[DRAFT. Analysis to be updated]

Portfolio Allocation in Parliamentary Governments

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Abstract

The distribution of cabinet seats among coalition partners is puzzling: portfolio allocations tend to be highly proportional, with a small-party bias, while legislative bargaining models typically predict over-compensation of formateur parties. Some more recent bargaining models of government formation is more consistent with Gamson's Law. Partly drawing on this work, we investigate how variation in the involvement of legislators in the making and breaking of governments affects the share of portfolios that formateur parties reap. We argue that restrictive rules for government formation and termination increase the prospects of coalition durability and provide formateur parties with weaker incentives to overcompensate coalition partners in exchange for their support. Our results confirm that absolute majority requirements for cabinet formation and removal tend to advantage formateur parties in portfolio allocation. Specifically, we find that formateur parties on average receive a higher share of portfolios compared with other parties in countries with an absolute majority requirement for government removal, and/or an absolute majority investiture requirement. Consequently, the small-party bias in portfolio allocation is reduced by about 4% in countries with strong investiture and no-confidence institutions. These findings are robust to various coalition characteristics and national settings. The analysis more than doubles the number of observations compared to previous studies by covering portfolio allocation in 569 coalition governments in 30 parliamentary democracies 1945-2014. Moreover, we improve measurement of portfolio allocation by basing calculations on the Sainte-Lagüe divisor method, removing cabinet-size bias, and providing a substantially meaningful measure of under- and overrepresentation of parties in coalition governments.

Keywords: Coalition governments, Gamson's law, portfolio allocation, investiture rules, no-confidence procedures

How coalition partners divide seats at the cabinet table is hotly debated in the government formation literature. Efforts to understand the portfolio allocation process are fuelled by the alleged contradiction between theoretical perspectives on bargaining and findings on how parties actually allocate ministries. Formal models of legislative bargaining expect the formateur – the party with the power to propose the allocation of government resources, or, in the words of Müller and Strøm (2003: 15), the "bargaining coordinator who is also the intended prime minister" – to exploit its privileged position so that it receives more cabinet posts than it otherwise would (Ansolabehere *et al.* 2005; Snyder *et al.* 2005). Nevertheless, empirical tests of the relationship between party resources and cabinet payoffs in parliamentary regimes have consistently found not only a strong positive relationship between legislative seat shares and portfolio shares, as predicted by Gamson's law (1961: 376), but also a systematic deviation from proportionality favouring smaller parties (Browne and Franklin 1973; Warwick and Druckman 2006; Bäck *et al.* 2009). Alternative operationalisations of the bargaining power of government parties (Ansolabehere *et al.* 2005) as well as salience-weighted portfolio payoffs (Warwick and Druckman 2006) have proven to affect the proportionality relationship only marginally, as neither salience nor bargaining power seem to advantage formateur parties. The misalignment of predictions based on bargaining models and empirical findings is often referred to as the "portfolio allocation paradox" (Warwick and Druckman 2006).

Coalition scholars have sought to explain this contradictory relationship both theoretically and empirically. In contrast to the bargaining model of Baron and Ferejohn (1989), which assumes that a formateur selected by an exogenous recognition rule makes simple take-it-or-leave-it offers to potential coalition partners,[1] newer institutions-based models of government formation are less inclined to abstract away essential features of this process. For example, in Bassi's (2013) model of government formation, formateurs and

governing coalitions emerge endogenously from the political game as a consequence of competition and bargaining among parliamentary parties. The model's increased realism implies that any "proposer advantage" of formateurs in portfolio allocation disappears. Similarly, Carroll and Cox (2007) extend traditional bargaining models by allowing parties to form pre-election pacts, which are expected to provide incentives to pre-commit to relatively proportional portfolio allocations. Falcó-Gimeno and Indridason (2013) suggest that the more complex and uncertain bargaining situations become, the more proportional the allocation of portfolios. Thus, none of these studies predicts that formateur parties should be better positioned to extract more than their fair share of cabinet seats.

