

Coalition Policy Perceptions*

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Abstract

How do voters form expectations about the policies of coalition governments? The literature generally assumes that voters hold beliefs consistent with Gamson's Law when making inferences about how the policy preferences of coalition parties affect government policy. Yet little is known about whether, or how, voters actually form expectations that way. In this paper we leverage data sets from Austria, Germany, and Sweden and find that when it comes to citizens Gamson is wrong. While voters take account of the coalition parties' sizes and bargaining strength, voters also seem to perceive that smaller coalition parties have disproportional influence on coalition policy. In other words, voters who live under and vote for coalition governments have a somewhat different sense of policy outcomes than the literature currently suggests.

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Parliamentary systems are often seen as coming in two varieties. The first, typically associated with Westminster, is characterized by single party majority governments. In the second type, party leaders must cobble together a legislative majority by forming government coalitions. Each type is generally thought to have certain advantages over the other. Single-party governments offer clear lines of accountability allowing voters to easily form expectations about government policy. Multiparty parliamentary systems, on the other hand, are seen as more representative — voters have more parties to choose from and the system should, therefore, have a higher degree of ideological congruence (Golder and Stramski, 2010). The strength of each type can be seen as the weakness of the other. In contrast to single-party governments, coalition governments are more difficult to hold accountable. In a coalition government, no single party can be expected to have its whole policy platform adopted. Instead, coalition parties negotiate the government’s agenda (Martin and Vanberg, 2011, 2014).

In order to hold individual coalition parties accountable, voters must have expectations about what a given coalition party seeks to achieve. Thus, voters need a basic understanding of how casting votes for parties influences coalition policy in order to make an efficient use of their vote. Without such expectations, voters cannot assess the degree to which individual coalition were successful in implementing their policy platforms — and whether to reward or punish the party for its performance.¹ Whether voters develop expectations about coalition policy is, therefore, highly relevant to the question of accountability. Yet, the literature is, so far, largely silent about whether — or how — voters form such expectations.

The literature on government formation has provided important insights into the bargaining over policy and office. Recently scholars have begun examining how voters’ expectations about the coalition bargaining outcome shape vote choice and this literature on strategic voting under coalition governments depends on voters forming expectations about coalition policy (see, e.g., Bargsted and Kedar, 2009; Kedar, 2011; Indridason, 2011; Meffert and Gschwend, 2010). This literature explicitly assumes that vote choice is affected by expectations about

¹Voters could, of course, simply focus on holding the coalition as a whole accountable.

which coalition will form and which policies it will implement. Yet, to date, there have been no systematic analyses of whether voters form such expectations and whether they respond to the factors that generally are thought to influence coalition policy.

Our findings suggest that voters do not expect policy influence to be proportional to party size. Using unique data on policy perceptions of voters from Austria, Germany and Sweden, we find that larger and centrist parties are expected to have greater influence on coalition policy. However, we also find that voters expect small coalition parties to “punch above their weight”. Voters, consequently, see small parties as having disproportional influence on coalition policy. While inconsistent with Gamson’s Law, such a small party bonus has repeatedly been demonstrated by the empirical literature on portfolio allocation (e.g., Warwick and Druckman, 2006) and voters’ perception thereof (Lin et al., 2017). We conclude by discussing the normative implications of our results for accountability in coalition governments.

Expectations about Government Coalition Policy

At election time, voters in most multi-party parliamentary systems know that no single party will obtain a majority and that a government coalition will form. This coalition will subsequently implement policies that reflect the preferences of the individual coalition parties in some manner. Thus, voters that care about policy outcomes face the rather daunting task of forming expectations about how their votes affect the coalition formation process and the policy that the coalition will implement.² Forming expectations about coalition policy may be challenging but voters are unlikely to be entirely at a loss. Voters, after all, will know something about the parties taking part in the government formation. Typically they will have some idea about how big the parties, about their ideological orientation, and they will have observed how these attributes translated into policies under previous governments.

²Fortunato and Stevenson (2013*a*) ask a related question, that is, how voters form expectations about the outcome of the coalition formation process and find that voters rely on heuristics such as the prime minister coming from the largest party.

The idea that a coalition party’s size and ideological position affect its influence on coalition policy is common.³ The assumption that each coalition party’s influence is proportional to its seat share is widely used in empirical work.⁴ The Comparative Manifesto Project, e.g., calculates government policy in this manner. Kim and Fording (2002) use a similar approach, weighing the parties’ positions by their cabinet seats. On the whole, the literature makes very strong assumptions about how the preferences of coalition parties affect government policy. A subset of this literature examines how government policy factors into voters’ decisions. Thus, it implicitly assumes that voters expect Gamson’s Law to dictate the coalition parties’ policy influence while there is little or no evidence to suggest that is the case.

Sophisticated voters may form expectations about coalition policy⁵ on the basis of a variety of factors that are likely to influence government policy. In reality, however, it is probably fair to say that policy-making in parliamentary systems — even among scholars — is not very well understood. Moreover, even highly sophisticated voters have little incentive to invest effort in forming expectations about policy as each voter is unlikely to be pivotal. It seems, thus, reasonable for voters to use relatively simple heuristics to form expectations.

Which heuristic might voters employ? Starting with a particularly simple heuristic, voters may expect coalition parties to wield equal influence and government policy to be the average of the perceived parties’ positions. This heuristic requires very little information on the part of voters, i.e., voters only need to have beliefs about the coalition parties’ positions.

Heuristic 1 (*Equal Influence*) *Voters expect government policy to be the (unweighted)*

³See, e.g., Laver and Budge (1992); Kedar (2005); Bargsted and Kedar (2009); Indridason (2011); Duch, May and Armstrong II (2010); Powell (2000); Huber and Powell (1994).

⁴See, e.g., Ferland (2016); Golder and Stramski (2010); Golder and Lloyd (2014); Indridason (2011). Others, e.g., De Sinopoli and Iannantuoni (2008) have assumed that policy is the vote-weighted average of *all* the parties’ positions.

⁵Fortunato and Stevenson (2013a) address voters’ expectations about the outcome of the coalition formation process. On a related note, Duch, Przepiorka and Stevenson (2015) examine how experimental subjects attribute responsibility in coalition governments.

average of the perceived coalition parties' policy positions.

Heuristics may also employ observable political outcomes. Scholars have sought to evaluate the influence of individual parties on government policy but, since measuring government policy is not trivial, they have often focused on bargaining outcomes that are easily quantifiable such as the allocation of ministerial portfolios (see, e.g., Gamson, 1961; Browne and Franklin, 1973; Warwick and Druckman, 2006). The study of portfolio allocation revealed one of the strongest empirical relationships in political science; according to Gamson's Law, the allocation of portfolios is proportional to the legislative strength of the coalition parties. Voters may similarly expect policy influence to be proportional to the seat share of each coalition party. Proportional allocation is also often seen as being fair (see, e.g., Verzichelli, 2008), which may further support voters' beliefs regarding the influence of individual coalition parties. The heuristic can be deployed with relative ease; it only requires two pieces of information; the perceived size of the coalition parties and their ideological positions.

Heuristic 2 (*Proportional Influence/Gamson's Law*) *Voters expect government policy to be the seat share weighted average of the perceived coalition parties' policy positions.*

Voters may also consider how the bargaining process favors some parties. Formal theories of bargaining tend to focus on the parties' bargaining strength, which generally suggest that the formateur should reap a disproportionately large share of the spoils (see, e.g., Austen-Smith and Banks, 1988; Baron and Ferejohn, 1989).⁶ In these models bargaining strength derives from two sources; party size and ideological position. Large parties enjoy an advantage for two reasons. First, larger parties are more likely to take a leading role in the coalition bargaining and occupy the formateur role (Diermeier and Merlo, 2004). Second, they tend to have more opportunities to form coalitions, making the threat to walk away from the bargaining table more credible. Ideological position influences bargaining strength for similar reasons. It

⁶Not all coalition bargaining models predict a formateur advantage and the respective empirical evidence is mixed. While the allocation of portfolios appears highly proportional, much less is known about how much influence coalition parties have on policy (see, e.g., Warwick, 2011).

affects the desirability of alternative coalitions and, therefore, the credibility of threats to terminate negotiations. A centrist party will have more options, i.e., it may find coalition partners on the left or on the right, whereas less centrist parties have few options other than to look towards the center. Centrist parties do not only derive strength from having more potential partners but also through credible threats to form a coalition with a party whose preferences are opposed to that of its current bargaining partner. Whether through intuition or experience by observing past behavior of parties (Fortunato and Stevenson, 2013b), voters may recognize that larger and more centrist parties wield greater bargaining power.

