pure PR systems.*

*H2: parties that are involved in coalition bargaining are more restrained by their policy priorities than by the “office-seeking” purpose in comparison with parties in PR countries.*

To test the first part of the hypothesis, the Chi-squared test is applied, which tests the statistical significance of binary variables, i.e. variables that can be numerically constructed to 0 and 1. As the data from Müller et al. defines that median parties in the coalition as 1 and no median parties in the coalition as 0, the Chi-squared tests the relationship between the ‘median party in the cabinet’ and the group variable ‘MMP’. If the p-value is smaller than 0.05, then there is a statistical relationship between the MMP electoral system and the composition of the coalition government. Then the percentage of the share of the coalition that has median parties can be compared between the PR and MMP countries in order to test hypothesis one. The Chi-squared test will be run twice as in the dataset of Müller et al. contains median parties on the economic and foreign policy dimension, separately.

For the second hypothesis, the term and measurement of parties “policy-seeking” and “office-seeking” behavior need to be defined. First of all, it must be acknowledged that there are both intrinsic and instrumental values of the policy and office seeking purposes for political parties. The intrinsic value indicates that parties gain votes in order to purely push for policy change or office posts.

Instrumental value, in contrast, means that parties use one purpose as the mean to reach the end of another purpose, i.e. political parties obtain offices in order to influence the policy output, or parties bring up policy proposals in order to gain office.<sup>34</sup> Although the difference between the intrinsic and instrumental value has not yet been specifically distinguished by any coalition model,<sup>35</sup> there are approximate mechanisms that can reflect parties' behaviours.

Based on the Minimal Connected Winning (MCW) theory by Axelord, the "policy-seeking" behavior can be simplified as the "seek to minimize the policy range between themselves and their partners."<sup>36</sup> On a single dimension of ideology, political parties tend to form the coalition with those who are ideologically connected, i.e. the members of the coalition will be "adjacent" to each other on the dimension.<sup>37</sup> Therefore, using the socioeconomic left-right spectrum data from Budge et al., the absolute value of the difference of the policy scale between the two furthest parties apart in the coalition is the indicator of the "policy-seeking" behavior of the parties. The result of the difference is defined as policy distance of the coalition.

In addition, since Budge et al.'s data are limited to 1945 to early 1990s, Müller et al.'s party ranks can also be used to estimate the policy distance between the coalition parties as an alternation to Budge's data. Müller et al. also use the left-right spectrum to rank the parties in the party system on various policy dimensions. According to Laver and Hunt, the first dimension of policy for political parties is the economic dimension, and the second dimension is on foreign policy.<sup>38</sup> The rank of the party ranges from 1 on the left hand side of the spectrum to  $n$ , the total number of parties in the system. In order to calculate the policy distance of the coalition, the formula  $\frac{d-1}{n-2}$ ,

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<sup>34</sup> Müller, 6-8.

<sup>35</sup> Budge, Ian, and Michael Laver. "Office Seeking and Policy Pursuit in Coalition Theory." *Legislative Studies Quarterly* 11, no. 4 (1986): 490.

<sup>36</sup> Müller, 7.

<sup>37</sup> Ibid.

<sup>38</sup> Michael Laver and W. Ben. Hunt, *Policy and Party Competition*, (New York: Routledge, 1992), 50.

where  $d$  is the difference of the rank between the two furthest parties apart in the coalition.

“Office-seeking” on the other hand, is relatively more obscure to quantify.<sup>39</sup> The distribution of cabinet portfolios is one of the most important factors for the office payment in the coalition. According to Gamson, the percentage share of ministries received by a party in the coalition should be proportional on a one-to-one basis with the percentage share of that party’s coalition seats. That is, if a party’s seat share in the coalition is  $\alpha\%$ , and the cabinet post share of the corresponding party is  $\beta\%$ , then  $(\beta - \alpha)$  should approximately equal to 0. The regression analysis later by Browne and Frensdreis confirmed the proportionality of the cabinet portfolio distribution as an office payoff for the parties in the governing coalitions. Nevertheless, the small parties may get slightly more than their proportionate seats, whereas the big parties may get less than the designated proportionality distribution. Therefore, in this paper, the “office-seeking” behaviour is reflected as the disproportionality of cabinet seat distribution. If a party has a strong “office seeking” intension, then  $(\beta - \alpha) > 0$ , especially for the dominating parties in the coalition. The result of  $(\beta - \alpha)$  is defined as the *office disparity*.