In contrast, studies of portfolio allocation in non-parliamentary systems find that a formateur advantage does exist. Empirical analyses of portfolio allocation at regional level in the Fifth French Republic, where the no confidence vote is lacking (Golder and Thomas 2014), in multiparty presidential systems in the Americas (Amorim Neto and Samuels 2010; Indridason 2015), and in Africa's presidential democracies (Ariotti and Golder 2017) show that the distribution of ministerial spoils tends to favour formateur parties when executive coalitions are not dependent on assembly confidence. In this case, the overpayment of formateur parties is put down to the separation of the government and legislature's origin and survival. In parliamentary systems, where the cabinet is subject to assembly confidence, formateur parties must consider not only the formation of a viable coalition but also its survival. Thus, to enhance the government's survival prospects, formateurs make more generous offers to their coalition partners than the standard Baron-Ferejohn model predicts. Hence, there is no formateur bonus. By contrast, as the executive's survival is independent of the assembly in presidential systems, the formateur's need to buy off their coalition partners with bonus portfolios is considerably reduced.

Although no confidence procedures are present by definition in parliamentary systems, there is considerable variation in how basic parliamentary instruments are institutionalized. While a simple majority of the legislators can remove the executive in some countries, the legislature's ability to bring down the government is severely restricted when the support of a majority of the total membership (absolute majority) and an agreement on an alternative prime minister is required to pass a no confidence vote. Similarly, while some governments can take office without the legislature's visible and explicit support, others must demonstrate that they have the backing of more than half of legislators (Bergman et al. 2003; Rasch et al. 2015).

Variation in majority requirements for both types of parliamentary procedures has been shown to affect government stability. Constructive no confidence motions and the explicit support of an absolute majority of legislators make governments more difficult to topple (De Winter 1995; Damgaard 2008). A similar effect exists for stricter rules of government investiture, where the explicit support of an absolute majority of legislators is required for a new government to take office (Rasch *et al.* 2015). Therefore, if it is true that the limited ability of coalition dissolution by legislators favours formateur parties in portfolio allocation in non-parliamentary systems (Indridason 2015), then strict rules of government formation and termination – that is, rules that increase government stability – can be expected to have a similar effect in parliamentary systems.

The theory we advance in this paper exploits the variation in rules and procedures within parliamentary systems, especially the different majority hurdles on investiture votes and no confidence motions. We argue that, just as the absence of no confidence mechanisms leads to different portfolio allocation outcomes in presidential systems compared to parliamentary systems, variation in the involvement of legislators in government formation and termination directly and indirectly influences the long-term stability prospects of

emerging cabinets and inter-party negotiations over office spoils. As the increase in government stability reduces the small coalition partners' ability to break down the government coalition, formateurs have fewer reasons to buy off their support to form stable coalitions. Thus, we expect that higher majority thresholds required for the cabinet's formation or termination by parliament benefit the formateur's party in portfolio allocation. We test this argument on a new data set comprising constitutional rules and portfolio allocation for 30 parliamentary and semi-presidential democracies over the post-war period (1945-2014). In line with these expectations, we find that the portfolio allocation process is more likely to favour formateurs in institutional environments that foster strong parliamentary involvement in the selection and removal of the government. This pattern of portfolio allocation holds when we consider different types of governing coalitions.

Parliamentary Institutions and Coalition Formation

Investiture rules and no confidence procedures are the most important *ex ante* and *ex post* mechanisms enabling parliament to exercise control over governments in parliamentary systems. The institutional details of these key procedures and the way in which they are linked vary more widely from one parliament to another than the crude distinction between positively and negatively formulated rules of government investiture implies. For example, the decision rule used for investiture votes can range from negative parliamentarism (having no vote at all), to Sweden's negative majority rule (where a new cabinet takes office unless it is opposed by more than half of elected legislators), simple majority rules (explicit support required from more than half of those present and voting) and absolute majority rules (explicit support required from more than half of all elected members). Results are mixed, but some scholars find that minority governments and a shorter government formation process are

more likely in the absence of a formal investiture vote (Strøm 1990; Bergman 1993a; De Winter 1995; Rasch *et al.* 2015). The size of the majority needed to remove a government also varies across parliamentary systems. For example, while in France an absolute majority of legislators need to support a no confidence motion for it to have effect, Scandinavian governments can be brought down by a simple majority of the legislators present and voting. The requirement of absolute majority support for no confidence procedures, even regular ones, weakens parliamentary *ex post* control in the short run, making governments more difficult to topple (De Winter 1995: 140). Thus, although the vote of no confidence is a defining feature of all parliamentary systems, different majority hurdles required for cabinet removal affect the emerging coalitions' prospects of stability.