Heuristic 3 (*Bargaining Strength*) *Voters expect larger and more ideologically centrist parties to have a disproportionate influence on the coalition’s policy.*

The three heuristics vary in terms of sophistication. The simplest one only requires voters to associate each coalition party with an ideological position. The most complex heuristic requires some sense that bargaining strength derives from the party’s perceived size and ideological position. While the third heuristic appears to ask a lot of voters, voters may still get by with fairly limited information⁷ — it may be enough for voters to recognize that larger parties are more likely to act as formateurs, to lead the eventual coalition, and to associate those patterns with greater influence.⁸ That association may simply stem from empirical observation. As “members of the polity” (Lewis-Beck and Skalaban, 1989), citizens learn to distinguish small parties from large and experience coalition governments (Armstrong and Duch, 2010; Gschwend, 2007; Herrmann, 2014). Coalitions are not rare in multi-party systems where coalitions also often form at lower levels of government. Electoral polls help citizens identify which coalitions are feasible and parties sometimes form pre-electoral coalitions (Golder, 2005) or announce with which parties they might, or will not, form a coalition

⁷The influence of bargaining strength may even be indirect, i.e., large, centrist parties may receive disproportional attention in the media that in turn colors voters’ evaluations.

⁸Recent research shows that voters assign greater responsibility (Angelova, König and Proksch, 2016) and more portfolios (Lin et al., 2017) to the party of the prime minister (see also Crabtree et al., 2017).

(Gschwend, Meffert and Stoetzer, 2017; Gschwend, Stoetzer and Zittlau, 2016). Thus, voters may apply such heuristics without a deep understanding of the coalition formation process.⁹

The three heuristics can also be viewed in terms of how favorable the outcome is to the largest party. The equal influence heuristic ignores party size while the Gamson’s Law heuristic rewards parties in proportion to their size. Finally, the bargaining strength heuristic rewards parties for being ideological more central in addition to being large.

To examine whether voters employ these heuristics, we leverage all election studies we are aware of that include questions about perceived coalition policy positions. The data comes from three countries: (1) the 2009 German Longitudinal Election Study (GLES), (2) the 2013 Austrian Election Study (AUTNES), (3) the 2014 Swedish National Election Study (SNES).¹⁰ First, we show that voters are quite comfortable with reporting perceived policy positions of parties and coalitions and that those coalition policy positions appear to be stable, indicating that they derive from some underlying logic of forming expectations. Second, we introduce a simple model to estimate each coalition party’s weight and compare those with the weights implied by the heuristics above. Third, we estimate a model that allows a direct test of the proportional influence heuristic that takes into account heterogeneity in voters’ expectations about the sizes of the coalition parties. Finally, we estimate non-linear least squares models in order to consider how additional covariates influence the parties’ coalition weights.

Perceptions of Coalition Policy

Austria, Germany, and Sweden are ideal cases for examining how voters evaluate coalitions. Their history of coalition governments means that voters have substantial experience in

⁹Fortunato, Lin and Stevenson (2014), find, e.g., that while political knowledge may be limited, voters are better informed about the aspects of the political system that are relevant in a given political context.

¹⁰We use the GLES Short-term Campaign Panel (wave 6) (Rattinger et al., 2015), the AUTNES pre-study module (Kritzinger et al., 2017), and the Swedish Internet Campaign Panel, particularly waves 2 and 6 (Bojje and Dahlberg, 2014).

judging coalition possibilities. The GLES is the only study we are aware of that includes questions about the perceived ideological placement of coalitions as well as the expected vote share of each party, which allows for a direct test of the heuristics.¹¹

Respondents were asked to place parties on a 0 – 10 left/right scale. In the GLES, 80-82% report policy positions for the CDU¹², the SPD, the FDP, and the Greens (B90).¹³ Respondents were also asked about their policy perceptions of three two-party coalitions: (1) the Grand Coalition (CDU-SPD), (2) the black-yellow coalition (CDU-FDP) and, (3) the red-green coalition (SPD-B90). About 76% place those coalitions on the left/right scale. Respondents, thus, find it only slightly more difficult to place coalitions on the left/right scale. Similar results are reported by Meyer and Strobl (2016) using AUTNES data.

While one might think evaluating coalition policies is difficult, respondents appear to feel comfortable placing coalitions on a left/right scale. The Swedish data provides an unique opportunity to assess the reliability of those judgments as respondents reported the perceived position of the Social Democrat (SAP)–Green (MP) coalition in two waves (2 and 6) four months apart. A full 43% placed the coalition at the very same value in both waves and about 85% report a value within a unit distance on the 0 – 10 left/right scale. While one might worry that respondents simply guess, the observed stability suggests that there is logic to how they arrive at those expectations. In the next section, we introduce a simple model to estimate how voters perceive the policy positions of coalition governments.

¹¹The Austrian as well as the Swedish data (Boije and Dahlberg, 2014; Kritzinger et al., 2017) only include questions about perceived ideological positions of coalitions.

¹²We refer to the CDU/CSU pre-electoral coalition as CDU. We use the perceived policy positions of the CSU for Bavarian respondents.

¹³That is about the same share reporting whether identify with any party; a standard survey item. Other studies about voter perceptions of coalitions report that 80% of respondents know which parties are in government (Angelova, König and Proksch, 2016).

A Model of Coalition Policy Perceptions

In theoretical and empirical work, coalition policy is usually assumed to be a function — typically a convex combination — of the coalition parties’ policy positions: $C = \alpha_A A + \alpha_B B = \alpha_A A + (1 - \alpha_A)B$, where A and B are the positions of the coalition parties, α_j is party j ’s *coalition weight*, and C is the government policy.¹⁴ If the weight of the parties is assumed to be proportional to their legislative seat share — as Gamson’s Law suggests — α_j equals the coalition seat share $s_j = \frac{l_j}{\sum_{j \in G} l_j}$ where l_j is party j ’s legislative seat share.

As voters may evaluate different coalitions, or parties, in different ways, we consider each coalition separately. For this we employ the simple two-party model above:

$$C_i = \alpha_A A_i + (1 - \alpha_A)B_i, \tag{1}$$

where A_i and B_i now represent each voters’ perceived party positions and C_i the respective perceived coalition position. Rearranging equation 1 we obtain:

$$C_i = \alpha_A A_i + B_i - \alpha_A B_i \tag{2}$$

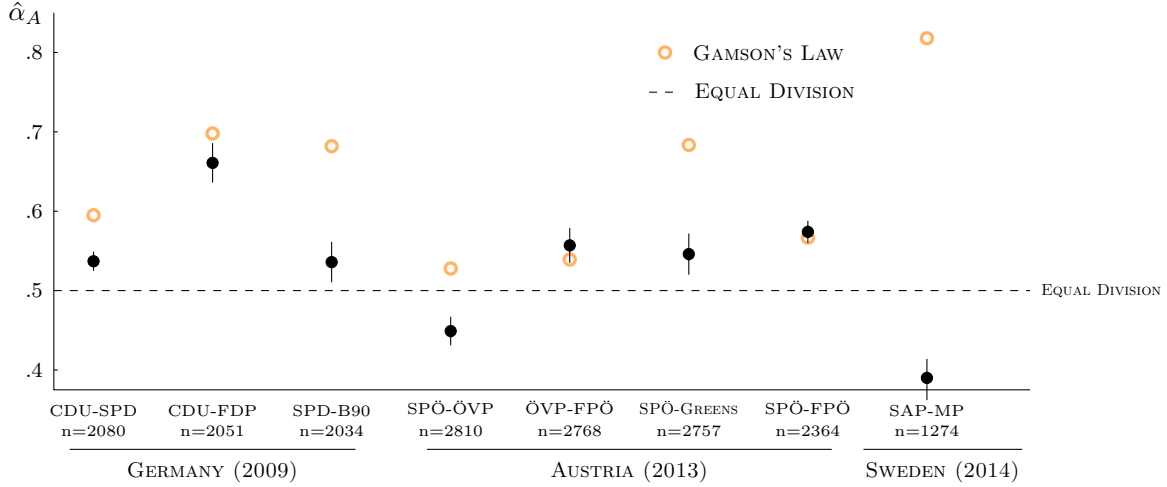
$$C_i - B_i = \alpha_A (A_i - B_i) \tag{3}$$

Thus, we can estimate party A ’s coalition weight $\hat{\alpha}_A$, the perceived influence of party A on the coalition policy directly by regressing the respondents’ perceived difference between the coalition policy and party B ’s policy ($C_i - B_i$) on perceived difference ($A_i - B_i$) between the policies of parties A and B . Throughout we refer to the first-named coalition party as A and the second-named party as B . Figure 1 shows the estimated coalition weights, $\hat{\alpha}_A$, and the 95% confidence intervals along with the predicted weights based on the equal division (dashed line) and the proportional influence (hollow circle) heuristics (using actual vote share).¹⁵

¹⁴More generally, we can be written as $C = \sum_{j \in G} \alpha_j p_j$, where G is the set of the coalition parties, p_j the policy position of party j , and α_j the weight of party j with $\sum_{j \in G} \alpha_j = 1$.