In order to show the difference on office disparity between PR and MMP countries, the variance of the office disparity in each coalition government in the 8 countries are calculated using the formula

$$s^2 = \frac{(\text{office disparity of party 1})^2 + (\text{office disparity of party 2})^2 + \dots + (\text{office disparity of party } n)^2}{n}$$

, which reflects the degree of disproportionality on the office disparity among different coalitions. Then the variance ratio test is applied, with MMP as the group variable, to test the statistical relationship between the electoral systems and the variance of the office-seeking behaviour of political parties.

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<sup>39</sup> Laver, 171.

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**Findings: Median Parties in Government**

Using the data collected by Müller et al., it is calculated that out of 175 coalitions formed in the 7 Western European countries, 72% of them contain the median party on the economic dimension in the cabinet, and 54.29% of the coalitions have median party on the foreign policy scales. In contrast, for the MMP country, i.e. Germany, 92.3% of the 26 coalitions were participated by the median party on the first dimension, and 84.6% on the other. Using Chi-Squared to check the statistical significance, it can be stated that the difference between the PR and MMP countries regarding the involvement of the median party on both economic and foreign policy dimension is significant at 5% significance level.<sup>40</sup> Thus, the median parties on those two dimensions would more likely to be in the government under the MMP system than the PR system.

**“Policy-seeking” vs. “Office-Seeking”**

Table 3 shows that using the distance of coalition measured by Budge et al., the means of the distance in PR countries is 24.86 in contrast to 11.29 on a -50 to +50 scale. The p-value for the alternative hypothesis, which the difference between the policy distance of coalition government in the PR countries and in the MMP countries are greater than 0, is smaller than 0.05.<sup>41</sup> Therefore, it is statistically significant that coalition governments in PR countries are composed by parties with greater policy distance than MMP countries. The party rank by Müller et al. also produces the same result. The policy distance of the coalition government in PR countries is on average 28% more than coalitions formed in the MMP countries. The p-value indicates the statistical significance of the difference at 5% significance level.<sup>42</sup> Thus, it can be concluded that MMP countries tend to have coalitions with a small range of policy distance on socioeconomic dimensions.

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<sup>40</sup> Appendix: Table 1, 2.

<sup>41</sup> Appendix: Table 3.

<sup>42</sup> Appendix: Table 4.

The variance ratio test shows that at 5% significance, it is statistically significant that the variance of the office disparity of coalition governments in PR countries is greater than the variance in MMP countries, since the p-value for the ratio of the former over the latter greater than 1 is smaller than the significance level.<sup>43</sup> Thus, the parties in the coalitions under the MMP system often have more proportionate cabinet ministry seat shares in corresponding to their parliamentary seat share of the coalition. Base on the three statistic tests, it can be concluded that in the MMP countries, when coalition formation is needed, the parties would tend to choose partner parties that have closer ideological or policy distance on the socioeconomic dimension than the PR countries, which reflects the prioritization of “policy-seeking” purpose of the political party based on Axelrod’s Minimal Connected Winning (MCW) Theory. Meanwhile, the cabinet seat allocation for coalition parties are relatively proportional to their seat share, which does not offer a greater maneuver space for the parties to pursue an “office-seeking” goal.

### **Conclusion**

Coalition theorists often categorize Germany, the only MMP country in Western Europe, within the PR categories. Although MMP electoral system shares the proportionality attribute of the PR systems, there are slight differences between these two types of system, especially on their party systems. The different composition of party systems, including the effective number of parties, ideological polarization, etc., affects the political atmosphere for parties to prioritize their prioritization and pursuit of office and policy.

The simplified measurement on the factor of “office-seeking” and “policy-seeking” intention of the political parties in PR and MMP countries provided a basic comparison of the party behaviors. The Chi-squared tests show that coalition governments in MMP

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<sup>43</sup> Appendix: Table 5.