The expectations about the impact of absolute majority requirements for investiture and no confidence procedures on government stability lead to our hypothesis about the way in which the parliament's involvement in the selection and removal of the cabinet shapes portfolio allocation. We distinguish between strong and weak formation rules on the one hand, the strong variant comprising only absolute majority investiture, and, on the other hand, no confidence instruments requiring the support of either a simple or an absolute majority. Strong involvement by means of an absolute majority investiture affects portfolio allocation in two ways. First, this procedure in practice means that a majority of parliamentarians need to accept the coalition, including members of the formateur party. For example, Raunio (2011: 121) argues that the introduction of the investiture vote in Finland's 2000 constitution strengthened the influence of parliamentary party groups on government formation and government action. Similarly, Bergman (1993b) shows that the introduction of a vote on the Speaker's candidate for prime minister in Sweden after 1975, although negatively formulated, forced party leaders to consult more widely to ensure that their own party members were willing to vote for particular candidates. Therefore, rank-and-file parliamentarians serve as

an additional constraint – or a veto player – compared to situations where party elites may compromise without facing a vote on the floor. Thus, ordinary legislators can be expected to be more reluctant to accept strongly disproportional portfolio allocations in their disfavour.

We should also note that in most countries with absolute majority investiture, the floor vote is public. The publicity of votes fosters an open commitment to the coalition that increases the costs of deserting it mid-term. Second, absolute majority investiture leads to governments with a more clarified parliamentary basis, and increases the probability that a majority coalition forms (Rasch *et al.* 2015). This is significant because we know that majority governments tend to be less fragile and more stable than minority governments (Strøm 1990; Conrad and Golder 2010). As a result, maintaining the coalition over time becomes less challenging.

Absolute majority no confidence procedures make it harder to get rid of a government once formed; under ordinary no confidence rules, governments are more vulnerable and easier to topple. Again, there are two relevant mechanisms in our context. First, it is more valuable to participate in coalitions that once formed are hard to remove. As the pie grows, so to speak, the need for formateurs to over-compensate potential coalition partners might shrink. The second mechanism also concerns stability and is closely related. Regardless of the no confidence procedure, it may be just as costly for the formateur to bring other parties into the coalition initially. However, if the coalition is hard to remove, the formateur does not need to provide extra compensation to other cabinet parties just to make the coalition survive. Consequently, to the extent that the government's removal becomes more difficult and challenging, the bargaining position of non-formateur parties weakens. This make formateurs somewhat stronger in the portfolio allocation process than they would otherwise be and we should observe less bias in favour of non-formateurs.

To sum up, our argument is that parliamentary institutions matter and influence the bargaining position of parties and the formateurs' need to buy off coalition partners. Investiture rules requiring an absolute majority approval on the floor provide incoming governments with a more clarified and solid parliamentary basis that is more difficult to overturn. In addition, the fact that a majority of members of parliament has a formal voice in the formation process, make extensively unbalanced deals less likely. Furthermore, absolute majority no confidence rules make it more difficult for the parliament to get rid of a government once formed. It strengthens the executive, extending its survival prospects. Thus, both institutional features of parliamentarism should benefit formateurs in the formation process and skew the overall distribution of portfolios more in their favour than it would otherwise be. These expectations give rise to our hypothesis:

Hypothesis: Separately or in combination, absolute majority investiture rules and no confidence procedures reduce the small-party bias in portfolio allocation and benefit the formateur party.

Investiture and no confidence procedures

Our analysis comprises thirty parliamentary and semi-presidential countries from 1945 onwards. The countries, time periods under analysis and number of coalition governments included in the analysis are listed in Appendix D. Rules of government formation and censure are classified based on the extent to which legislators are involved in the decision-making process. Investiture requirements are divided in two broad categories. The first one includes absolute majority investiture rules, which represent the highest hurdle that new governments must pass before (or soon after) taking office. This group includes countries like Germany and Hungary.[2] The second category includes negative formation rules (where there is no

investiture or where the voting rule applied to investiture votes is negative majority) and positive formation rules that require simple majority. This group includes countries like Norway and Denmark, where there are no investiture procedures. Belgium after the 1994 constitutional reform, together with Portugal and Sweden, are cases of negative investiture rules, where the government can form even if a simple majority votes against it (Cheibub *et al.* 2015: 982). Countries like Ireland and Latvia, where the investiture requirement is limited to the majority of legislators present and voting (simple majority), are also included in this category.