¹⁵Estimation results are presented in an appendix where we also consider the possibility of attenuation

Figure 1: ESTIMATED COALITION WEIGHT ($\hat{\alpha}_A$) OF FIRST PARTY



The results offer three lessons. First, voters do not employ the equal division heuristic. None of the confidence intervals around the estimated coalition weights cross the dashed line. Although the heuristic is easy to apply for any coalition, respondents consistently consider the coalition parties to have unequal influence on coalition policy.

Second, voters generally do not seem to apply the Gamson's Law heuristic either. The coalition weights consistent with Gamson's Law are typically quite different from the estimated weights. The only exceptions are coalitions that include the Austrian FPÖ. Nevertheless, wherever the estimated and the expected weights differ, we find that the estimated weight is consistently lower than the one expected by Gamson's Law. This implies that the perceived policy influence of the larger coalition party, and likely formateur, is consistently smaller and, importantly, not larger as many models of coalition bargaining suggest (e.g., Baron and Ferejohn, 1989). Instead, our evidence is consistent with the small party advantage found in the literature on portfolio allocation (see, e.g., Browne and Frensdreis, 1980) and also with recent work on voters' perceptions of portfolio allocation (Lin et al., 2017).

Third, voters do take party size into account. Across all the coalitions (with two exceptions), the larger party's estimated weight is greater than that of its coalition partner. Moreover, the bias due to measurement error and examine whether respondent's political knowledge affects our estimation.

coalition weight of the larger party in each coalition increases with the party’s relatively size, e.g., the CDU in Germany carries greater weight in a coalition with a small party (FDP) than a large party (SPD). In Austria and Sweden we observe the same pattern for the coalitions that do not conform to Gamson’s Law. However, party size is not the only thing that matters. The estimated weights for the CDU in the CDU-SPD coalition and SPD in the SPD-B90 coalition are highly similar although the SPD provided a larger coalition seats share in the SPD-B90 coalition than the CDU did in the CDU-SPD coalition.

As noted above, scholars must often make assumptions about the policy positions of coalition governments in empirical and theoretical work where coalition’s policy factors into voters’ decisions. The most common approach is to assume that coalition policy is determined in a Gamson’s Law-like fashion (e.g., Ferland, 2016; Golder and Stramski, 2010; Golder and Lloyd, 2014; Indridason, 2011). What implications does this have given that it has been demonstrated that voters do not quite see coalition policy through the lens of Gamson’s Law? It is potentially a problem if voters think small parties have disproportional influence on coalition policy while scholars assume parties have strictly proportional influence.

In order to evaluate the size of this discrepancy, we calculate the predicted policy position based on respondents’ observed party positions (A_i and B_i) assuming Gamson’s Law, i.e., $C_i^{GL} = \alpha_{GL}A_i + (1 - \alpha_{GL})B_i$ and compare it with the expected coalition policy obtained using the estimated weight in Figure 1 (or tables 3-5 in the appendix), i.e., $\hat{C}_i = \hat{\alpha}_A A_i + (1 - \hat{\alpha}_A)B_i$. Table 1 summarized the average difference ($|C_i^{GL} - \hat{C}_i|$) for each of the coalitions. As can be seen in the table, the mean differences range from very small (.03 for the Austrian SPÖ-FPÖ coalition on the 11-point scale) to quite substantial (.60 for the Swedish SAP-MP coalition).

Naturally, the magnitude of these differences must be kept in context — a difference of .25 might be considered insubstantial for coalition whose parties are quite far apart ideologically but one might arrive at the opposite conclusion if they are close ideologically. Thus, one way to get a sense of the substantive significance of these differences is to consider the average difference as a fraction of the distance between the coalition parties: $\frac{|C_i^{GL} - \hat{C}_i|}{|A_i - B_i|}$ as shown in

Table 1: DIFFERENCES IN PREDICTED COALITION POLICY POSITIONS
— GAMSON’S LAW (VOTES) VS. ESTIMATED WEIGHT —

COALITION	MEAN DIFFERENCE	% OF DISTANCE B/W COALITION PARTIES
CDU-SPD	.20	6
CDU-FDP	.16	12
SPD-B90	.18	14
SPÖ-ÖVP	.19	8
ÖVP-FPÖ	.05	2
SPÖ-GREENS	.27	14
SPÖ-FPÖ	.03	1
SAP-MP	.60	43

Table 1. Overall, the differences as a share of the perceived distance between the coalition parties ranges from low to moderate with the exception of the SAP-MP coalition in Sweden where the difference amounts to about 43% of the distance between the coalition parties.

There are several ways to get at the substantive meaning of a change in the policy position of a coalition. In the context of the literature on coalition voting that has employed Gamson’s Law to calculate government policy, coalition voting can take different forms. ‘Balancing’ refers to a form of coalition voting where voters aim to ‘pull’ government policy towards their preferred policy. A centrist voter whose most preferred party is the CDU might, e.g., opt to vote for the SPD with the goal of pulling the coalition policy closer to the center. The basic result from the formal literature is that the expected coalition policy divides voters in terms of which coalition party they should vote for; a voter preferring a policy further to the left should vote for the coalition party on the left while a voter preferring a policy to the right should do the opposite. Thus, if Gamson’s Law is assumed to determine coalition policy then we would make an incorrect prediction about voters whose preferred policy lies between the Gamson’s Law prediction and the true expectations of the voters. Sticking with the Grand Coalition, 6% of the voters whose preferred policy lies between the platforms of the two coalition partners is not a negligible number.¹⁶

¹⁶This assumes that the distribution of these voters is uniform. If the distribution is not uniform and the

Another way to examine our findings in the light of existing research is to look at the impact of, say, a .20 change in coalition policy on outcome variables. For instance, Martin and Vanberg (2014) model the number of bill’s subsections amended in the legislative processes a function of the ideological distance between the minister under whose jurisdiction the legislation falls and the coalition compromise, which assumes Gamson’s Law. Using Martin and Vanberg’s (2014) results, and focusing on Germany, we find that the predicted number of subsections amended changes by about 2% when the coalition compromise changes by .20 (as in our results for the CDU-SPD coalition). In sum, our results show that assuming that voters expect the influence of the coalition parties to reflect Gamson’s Law does have substantive consequences, sometimes quite large ones.

To sum up, voters use neither the equal influence heuristic nor the proportional influence heuristic when evaluating coalition policy. There is, however, a clear small party bonus, i.e., their perceived influence is greater than Gamson’s Law suggests. The latter claim assumes that respondents correctly anticipate the relative sizes of the coalition parties, though, which could explain the lack of support for the Gamson’s Law heuristic. If expectations about party size are heterogeneous, then the coalition weights respondents use in forming expectations about coalitions’ policy position will vary — even while using the same heuristic. In the next section we, therefore, take respondents’ expectation about party size into account.

Heterogenous Expectations and Order Effects

The simple model in equation (1) is a convenient first approximation but it mostly serves an illustrative purpose as respondents have different expectations about party size. To better test whether voters perceive the parties’ influence on coalitions policy to be proportional to their size or whether there is a small party bonus, we rewrite equation (1) as a function of expected vote shares — to account for respondents’ heterogenous expectations — and

voter density close to the expected coalition policy is higher, this percentage would be larger.