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countries are more likely to include the median parties on both the economic and foreign policy dimension. The t-test and F-test proved the statistical significance that coalition parties in MMP countries have lower policy distance and official disparity than the coalition parties in the PR countries. Nevertheless, the design of this quantitative research has a couple of issues that need to be solved in order to figure a more precise difference between party coalition behavior in these two types of political systems.

First, there is a small-N problem for the MMP countries. As Germany is the only MMP country in the sample, the data itself is a little bit biased because it cannot distinguish whether the political and democratic tradition of Germany plays an important role in their party system and party behavior. Especially Germany is traditionally regarded as a policy-focused country.<sup>44</sup> New Zealand is one of the few other MMP countries that can be included yet was not due to the unavailability of data. Second, the data of party positions used in this research does not vary across time. Although parties rarely change their policy positions from one side of the spectrum to the other, it is more plausible adding in the precise variation of the policy positions in order to test the statistical significance of the difference between PR and MMP. Last and most importantly, the model to quantify “policy-seeking” and “office-seeking” can be developed more sophisticatedly to distinguish the instrumental value of one on another, possibly through regression models. Upon solving these issues, there will be a more solid outcome to differentiate the political intention and priorities of the parties in the MMP system from the others, thus to reveal the value of the existence of the hybrid system.

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<sup>44</sup> Laver, 177.

### References

- Bäck, Hanna, Marc Debus, and Patrick Dumont. "Who Gets What in Coalition Governments? Predictors of Portfolio Allocation in Parliamentary Democracies." *European Journal of Political Research* 50, no. 4 (2010): 441-78.
- Blockmans, Tom, and Marie-Anne Guerry. "Coalition Formation Procedures: The Impact of Issue Salience and Consensus Estimation." *Group Decision and Negotiation* 25, no. 3 (2015): 481-99.
- Budge, Ian, and Michael Laver. "Office Seeking and Policy Pursuit in Coalition Theory." *Legislative Studies Quarterly* 11, no. 4 (1986): 485-506.
- Dalton, Russell J. "The Quantity and the Quality of Party Systems." *Comparative Political Studies* 41, no. 7 (2008): 899-920.
- Gallagher, Michael, and Paul Mitchell. *The politics of electoral systems*. Oxford: Oxford University Press, 2008.
- Green-Pedersen, Christoffer. "The Growing Importance of Issue Competition: The Changing Nature of Party Competition in Western Europe." *Political Studies* 55, no. 3 (2007): 607-628.
- Guiaşu, Silviu, and Mircea Malita. *Coalition and Connection in Games: Problems of Modern Game Theory Using Methods Belonging to Systems Theory and Information Theory*. Oxford: Pergamon Press, 1980.
- Indridason, Indridi H. "Coalition Formation and Polarisation." *European Journal of Political Research* 50, no. 5 (2011): 689-718.
- Laver, Schofield, and Norman Michael. *Multiparty Government: The Politics of Coalition in Europe*. New York: Clarendon Press, 1990.
- Laver, Michael, and W. Ben. Hunt. *Policy and Party Competition*. New York: Routledge, 1992.
- Lijphart, Arend. *Patterns of Democracy*. Cumberland: Yale University Press, 1999.
- Mershon, Carol. "Coalition Theories and Italian Governments: The Logic of Sudden Death and Sure Resurrection." Washington University, St. Louis W.P., 1990. 147.