We use similar decision rules to codify no confidence procedures. The main distinction is between legislatures where parliamentarians need an absolute majority to pass censure motions and legislatures where a simple majority is sufficient to bring down incumbent governments. The former category includes countries with constructive motions of no confidence, like Germany, as well as countries where the absolute majority hurdle is not accompanied by the requirement of nominating an alternative prime minister, such as Portugal.

Table 1 summarises our grouping of weak and strong parliamentary involvement in making and breaking governments. As is apparent from the table, the cell combining decision rules by absolute majority for investiture votes and simple majority for no confidence motions lacks observations. Although this pattern limits our ability to study the combined effects of strong and weak parliamentary involvement in the formation and termination of governments, we are still able to estimate the independent effect of formal rules of government investiture and removal as well as the simultaneous presence (upper-left cell) or absence (bottom-right cell) of demanding majority requirements.

[Table 1]

Another limitation of our data is the low level of within-country variation in the key independent variables. As a result, we can see that countries from the same region, such as Scandinavia or Eastern Europe, tend to cluster together. Establishing cause and effect in such settings is challenging. However, instances of cross-temporal institutional variation in some of the countries in our dataset seem to confirm our expectations.

Consider the following examples from the countries that did experience change in investiture and no confidence rules in post-war Europe. Israeli cabinets are usually presented as an exception to the infamous "paradox", as portfolio allocation in recent decades tends to over-compensate the party of the prime minister (Kenig and Barnea 2015: 183). The rules for government formation and resignation are nowadays restrictive but they have undergone several changes over time. Between 1948 and 1996, investiture and no confidence votes could be passed with the support of a simple majority of legislators. During this time, the average formateur party provided about 69% of the government's total legislative weight but received just 66% of the portfolio payoff. While allocations were almost proportional, the underpayment suffered by formateur parties ranged from one to four posts. Between 1996 and 2003 prime ministers were directly elected and the formal requirement for an investiture vote removed, making the bargaining position of formateurs extraordinarily strong (Arian *et al.* 2002: 39–41). Simultaneously, the threshold for a successful no confidence vote was raised to an absolute majority of legislators. This time around, the average formateur party provided 39% of the government's total legislative weight, and received about 52% of the portfolio payoff, amounting to a considerable formateur over-payment. On average, formateurs received 2.4 more cabinet positions in the governments formed over this nine-year period than their legislative size entitled them to. Notably, in none of the governments that formed during this time did formateur parties receive fewer portfolios than their

proportional share. Since 2003, when the simple majority investiture vote was reversed, formateurs have continued to be overpaid albeit at a lower level: the average formateur party provided 47% of the government's total legislative weight and received about 54% of the portfolio payoff. Over this period, formateurs received 1.7 more cabinet positions than their proportional share and there was only one instance in which the formateur party was underpaid by one post (when the alliance of Labour Party-Meimad alliance joined the coalition government led by PM Sharon's Likud Party in January 2005).

Belgian governments provide similar evidence regarding the impact of institutional change on portfolio allocation. Before the 1993 constitutional reform, when a simple majority of legislators could unseat incumbent governments, formateurs provided 47% of the ruling coalition legislative seats, but received only 40% of cabinet posts. On average, formateurs systematically received at least one ministry less than their proportional share, while occasional underpayments could reach three or four posts. Following the 1993 reform, which increased the majority threshold for the censure of cabinets to absolute majority, portfolio allocations became more proportional. On average, formateurs obtained 29% of cabinet posts in exchange for a 27% contribution to legislative seats. Moreover, none of these parties were underpaid by more than one portfolio during this time. Overall, these examples confirm that the link we identified between parliamentary institutions and portfolio allocation holds not just on average, but also for the great majority of cabinets when considered in isolation before and after an institutional change.

In contrast to Belgium and Israel, the distribution of cabinet post in Scandinavian countries, where there are no formal investiture votes (or a negative one in Sweden after 1974) and a majority of legislators present and voting is sufficient to dismiss a sitting government, illustrates the trend of formateur underpayment. Denmark, Norway and Sweden have had several governments where the party of the prime minister obtained three portfolios less than

their fair share. In the Danish second Schlüter government, the Conservatives even got four portfolios less than in a strictly proportional allocation. In none of the Scandinavian coalition governments after World War II, the formateur or prime minister parties have been overrepresented. In general, smaller parties have been advantaged. Formateur parties have been under-compensated even in cases where they were not the largest coalition party (e.g. the Christian People's Party of Prime Minister Bondevik in Norway in 2001. Over time, the average formateur party in Denmark provides about 67% of the government's legislative seats and receives about 58% of the portfolio payoff, while the average non-formateur party provides nearly 20% of the government's legislative weight and obtains more than 26% of the cabinet seats.