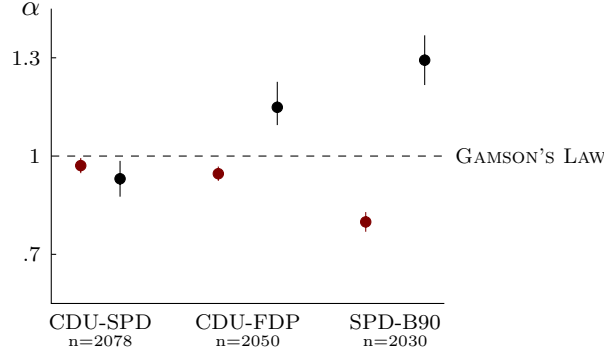


Figure 2: ESTIMATING THE PARTY WEIGHT
ESTIMATED WEIGHTS SYSTEMATICALLY DIFFER FROM GAMSON'S LAW ($\alpha_i = 1$).

perceived policy positions of the parties:

$$C_i = \alpha_A V_{A_i} A_i + \alpha_B V_{B_i} B_i \quad (4)$$

where V_{ji} denotes respondent i 's expectation about party j 's contribution to the coalition's legislative majority. We use expected vote share as the study in Germany did not include questions about seat share. Neither was available in the Austrian and the Swedish data. Thus, $V_{ji} = \frac{v_{ji}}{v_{ji} + v_{ki}}$ where v_{ji} is party j 's expected vote share relative to the expected vote share of party j and k .¹⁷ $V_{A_i} A_i$ and $V_{B_i} B_i$ are the respondent specific vote-weighted policy positions of parties A and B . If the parties' influence is proportional to vote share then $\alpha_A = \alpha_B = 1$. Again, we estimate the parties' influence using a linear model without a constant.

Figure 2 displays the estimated weights, $\hat{\alpha}_A$ and $\hat{\alpha}_B$, together with their 95% confidence intervals (see appendix, table 8). The proportional influence hypothesis can safely be rejected for all three coalitions.¹⁸ None of the estimated confidence intervals intersect the reference line that indicates the expected value if voters use this heuristic. Instead, again the evidence

¹⁷The survey question was: "What percentage of the second votes do you think the parties will gain at the federal election on 27 September 2009?" The responses were added up automatically to facilitate that the respondent's predictions summed to 100%.

¹⁸Significance tests with $H_0 : \alpha_A = \alpha_B = 1$. CDU-SPD: $F_{2,2076} = 33.70$ ($p < .0001$), CDU-FDP: $F_{2,2028} = 74.57$ ($p < .0001$), SPD-B90: $F_{2,1817} = 102.6$ ($p < .0001$).

points to a small party advantage rather than a formateur advantage. The estimated weights of the small parties, FDP and B90, are estimated to be systematically higher than expected by Gamson’s Law. Interestingly, Lin et al. (2017) come to a similar conclusion about voters’ perceptions of portfolio allocation, i.e., that while voters’ expectations tends toward proportionality, they expect smaller parties to do slightly better than their size would suggest.

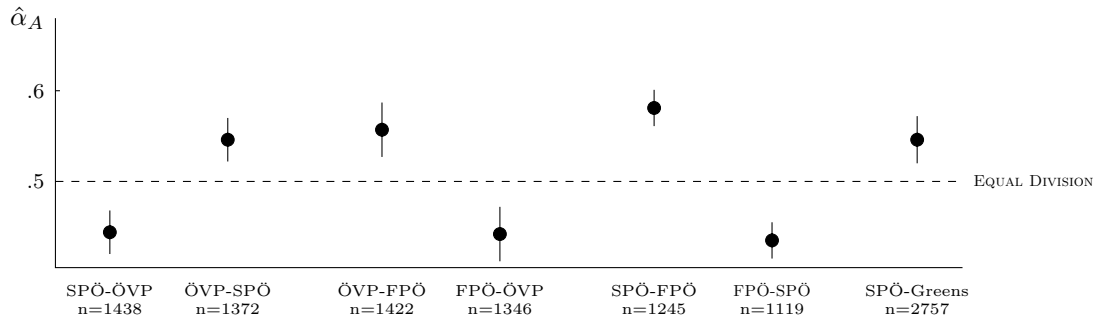
So far we have assumed that the first named party in each coalition was expected to be the stronger party within the coalition and, therefore, was likely to act as a formateur.¹⁹ In each case the first named party was estimated to have less influence than its vote share suggested and there is, therefore, little indication of respondents perceiving a formateur advantage.

What if this order assumption is wrong? What if voters do not focus on party size, as we assume, but simply assign a higher coalition weight to first-named parties on the assumption that the first-named party will lead the coalition? This alternative explanation would cast doubts on our interpretation of the results. Fortunately, the Austrian data (Kritzinger et al., 2017) allows us to test this alternative explanation because it includes a random split-sample design. Half of the sample was asked about the three coalitions as we reported them above (SPÖ-ÖVP, ÖVP-FPÖ, and SPÖ-FPÖ) while for the other half the order of the parties was reversed (ÖVP-SPÖ, FPÖ-ÖVP, and FPÖ-SPÖ). The order of the SPÖ-Greens coalition was not randomized. Using equation 1, we estimate the coalition weights for seven coalitions.

The estimated coalition weights, $\hat{\alpha}_A$, and confidence intervals are graphed in Figure 3 (see appendix, table 6). If the estimated coalition weights are above the reference line the influence of the first-named party on the coalition policy is perceived to be stronger than the influence of the second-named party. No matter whether it is the first-named party or not, with the exception of one coalition (SPÖ-ÖVP), voters weighed larger parties more heavily. When the order is flipped, the coefficient flips ‘around’ the equal division line. Thus, voters

¹⁹It bears noting that Austrian and German coalitions are formed in a ‘free-style’ form of coalition bargaining and there is no formal formateur but, as is the case where a formateur is appointed, the leader of the largest party is likely to adopt a role as a formateur.

Figure 3: ESTIMATED COALITION WEIGHT ($\hat{\alpha}_A$) OF FIRST PARTY



seem to distinguish larger from smaller parties when deriving coalition policy positions.

Modeling the Coalition Weight of Parties

We now extend our model (1) above to allow the coalition weights (α) to depend on additional covariates in order to find out under which conditions voters perceive a party more or less influential in determining coalition policy.

Our key covariates relate to the three heuristics.²⁰ *Party Size* addresses the first two heuristics, *Equal Influence* and *Gamson's Law*. *Equal Influence* implies that party size has no effect on expected coalition policy while *Gamson's Law* implies that each parties' influence ought to be proportional to party size. We operationalize *Party Size* as the respondent's expectation about party *A*'s share of the coalition's vote, i.e., $\frac{v_{A_i}}{v_{A_i} + v_{B_i}}$. As the normalized vote shares add up to one, only party *A*'s vote share is needed.

The third heuristic, *Bargaining Strength*, implies that the size of a party has an effect but voters may consider other factors that affect bargaining strength. Bargaining strength of a party is usually conceptualized in terms of the opportunities it has to form coalitions — the idea being that if a party has credible outside options then it has greater leverage in the coalition formation negotiations. As we have argued above, respondents' perception of a party's bargaining strength derives from two sources: the party's size and its ideological

²⁰We restrict the analysis here to the Germany data as it is the only survey that asks about party size.

position. In addition to party size, we, therefore, construct a measure of a party’s perceived ideological centrality — centrist parties have greater opportunities to form coalitions to both the left and the right and are, on average, closer ideologically to other parties. *Ideological Centrality* is measured by how close to the center of the left/right scale (at ‘5’) a party is perceived, i.e., by the absolute distance between the respondent’s placement of a party and the center of the left/right scale. A party’s perceived ideological centrality ranges from 0 to 5 with higher values indicating greater centrality. Finally, to construct our covariate Δ *Ideological Centrality*, we take the difference in perceived ideological centrality between the coalition parties. The measure ranges from -5 to 5 and is positively related to party A ’s bargaining advantage.²¹ We expect a larger coalition weight for the party perceived as being closer to the center and, hence, a positive coefficient for Δ *Ideological Centrality*.

As for control variables, we consider how leader evaluations, party preferences, and how informed voters are about politics influence policy expectations. Voters’ expectations may be influenced by the personal characteristics of the party leaders who represent the parties in the coalition negotiations and lead their parties in government. Respondents should attribute greater influence to party leaders who they think show resolve in negotiations, have deep convictions and strong principles, are hard-working, or are simply stubborn — that is, characteristics that plausibly affect the outcome of negotiations. Controlling for leader evaluations is warranted as many have argued that parliamentary politics have increasingly become focused on party leaders (see, e.g., Aarts, Blais and Schmitt, 2011). To operationalize leader evaluation we use the like/dislike scores for party leaders. We calculate a ‘leader differential’ (Δ *Leader Evaluation*) as the difference between party A and B ’s leader evaluations. Δ *Leader Evaluation* is scaled to range from -1 to 1 . If respondents perceive a leader advantage it should translate into a greater weight for the advantaged party and a positive coefficient for Δ *Leader Evaluation*.