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- Müller, Wolfgang C. *Coalition Governments in Western Europe*. Oxford: Oxford Univ. Press, 2006.
- Müller, Wolfgang C. *Policy, Office, or Votes?: How Political Parties in Western Europe Make Hard Decisions*. Cambridge, 2010.
- Niedermayer, Oskar. *Handbuch Parteienforschung*. Wiesbaden: Springer, 2013.
- Reynolds, Andrew, Ben Reilly, Andrew Ellis, and José Antônio Cheibub. *Electoral system design: the new international IDEA handbook*. Stockholm: International Institute for Democracy and Electoral Assistance, 2012.
- Riker, William Harrison. *The Theory of Political Coalitions*. Westport (Conn.): Greenwood Press, 1984.
- Sened, Itai. "A Model of Coalition Formation: Theory and Evidence." *The Journal of Politics* 58, no. 2 (1996): 350-372.
- Shugart, Matthew Soberg, and Martin P. Wattenberg. *Mixed-member electoral systems the best of both worlds?* Oxford: Oxford University Press, 2001.
- Sørensen, Rune J. "Political Competition, Party Polarization, and Government Performance." *Public Choice* 161, no. 3-4 (2014): 427-50.
- Straffin, Philip D., and Bernard Grofman. "Parliamentary Coalitions: A Tour of Models." *Mathematics Magazine* 57, no. 5 (1984): 259-274.
- Taagepera, Rein, and Matthew Soberg. Shugart. *Seats and votes: the effects and determinants of electoral systems*. Yale University Press, 1991.
- Volden, Craig, and Clifford J. Carrubba. "The Formation of Oversized Coalitions in Parliamentary Democracies." *American Journal of Political Science* 48, no. 3 (2004): 521-537.

**Appendix**

**Table 1: Chi-squared Test on Median Party in Cabinet (Economic scale)**

<b>MMP</b>	<b>Median Party in Cabinet (Economic)</b>		<b>Total</b>
	<b>0</b>	<b>1</b>	
<b>0</b>	49 (28.00)	126 (72.00)	175 (100.00)
<b>1</b>	2 (7.69)	24 (92.31)	26 (100.00)
<b>Total</b>	51 (25.37)	150 (74.63)	201 (100.00)

Pearson Chi2 (1) = 4.9302, Pr = 0.026,  $\alpha=5\%$

**Table 2: Chi-squared Test on Median Party in Cabinet (Foreign Policy scale)**

<b>MMP</b>	<b>Median Party in Cabinet (Foreign Policy)</b>		<b>Total</b>
	<b>0</b>	<b>1</b>	
<b>0</b>	80 (45.71)	95 (54.29)	175 (100.00)
<b>1</b>	4 (15.38)	22 (84.62)	26 (100.00)
<b>Total</b>	84 (25.37)	117 (58.21)	201 (100.00)

Pearson Chi2 (1) = 8.5601, Pr = 0.03,  $\alpha=5\%$

**Table 3: Policy Difference (Budge et al.)**

<b>Group</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Err.</b>	<b>Std. Dev</b>
<b>0</b>	217	24.85714	.8838089	13.01932
<b>1</b>	45	11.28889	1.030162	6.910539
<b>Combined</b>	262	22.52672	13.21431	20.91918
<b>diff</b>		13.56825	1.357333	

diff = mean (0) – mean (1)

H0: diff = 0

Ha: diff &lt;0

Pr (T&lt;t) =1.000

0.0000

Ha: diff != 0

Pr (|T|&gt;|t|) =1.000

Ha: diff &gt;0

Pr (T&gt;t) =

**Table 4: Policy Difference (Müller et al.)**

<b>Group</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Err.</b>	<b>Std. Dev</b>
<b>0</b>	279	.3839019	.021216	.3543766
<b>1</b>	46	.1009317	.0227048	.1539916
<b>Combined</b>	326	.3438507	.0192798	.3475714
<b>diff</b>		.2829702	.0310745	

diff = mean (0) – mean (1)

H0: diff = 0

Ha: diff &lt;0

Pr (T&lt;t) =1.000

0.0000

Ha: diff != 0

Pr (|T|&gt;|t|) =1.000

Ha: diff &gt;0

Pr (T&gt;t) =

**Table 5: Test on Variance**

<b>Group</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Err.</b>	<b>Std. Dev</b>
<b>0</b>	101	.0254703	.0062143	.0624533
<b>1</b>	20	.0152943	.0030598	.0136837
<b>Combined</b>	121	.0237883	.0573969	.573969

ratio = sd (0)/sd(1)

H0: ratio = 1

Ha: ratio < 1

Pr (F<f) =1.000

0.0000

Ha: ratio != 1

Pr (F>f) =0.0000

Ha: ratio > 1

Pr (F>f) =