The patterns of coalition formation in Scandinavia, Israel, and Belgium suggest that rules of government formation and termination affect the negotiation position of formateurs and subsequently the allocation of cabinet portfolios. After presenting our data and variables on coalition governments in the next section, we move on to a systematic analysis of portfolio allocation under different institutional scenarios.

Portfolio allocation data and measures

For the analysis of portfolio allocation we use a data set consisting of coalition governments included in the ParlGov database (Döring and Manow 2016), where a new government is counted whenever there is a change in the party composition of a government coalition; a change in the identity of the prime minister; or a general election. To create a new data set on legislative seat shares and portfolio allocation we relied on Woldendorp et al. (2000) and Seki and Williams (2014) data sets. We updated and crosschecked these data against the information published in the annual country reports published in the *European*

Journal of Political Research Political Data Yearbook since early 1990s until 2014. Where available, and especially when the above-mentioned sources provided contradictory information, we used official data sources to crosscheck, update, and correct existing portfolio allocation data (we provide country sources in Appendix E). Overall, the dataset covers 1,807 parties that participated in 569 coalition governments..

So far, most scholars have tested Gamson's Law using legislative seat shares and portfolio shares as proxies for party resources and cabinet payoffs respectively. Indeed, raw legislative seat shares have been empirically proven to predict the distribution of cabinet portfolios in European governments better than theoretical voting weights (Cutler *et al.* 2016: 11). However, as previous studies have noted (Browne and Frendreis 1980; Warwick and Druckman 2001; Indridason 2015), this approach generates some random errors because seat shares and portfolio shares are expressed in different units, and each minister posts has to be allocated in its entirety. For example, imagine a party that contributes seven percent of a coalition's legislative seat share in a twenty-seat cabinet. Depending on the size of the other parties in the coalition, this party is likely to end up with either five percent (i.e. one cabinet seat) or ten percent (i.e. two cabinet seats) of available ministries. Neither of the two scenarios respects the proportionality norm: in the first case the party appears as underpaid in cabinet payoffs, while in the second case it looks like it receives a portfolio bonus. Both situations may be artificial deviations from proportionality as whether one or two portfolios represent a "proportional" distribution of portfolios depends on the size of the other parties in coalition. Let us assume that one post is *the* most proportional allocation. Then, five percent of the portfolios of this party perfectly reflects its seat share (of seven percent), with no real deviation from Gamson's Law in the allocation process.

One way to remove artificial deviations from proportionality from the analysis, is to use a divisor method based on seat distribution (Browne and Frendreis 1980; Brams and

Kaplan 2004; Ecker *et al.* 2015; Raabe and Linhart 2015; Bucur 2016). As shown by O'Leary at al. (2005), divisor rules, such as d'Hondt or Sainte-Laguë, have been used to determine not only the number of posts each party receives, but also as a sequencing procedure that determines the order in which parties choose their preferred ministries in Northern Ireland and in Danish municipalities. Among allocation methods, however, the Sainte-Laguë formula has been characterised as "the unique unbiased proportional divisor method" (Balinski and H. Peyton Young 1982: 125), due to its ability to eliminate the large-party advantage in the seat allocation process (Shugart and Taagepera 2017: 37–8). Thus, using the Sainte-Laguë formula to estimate the number of portfolios parties should receive under the proportionality law is a more accurate way of determining actual deviations from a perfect one-to-one relationship between legislative seats and portfolios than simply using raw portfolio shares. To determine whether parties are over- or underpaid in the allocation of cabinet posts, we employ the Sainte-Laguë formula to estimate the portfolio share parties should receive under the proportionality law based on their seat share contribution to the ruling coalition. Then we compare the proportional distribution of cabinet seats with the actual distribution observed empirically.