It is also possible that voters are affected by perceptual biases in their evaluations of

²¹That is, $(5 - |p_A - 5|) - (5 - |p_B - 5|) = -|p_A - 5| + |p_B - 5|$, where p_j is the position of party j .

coalition policy (Meyer and Strobl, 2016). If a voter finds a party’s argument in favor of certain policies persuasive, they may assume that others will also find them persuasive. We operationalize perceptual biases in a similar manner to leader evaluations, using the parties’ like/dislike score. We calculate the party preference differential, $\Delta Party Preference$, as the difference between the evaluations of parties A and B and scale the result to range from -1 to 1. A positive coefficient is expected if voters’ expectations are shaped by perceptual biases.

Finally, we control for the level of a respondent’s *Political Knowledge* as it is conceivable that the ability of voters to reach conclusions about the influence of various parties on coalition policy depends on their level of intellectual engagement with politics. Respondents’ relative placements of political parties as well as their expectation about party size may differ between political experts, who have a lot of factual knowledge, and respondents who don’t know much about politics. We construct a political knowledge scale (Cronbach’s $\alpha = .83$) ranging between ‘0’ and ‘1’ based on 13 factual knowledge items.²²

Thus, in order to find out under which conditions do voters perceive a party more or less influential in determining coalition policy, we extend the model (1) above to allow the coalition weight (α_i) to depend on additional covariates and, hence, to vary across respondents in the following way:

$$\begin{aligned}
 C_i &= \alpha_i A_i + (1 - \alpha_i) B_i + \epsilon_i \text{ with} & (5) \\
 \alpha_i &= \text{logit}^{-1}(\gamma_0 + \gamma_1 PartySize_i + \gamma_2 \Delta IdeologicalCentrality_i \\
 &\quad + \gamma_3 \Delta LeaderEvaluation_i + \gamma_4 \Delta PartyPreference_i \\
 &\quad + \gamma_5 PoliticalKnowledge_i)
 \end{aligned}$$

The perceived policy position of a coalition should depend on the respective positions of the constituting parties and an error term ϵ_i with zero mean. Rather than estimating one

²²We disregard all knowledge items that were measured after wave 6, where the dependent variable of our analysis, respondents’ perceived coalition policy, was measured.

coalition weight directly, we allow α_i to vary across respondents as a logistic transformation of a linear and additive function of additional covariates. This parametrization ensures that the resulting $\hat{\alpha}_i$ is a proper weight, i.e., it lives in the unit interval. We estimate the γ 's for the above regression model using non-linear least squares (Davidson and MacKinnon, 1993) and use them to recover $\hat{\alpha}_i$ post-estimation. Note that positive $\hat{\gamma}$'s indicate that larger covariate values increase the weight respondents assign to the first-named coalition party ($\hat{\alpha}_i$) while at the same time decrease the weight of the second-named party ($1 - \hat{\alpha}_i$).

Table 2 shows the estimation results of the conditions under which voters perceive a party more or less influential in determining coalition policy for all two-party coalitions in the German data: CDU-SPD (grand coalition), CDU-FDP (black-yellow coalition), and SPD-B90 (red-green coalition). For each coalition we run three models to evaluate the robustness of the effects across specifications. First, we only have *Party Size* in the model, second, we add our other key covariate, Δ *Ideological Centrality*, and third, we include the control variables.

We find evidence supporting our hypotheses for the coalitions that were more likely to form; the grand coalition and the black-yellow coalition. The context of the 2009 election may be responsible for why the results for the SPD-B90 coalition are not in line with any of the heuristics — respondents may have devoted little attention to the SPD-B90 coalition because the coalition was considered very unlikely to form.²³ In the remainder of this paper we focus our discussion on the two coalitions that were considered more likely to form and we are better able to explain how respondents weigh the ideological positions of the coalition parties in order to form expectations about the coalition's policy.

The explanatory variables have a consistent effect for the two coalitions (models 1 – 6) considered more likely to form. The coefficients for *Party Size* are positive as expected. The larger party A was expected to be, the more weight respondents placed on party A 's position

²³The respondents were asked in the fifth wave (question `kp5_940`) whether the CDU-FDP and the SPD-Green coalitions would control a majority in parliament. Only seven percent said a SPD-Green coalition would obtain a majority. As noted above, respondents also saw these parties as being very close ideologically — nearly half the sample placed them at the same position.

Table 2: DETERMINANTS OF COALITION WEIGHT (α)

	CDU-SPD			CDU-FDP			SPD-B90		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intercept	-0.321 (0.223)	-0.264 (0.220)	0.055 (0.253)	-0.595 (0.529)	-0.524 (0.531)	-0.616 (0.540)	0.779** (0.394)	0.800** (0.396)	1.162** (0.467)
Party Size	0.800** (0.388)	0.926** (0.383)	0.883** (0.427)	1.581** (0.722)	1.683** (0.726)	1.600** (0.737)	-0.929* (0.561)	-0.969* (0.563)	-1.922*** (0.641)
Δ Ideological Centrality		0.216*** (0.020)	0.213*** (0.020)		0.081*** (0.031)	0.090*** (0.032)		0.029 (0.025)	0.018 (0.026)
Δ Leader Evaluation			0.092 (0.094)			-0.276 (0.215)			0.352* (0.206)
Δ Party Preference			0.004 (0.079)			0.114 (0.241)			0.369* (0.202)
Pol.Knowledge			-0.426*** (0.122)			0.305 (0.244)			0.491** (0.240)
OBSERVATIONS	1644	1644	1644	1632	1632	1632	1582	1582	1582
ROOT MSE	1.16	1.11	1.11	1.12	1.11	1.11	1.06	1.06	1.06

* p < 0.10; ** p < 0.05; *** p < 0.01.

when evaluating the coalition’s policy. This implies that respondents see the CDU (party *A* in both coalitions) — by virtue of being seen as the bigger party by most voters — as being more influential. Thus, the perceived coalition policy is closer to the perceived CDU position than the respective coalition partner, the SPD or the FDP. Δ *Ideological Centrality* also has the hypothesized effect for these coalitions. Respondents that see the CDU as being closer to the ideological center attribute greater weight to the CDU’s policy position and, consequently, smaller weight to the coalition partner’s position. Thus, voters perceive larger and more centrist parties of a coalition to be more influential in determining coalition policy.

We find little evidence of voters being influenced by perceptual biases. While the Δ *Party Preference* coefficients have the expected sign, the size of the effect is small in comparison with the standard errors. This is an interesting — and potentially instructive — finding when compared with Meyer and Strobl (2016) who do find evidence of perceptual biases. The Austrian survey they analyze did not ask for respondents’ expectation about the parties’ vote shares. Perceptual biases may work by influencing how persuasive respondents find the parties’ arguments and those biases may then be reflected in the respondents’ expectations about party size. That is, if a voter finds a party’s platform appealing then she may assume other voters will agree and, consequently, expect more voters to cast their votes for the party. If perceptual biases operate primarily by influencing expectations about party size, the inclusion of party size in our models will capture the effects of perceptual biases. This is what our results show — Δ *Party Preference* has no independent effect in our model specification, suggesting that the causal mechanism by which perceptual biases matter primarily operate through biasing voters’ expectations about electoral outcomes.²⁴

Leader evaluations only have the hypothesized effect for two of the three coalitions the respondents were asked about and the coefficient is only statistically significant for one of

²⁴Thus, we cannot rule out the possibility that perceptual biases matter. A more favorable opinion of a party may lead a respondent to expect a higher vote share for a party that in turns affects its influence on coalition policy.

those (SPD-B90 coalition). There is, thus, limited evidence to suggest that respondents' evaluations of the party leaders matter — although the same caveats apply here as with the effects of party preferences. That is, perceptual biases regarding party leaders may lead respondents to overestimate the size of the parties whose leaders they consider competent. It is, therefore, not possible to rule out that leader evaluations matter but it does suggest that if leader evaluation effects are present they are unlikely to derive from respondents' expectation that the leaders' political savvy will pay dividends in the coalition negotiations.

Finally, the estimated coefficients for *Political Knowledge* do not show a coherent pattern. Those who score higher on our knowledge scale seem to place less weight on the CDU position (and consequently place more weight on the SPD position) to determine the coalition's policy position of the CDU-SPD coalition. While we find no effect of political knowledge on the weight that determines the importance of the CDU position on the CDU-FDP coalition position, we find a positive effect of political knowledge on the weight that determines the importance of the SPD position on the SPD-Green coalition position.

How do the estimated effects compare with those implied by the heuristics discussed above? The non-linear parameterization of the coalition weight (α) means that the substantive effects cannot immediately be read from the estimated coefficients but the effects can be examined by predicting the coalition weights using the estimated $\hat{\gamma}$'s for different values of the covariates. Figure 4 graphs the effects of *Party Size* and Δ *Ideological Centrality* for the two coalitions. In order to derive the average predicted weights together with their respective 95% confidence intervals, the values of the two variables, *Party Size* (on the left) and Δ *Ideological Centrality* (on the right), were varied while all other independent variables were set to their observed value for each respondent. The top panels present the results for the CDU-SPD coalition while the bottom panels presents the results for the CDU-FDP coalition. The panels on the left shows the average predicted weights conditional on the CDU's expected size (as a ratio of the respective expected two-party coalition vote share). The graphs show how respondents that expect the CDU to win more votes have higher predicted values of α , i.e., they are

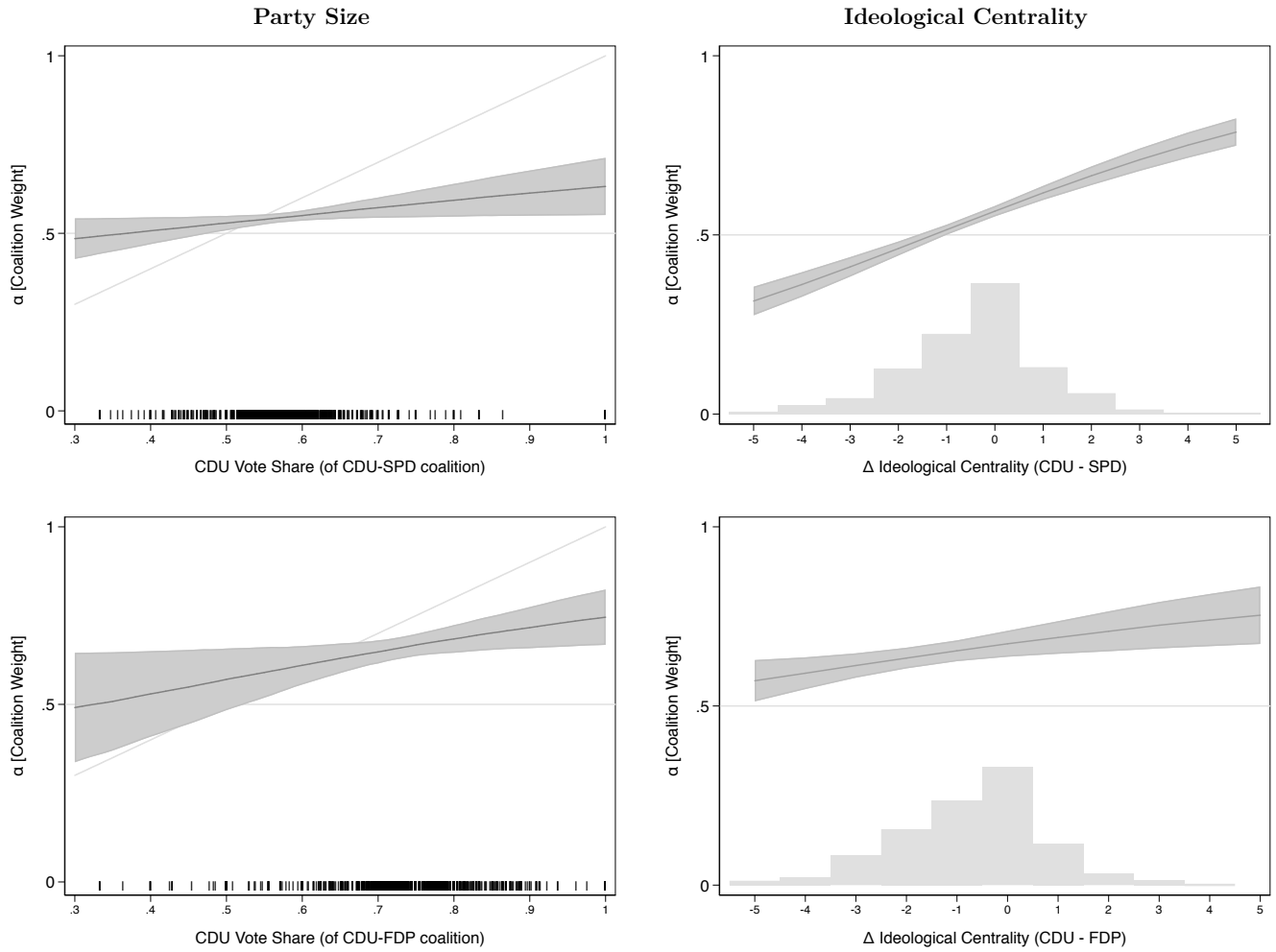


Figure 4: IMPACT OF PARTY SIZE & IDEOLOGICAL CENTRALITY ON COALITION WEIGHT (α)

The reference lines at $\alpha = .5$ indicate the predictions of the equal influence heuristic. The reference lines with slope of one in the left panels show the predictions of the Gamson's Law (proportional influence) heuristic conditional on CDU's coalition vote share.

generally more likely to think the CDU will have a bigger impact on government policy.

The expectation according to the equal division heuristic, i.e., $\alpha = .5$, is shown by horizontal lines. The heuristic can quickly be dismissed as it can clearly be seen that the predicted coalition weights do depend on the parties' expected vote shares. Furthermore, the figures show that the predicted coalition weights (on the vertical axis) of the CDU are almost always greater than .5 and, for the majority of the respondents, the confidence intervals do not overlap the horizontal line. This suggests that an average voter perceives the CDU to have at least a slight advantage in determining coalition policy — this is evident from the fact that the CDU's predicted coalition weight is larger than .5 for a voter that expects the two coalition parties to have an equal vote share.

Respondents employing the second heuristic, the proportional influence heuristic, would simply assign a coalition weight to the party equal to its expected vote share (as a share of the coalition parties' total expected vote share). The Gamson's Law heuristic is shown in the panels on the left, i.e., a line with a slope of one. While Gamson's Law implies that party size has a positive effect on coalition policy, the graph for the CDU-FDP coalition makes clear that the effect of *Party Size* is somewhat smaller than what the Gamson's Law heuristic implies. Although the slope is less than one, it bears noting that about 17% of the respondents have expectations about the relative size of the CDU in a CDU-FDP coalition that are not statistically different from what Gamson's Law would predict. For the relative size of the CDU in a CDU-SPD coalition, about 28% of the respondents fall in the range where the 95% confidence interval covers the prediction of the Gamson's Law heuristic. Overall, though, there is little reason to conclude that Gamson's Law accurately describes voters' expectations about the parties' policy influence. Instead, the results across both coalitions suggest that the CDU seems to pay a policy penalty. While the CDU seems to have more influence over coalition policy than its coalition partner, the larger the CDU is expected relative to its coalition partner, the higher this policy penalty seems to be. Consequently, the respective smaller party within the coalition has an advantage in terms influence on the

coalition policy above what could be expected based on Gamson’s Law.