To illustrate how we use the Sainte-Laguë formula to translate legislative seat shares into cabinet seats, consider the distribution of ten cabinet seats to three parties owning 48%, 40%, and 12% of a government coalition's legislative seat-share. A purely proportional allocation of portfolios is impossible under these circumstances, as cabinet seats must be allocated to single parties in their entirety (i.e. the largest party in this example cannot obtain between four and five portfolios). However, if we apply the Sainte-Laguë formula to distribute the ten cabinet seats, then the three parties should receive five, four, and one ministry respectively (or 50, 40 and 10 percent of the portfolios). This proportional distribution of cabinet seats indicates the share of cabinet portfolios that a government party

should receive if the Sainte-Laguë formula were used to translate legislative seat shares into cabinet seat shares. For example, if the actual distribution of cabinet seats in the example above is five-four-one, then we have a case of perfect proportional allocation. However, if the actual distribution were four-four-two, then our data would indicate that the smaller party was overpaid by one portfolio at the expense of the largest party.

How does the new way of estimating the link between party resources and cabinet payoffs using the Sainte-Laguë allocation method affect the parity norm? Figure 1 shows how using the Sainte-Laguë formula to translate legislative seat shares into proportional cabinet portfolio shares affects the fit of the relationship compared to the use of raw seat shares. Both panels show similar regression lines, confirming that using the Sainte-Laguë formula to remove artificial deviations from proportionality affects the overall fit of the proportionality relationship only marginally (Warwick and Druckman 2001; Indridason 2015). The way in which the Sainte-Laguë formula removes artificial deviations from proportionality can be observed in the right-side panel, where more observations are to be found exactly on the 1:1 proportionality line than in the left-side panel. Moreover, the data in Figure 1 also reveal that while large parties tend to be under-compensated in the average portfolio allocation, a non-negligible number of formateur parties are over-compensated (being situated above the 1:1 proportionality line). Additionally, in a good number of situations, formateur parties are advantaged compared to non-formateur parties of a similar size, even if the portfolio allocation in many of these cases is not strictly proportional.

We investigate the disproportionality in the allocation of cabinet portfolios confirmed by our data in more detail. Figure 2a and 2b present deviations from perfect proportionality at cabinet and party levels (as measured by the Sainte-Laguë formula). We calculate disproportionality in absolute terms for each cabinet by considering the over- or under-representation of each coalition party. The results presented in Figure 2a indicate that

some disproportionality in the allocation of cabinet portfolios is present in 74% of the coalition governments in our sample. However, a perfectly proportional distribution of seats could be achieved in almost 41% of these cases just by transferring a single portfolio from the overrepresented party in the cabinet to the underrepresented one. In the remaining 18% of coalitions at least two portfolios would need to be transferred from the over-represented parties to the under-represented ones to achieve perfect proportionality. Similar results are obtained at party level, as indicated in Figure 2b: while 58% of parties in coalition governments obtain either too many or too few ministries compared to what a perfectly proportional allocation would imply, 68% of the disproportional allocations deviate only one seat from proportionality.[3]

[Figures 2a-2b]

As expected, when we consider the role of formateur status in the disproportional allocation of portfolios, we find that formateur parties are more often disadvantaged in the distribution of ministries than other parties are. The data in Figure 3 shows that formateurs receive less than their proportional share of portfolios in about 45% of formation situations. However, one can also notice these parties obtain their fair share of the prize in almost 35% of the cases and are advantaged in over 20% of the situations. In comparison, non-formateur parties receive a share of cabinet posts proportional to their size in nearly 45% of cases but are overpaid in 35% of the formation situations and underpaid in about 19% of cases. Overall, these figures confirm the general tendency to overcompensate small parties at the expense of formateurs found by previous studies. However, the fact that formateurs clearly get more than their fair share in one fifth of coalition governments suggests that a formateur bonus can be extracted under certain circumstances.

[Figure 3]

In the following section, we analyse the extent to which parliamentary institutions modify the impact of party size on portfolio allocation.