Overall, then, neither heuristic appears to capture respondents’ expectations about government policy and, instead, their expectations fall somewhere in between the two heuristics. Importantly, the standard assumption invoked in the literature — that voters hold beliefs consistent with Gamson’s Law when making inferences about how the policy preferences of coalition parties affect government policy — is *not* supported by our data. Instead respondents appear to see smaller coalition parties having disproportional influence on policy, which echoes the findings in the literature that smaller parties receive a disproportionate share of cabinet portfolios (see, e.g., Browne and Franklin, 1973; Browne and Frendreis, 1980; Warwick and Druckman, 2006). This finding also suggests that voters do not perceive a formateur advantages — although the evidence on this point is indirect as no formateurs are formally appointed in the German system and the conclusion can, thus, only be supported if one is willing to assume that larger parties are more likely to occupy a formateur-like role. Party size clearly matters, however. Thus, respondents appear to recognize that larger parties will be better able to influence coalition policy. A positive effect of party size cannot tell us, though, whether this advantage derives from the party’s bargaining strength or other factors, such as greater likelihood of acting as a formateur.²⁵

Ideological centrality, our second proxy for bargaining strength, suggests that voters appear to behave as if they pay attention to the bargaining context, i.e., how the parties’ ideological position may affect their ability to form coalitions. The right panels of Figure 4 show how ideological centrality affects expectations about coalition policy. Perceived ideological centrality has a positive effect on the respondents’ expected coalition weight. This suggests that voters see centrist parties as having a bargaining advantage as expected by the bargaining strength heuristic.²⁶ Another thing to note is that the CDU’s weight, in

²⁵The likelihood of being chosen formateur can, of course, be considered part of a party’s bargaining strength but here we wish to distinguish between bargaining strength that derives from credible threats to pursue alternative coalitions and the advantage of having a higher probability of acting as a formateur.

²⁶The finding could also be interpreted as indirect support for McDonald and Budge’s (2005) argument

particular in the CDU-FDP coalition model, tends to be higher ($> .5$) even when the CDU is disadvantaged in terms of ideological centrality — this is true when the CDU and SPD are seen as equally central and for any difference in ideological centrality in the CDU-FDP coalition. This is explained by the fact that the predicted weights are calculated holding other covariates fixed at their actual values and the CDU is generally perceived to be the bigger party. This is interesting in light of the fact that the distribution of the difference in ideological centrality, as shown by the histograms in Figure 4, does not favor the CDU. Thus, the effect of party size seems to outweigh the effects of ideological centrality — although this is far clearer in the case of the CDU-FDP coalition than the CDU-SPD coalition.

To sum up, we find that party size and ideological centrality generally have a positive effect on the weight voters assign to a party’s ability to influence government policy for the two coalitions that are deemed more likely to form.

Conclusions

Taking a cue from Gamson’s Law, a considerable body of work on politics and policy-making in multi-party parliamentary systems assumes that the policy positions of coalition governments are simply the weighted average of the coalition parties’ positions. More recently, political behavior scholars have noted that instrumental voters in multi-party systems have an incentive to cast their votes both as to influence which coalition form as well as the policies adopted by coalition governments. ‘Coalition voting’ of this form requires voters to form expectations about the policies coalition governments will implement and, implicitly or explicitly, much of the literature assumes that voters form expectations in line with Gamson’s Law. Our evidence, using unique survey data on the policy positions of parties and government coalitions, suggests, however, that voters do not perceive policy influence to be proportional to party size.

about the median mandate, i.e., that political parties will have a hard time moving policy away from the median legislator and voters, therefore, would assign less weight to the policy influence of parties that are further away from the middle of the policy spectrum.

This result is in line with recent work on responsibility attribution in coalition governments. First, there is experimental evidence on responsibility attribution in the context of collective decision making, akin to coalition governments, where blame is neither assigned equally nor proportionally to the actors' size (Duch, Przepiorka and Stevenson, 2015). Second, our finding squares nicely with recent survey evidence (Angelova, König and Proksch, 2016) showing that voters neither assign responsibility equally nor proportionally to the size of a coalition party.

While our results provide evidence that voters perceive parties to neither have equal nor proportional influence on coalition policy, they suggest that voters are sensitive to factors that contribute to parties' bargaining strength. That is, we find that party size matters — albeit less than Gamson's Law would suggest — but also that ideology, which acts as a constraint on the parties' threats to credibly pursue alternative coalitions, influences voters' perceptions. Thus, although the findings here are cause for concern for theories that rely on the proportional influence assumption, some comfort can be taken in the fact that voters do respond to the key factors scholars have argued to determine coalition policy. That is, voters appear capable of forming expectations about coalition policy and those expectations vary in predictable manner with party size and ideological centrality.

These findings have consequences for theories of coalition politics. Voters see coalitions differently from how theories such as Gamson's imply. True, most theories of coalitions consider party actions and do not directly address voters. But voter perceptions and party strategies must be linked both empirically and theoretically. Empirically, if it is the case that voters systematically see small parties in coalitions as more important than their size suggests then the actors (parties) have to take that into account. Theoretically the same thing applies unless we are willing to assume that party actions regarding coalitions are completely independent of voter perceptions. Any theory of democratic politics takes as a basic assumption that elite behavior is constrained by voter behavior. It would seem difficult to have a model of coalitions and elections where voter and parties do not share common knowledge of who is important within a coalition. At the very least, even as political science

theory says ‘here is how the coalition game is played out by parties’, voters who live in those systems are telling us ‘we see it differently’.

A number of anecdotes suggest that small parties have outsized influence in coalition politics. Small parties may be portrayed as ‘kingmakers’ using their ‘blackmail’ power under some specific circumstances. More systematic evidence than anecdote is seen in formal measures of influence. They show the value of small parties when they are in the right place (i.e. a good position in the policy space) at the right time. Our results provide another and different kind of evidence that shows the impact of small parties in multi-party politics. Voters who live with coalition politics systematically see coalition politics play out in a way that small parties have an influence on policy outcomes larger than their size would suggest.

Whether and how voters can hold multi-party governments accountable is a long standing question within the literature, particularly as it relates to how economic voting may take place given coalition governments (see, e.g., Powell and Whitten, 1993; Anderson, 2007; Angelova, König and Proksch, 2016). In very general terms this literature suggests that larger parties will share more of the credit and blame than smaller parties and in particular the largest effects will be associated with the Prime Minister’s party (Debus, Stegmaier and Tosun, 2014). What we see, then, are unequal but predictable patterns of accountability across parties within a coalition. Our results provide a another benchmark suggesting that if indeed voters see small parties as having an effect larger than their size would suggest, then we should see small parties being held accountable to a greater degree than a proportional influence heuristic would suggest: smaller parties should be seen to be more responsible than a naive version of Gamson’s theory applied to accountability would predict.

Our findings, however, raise a number of questions that require further study. First, are voters’ expectations accurate? Answering this question is a significant challenge as it requires knowledge of how much influence individual coalition parties actually have on government policy but our understanding of policy making in parliamentary systems remains

underdeveloped.²⁷ It is important to note, however, that the question of whether voters' expectations are accurate is not relevant when it comes to studying coalition voting, i.e., the question there is whether voters respond to *their* perceptions of the political context.

Second, on a related note, we might flip the question around and ask whether scholars' expectations about coalition policy are accurate. The assumption of proportional influence is quite dominant in the literature (see, e.g., Martin and Vanberg, 2014; Indridason, 2011) despite the fact that it is at best a rough approximation given the empirical regularities scholars observe to the contrary (see, e.g., Browne and Frensdreis, 1980; Warwick and Druckman, 2006). The dominant assumption of proportional influence in the literature is, as we have seen here, also at odds with voters' coalition policy perceptions and similarly, at odds with voters' perception of portfolio allocation (Lin et al., 2017). While one may doubt the ability of voters to make informed inferences about the influence of coalition parties, it is comforting that voters' perceptions mirror the deviations from Gamson's Law established in the empirical literature but at the same time the discrepancy between the established small party bias and the widely adopted assumption of strictly proportional influence is nonetheless disconcerting.

Third, our results are necessarily limited to three elections in Austria, Germany and Sweden. The 2009 GLES is the only survey available that includes the questions necessary to examine voters' perceptions of party influence on government policy. While the Austrian as well as the Swedish survey does include questions about the policy positions of potential coalitions, respondents were not asked about their expectations about party size. Our hope is that our findings will encourage scholars to include questions about the policy positions of coalition governments in future surveys. We have evidence here that respondents can do this.

Finally, understanding whether and how voters form expectations about coalition policy

²⁷This is not to say the question has been ignored. Warwick (2001), Laver and Budge (1992), and Debus (2008), for example, have sought to estimate the influence of coalition parties by comparing the manifestos of coalition parties with coalition agreements.

is not only important in terms improving theoretical and empirical research on coalition politics and voting behavior — it also has quite significant implications for representation and voters’ ability to hold governments accountable. The choices of voters at election time risk not being meaningful if voters lack understanding of how their votes affect policy outcomes. Thus, to make effective use of their votes, prospective voters need both a basic understanding of what to expect from the coalition formation process and how much influence individual coalition parties have on policy outcomes. Similarly, retrospective voters need to be able to evaluate the performance of individual coalition parties. Doing so requires also establishing benchmarks against which to measure the performance of parties. That is, it may not be reasonable to expect a small coalition partner to have the same influence as a major coalition party and one might, therefore, consider a minor party to have performed well even if it has only been moderately successful in pursuing its policy agenda. The extent to which voters evaluate coalition parties on those terms is not clear. Some accounts suggest that this may not be the case. For example, Strøm (1984) argues that one reason minority governments form is that they wish to avoid the electoral penalty that comes with being in government — incorrect expectations about influence on coalition policy would then potentially further dissuade small parties from joining governing coalitions. While our results necessarily fall short of showing that voters form accurate expectations about coalition policy, they do show that voters form expectations and that those expectations tend to vary in predictable ways with factors that ought to influence the bargaining strength of the parties.

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Appendix

Estimated Coalition Weight ($\hat{\alpha}_A$) of First Named Party

In this section we present the regression results that are displayed graphically in figure 1 in the paper as well as formal hypotheses tests for the null hypotheses that the coalition weight differs from 0.5 (i.e., equal influence).

Table 3: ESTIMATED COALITION WEIGHT (GERMANY)

	COALITION		
	CDU-SPD	CDU-FDP	SPD-B90
α	0.536*** (0.006)	0.656*** (0.013)	0.538*** (0.014)
OBSERVATIONS	2080	2051	2034

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ for $H_0: \alpha = 0.5$.

Table 4: ESTIMATED COALITION WEIGHT (AUSTRIA)

	COALITION			
	SPÖ-ÖVP	ÖVP-FPÖ	SPÖ-Greens	SPÖ-FPÖ
α	0.449*** (0.009)	0.557*** (0.011)	0.546*** (0.013)	0.574*** (0.007)
OBSERVATIONS	2810	2768	2757	2364

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ given $H_0: \alpha = 0.5$.

Table 5: ESTIMATED COALITION WEIGHT (SWEDEN)

	SAP-Greens
α	0.390*** (0.014)
OBSERVATIONS	1274

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ given $H_0: \alpha = 0.5$.

Testing the Order Effect

The Austrian survey included a survey experiment in which the order of the coalition parties was randomized. Here we present the regressions results for the Austrian survey experiment that were presented graphically in figure 3 in the paper as well as formal hypotheses tests that the coalition weight differs from 0.5 (i.e., equal influence).

Table 6: ESTIMATED COALITION WEIGHT OF FIRST PARTY IN AUSTRIA

	COALITION						
	SPÖ-ÖVP	ÖVP-SPÖ	ÖVP-FPÖ	FPÖ-ÖVP	SPÖ-Greens	SPÖ-FPÖ	FPÖ-SPÖ
α	0.444*** (0.012)	0.546*** (0.012)	0.557*** (0.015)	0.442*** (0.015)	0.546*** (0.013)	0.581*** (0.010)	0.435*** (0.010)
OBSERVATIONS	1438	1372	1422	1346	2757	1245	1119

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ given $H_0: \alpha = 0.5$.

Robustness Check: Accounting for Measurement Error

Figures 1 and 2 in the paper suggest that when it comes to voters, Gamson’s Law doesn’t apply. However, it is possible that measurement error in the independent variable has an attenuating effect on our estimate of the coalition weight α . Given the data available to us, we cannot simply identify a measurement model to examine directly how strong the impact of measurement error in attenuating our estimates is. A second-best strategy is to look at a subsample of ‘political experts’. Such a subsample of ‘political experts’ should provide an estimate of the estimated coalition weight that is most likely not plagued by measurement error. For this robustness test we focus on the German data as it includes a very comprehensive instrument to measure a respondent’s political knowledge. We define ‘political experts’ as respondents of the 2009 GLES that rank in the upper half of a knowledge scale we constructed based on 13 factual political knowledge items. Again, while expectations of ‘non-experts’ is likely to include a fairly large random component the expectations of ‘political experts’ should be more accurate and, thus, the ‘political experts’ subset of data should contain less measurement error.

Table 3 in the previous section provides the estimates that are displayed in figure 1 using the full sample of respondents. We can see, mirroring the results that have been presented graphically in figure 1 that the coalition weight of the first-named party of each coalition is systematically larger than .5.

Table 7: ESTIMATED COALITION WEIGHT (GERMANY)
– EXPERTS ONLY –

	COALITION		
	CDU-SPD	CDU-FDP	SPD-B90
α	0.523** (0.007)	0.658** (0.018)	0.560** (0.019)
OBSERVATIONS	1064	1059	1054

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$ for $H_0: \alpha = 0.5$.

The estimation results using only the subsample of ‘political experts’ (table 7) show that

the estimated coalition weights are nearly identical in magnitude to the ones presented in table 3. Moreover, the estimated weights are actually larger in two out of three cases, which further suggests that attenuation bias is not a significant issue here. The standard errors are, naturally, larger due to the reduced sample size. Despite the larger standard errors, we can still conclude that the estimated coalitions weights are systematically larger from .5. Thus, even using a subsample of ‘political experts’ where the measurement error can be expected to be less severe, citizens seem not to use the equal inference heuristic. Moreover, all the estimated coalition weights for political experts are also systematically different from what Gamson’s Law would predict (i.e., $\alpha_{CDU} = .62$ for the CDU-SPD coalition, $\alpha_{CDU} = .72$ for the CDU-FDP coalition, and $\alpha_{SPD} = .68$ for the SPD-Green coalition).

In addition to the simple model presented in equation (1) of the paper, we extended our analysis to account for respondents’ heterogenous expectations about party size. We estimated the model shown in equation (4) and presented the estimated weights in figure 2. The regression results using the full sample of respondents are shown in table 8.

Table 8: TESTING GAMSON’S LAW
— PROPORTIONAL INFLUENCE OF COALITION PARTIES —

	CDU-SPD	CDU-FDP	SPD-B90
α_A	0.947*** (0.012)	0.946*** (0.011)	0.827*** (0.015)
α_B	0.997 (0.026)	1.149*** (0.032)	1.260*** (0.037)
OBSERVATIONS	2078	2050	2030

Standard errors in parentheses. *p < 0.10, **p < 0.05, ***p < 0.01 given $H_0: \alpha = 1$.

The estimated weights are (with the exception of the SPD weight in the CDU-SPD coalition) systematically different from ‘1’, i.e., the expected weight if voters employ the Gamson’s Law heuristic. Again, as we discuss in the body of the paper the paper, voters — even when we account for their varying expectations about the coalition parties’ sizes — don’t appear to form expectations in accordance with Gamson’s Law..

Again, measurement error may be responsible for why the estimated weights are different

from ‘1’. As above, we replicate our analysis using only the subsample of ‘political experts’. In this subsample we obtain, again, very similar estimates and somewhat larger standard errors as can be seen in table 9.

Table 9: TESTING GAMSON’S LAW (POLITICAL EXPERTS)
 — PROPORTIONAL INFLUENCE OF COALITION PARTIES —

	CDU-SPD	CDU-FDP	SPD-B90
α_A	0.945*** (0.015)	0.941*** (0.015)	0.849*** (0.022)
α_B	0.970 (0.038)	1.201*** (0.046)	1.179*** (0.055)
OBSERVATIONS	1063	1059	1053

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ given $H_0: \alpha = 1$.

The estimated weights do not support the prediction of Gamson’s Law except for the SDP in the CDU-SPD coalition. Moreover, strictly speaking, Gamson Law implies that both weights should equal ‘1’. Again, this can also be safely rejected for all three coalitions (Significance tests with $H_0 : \alpha_A = \alpha_B = 1$. CDU-SPD: $F_{2,1061} = 40.03$ ($p < .0001$), CDU-FDP: $F_{2,1057} = 9.57$ ($p < .001$), SPD-B90: $F_{2,1051} = 37.61$ ($p < .0001$). The results of the hypotheses tests for the models estimating the full sample of respondents were presented in footnote 18 in the main text).

Thus, we conclude that if the observations in the subset of ‘political experts’ contains less measurement error, there is very little to suggest that attenuation bias is driving our conclusion that voters deviate systematically from what one would expect were using a heuristic analogous to Gamson’s Law.¹

¹Moreover, one can straightforwardly show that differential item functioning (DIF), which also can generate measurements that are different from the ‘true value’, does not bias regression estimates but merely causes heteroscedastic errors.