Portfolio Allocation under Strong and Weak Parliamentary Institutions

We present the results of ordinary least squares (OLS) regressions in Table 2. The dependent variable records the share of ministerial portfolios allocated to each governing party. *Formateur* status is coded endogenously and equals 1 for PM parties and 0 otherwise. *Seat contribution* records the proportional distribution of cabinet seats determined by the Sainte-Laguë allocation method (i.e. legislative seat shares transformed to the same scale as portfolio shares), while the dependent variable records the actual distribution of cabinet seats. We use the interaction term *Seat contribution* × *Formateur* to test whether the effect of formateur status varies with party size. To estimate how each of the three institutional scenarios presented in Table 1 affects portfolio allocation, we create an explanatory variable with three categories of institutional rules (the non-blank cells in Table 1): strong investiture-strong no confidence; weak investiture-strong no confidence; weak investiture-weak no confidence. To avoid violating the OLS assumption regarding the independence of error terms for parties in any given coalition, we drop one party at random from each cabinet. To control for cross-country heterogeneity in portfolio allocation processes on top of investiture and no confidence rules, country fixed effects are included in all models.[4]

Notwithstanding the different time period and larger number of countries included in our analysis, the correlation between the parties' legislative size and the share of cabinet

portfolios emerges just as strong as that found by Warwick and Druckman's (2006) study. The correlation between the two variables of $r = 0.95$ ($p < 0.001$) is almost identical to the coefficient ($r = 0.94$) Warwick and Druckman (2006: 646) reported for their previous cross-country study. As expected, addressing the portfolio lumpiness problem reduces random errors in the allocation process, but does not eliminate disproportionality. Finally, the results reported for the first model in Table 2 also emphasise the expected bias in favour of smaller parties, as both the slope ($\beta = 0.81$, S.E. = 0.01) and the intercept ($\alpha = 0.08$, S.E. = 0.01) deviate significantly from their hypothesised values of 1 and 0 respectively.[5]

[Table 2]

To estimate the impact of formateur status on the relationship between seat shares and cabinet payoffs, Model 2 includes both a formateur status dummy variable and the interaction of that variable with seat shares. The results confirm the underpayment of formateur parties that contribute more than 40% of the cabinet's seat share. On average, formateurs above this size receive one less portfolio than their proportional share.

Models 3-5 test the extent to which institutional variation is associated with the presence of a formateur advantage. First, we consider the impact of investiture procedures. Model 3 presents a three-way interaction between seat share, formateur status, and an indicator for strong investiture rules (i.e. absolute majority requirements). The key interaction effects are presented graphically. The two upper panels in Figure 4 illustrate how the effect of formateur status on cabinet payoffs changes across the range of observed values for party resources under weak and strong investiture regimes. Confidence intervals (95%) around the sloping lines determine the conditions under which the formateur status has a statistically

significant effect on the size of cabinet payoffs, while the rug plot above the horizontal axis provides information about the distribution of formateur seat shares.

The upper-left plot in Figure 4 indicates that formateurs extract a portfolio bonus under strong investiture regimes. Although this effect decreases mildly with the parties' legislative strength, it remains positive and significant across the entire seat share range. The strong effect obtained under this scenario may also be explained by the fact that countries characterised by strong investiture rules also display restrictive no confidence procedures (upper-left cell in Table 1). In contrast, the upper-right plot suggests that formateur status has a positive effect on cabinet payoffs only for relatively small parties under weak investiture regimes. However, the effect has a downward trend and loses statistical significance for formateurs that provide more than 35% of the cabinet's seat share.

[Figure 4]

Next, we consider how cabinet removal rules affect portfolio allocation. Model 4 presents a three-way interaction between seat share, formateur status, and an indicator for absolute majority no confidence rules. The key interaction effects are presented in the two bottom panels in Figure 4. The lower-left panel suggests that being the formateur party under demanding rules of no confidence is likely to attract a bonus in portfolio allocation. The effect is positive across all values of observed seat shares but loses statistical significance above 85%. Nevertheless, this is a highly substantive effect, as it covers 84% of the observations in our sample. The lower-right panel suggests a different picture for government formations under less restrictive no confidence procedures. Specifically, only formateurs that contribute less than 10% of the coalition's legislative strength are advantaged in the allocation of ministries. The positive effect is significant but hardly substantive, as fewer than 2% of the

formateur parties in the data set fall in this range. To determine whether this effect is solely due to the presence of constructive no confidence rules, which should strengthens the cabinet once formed even more than just an absolute majority rule (Diermeier *et al.* 2002), we re-estimated Model 4 so that it only differentiates between constructive and regular no-confidence motions. Marginal effects graphs presented in the Appendix (Figure B1) indicate that this is not the case. Although, as expected, the effect of formateur status on portfolio allocation is positive regardless of party size under constructive no confidence rules, it does not reach statistical significance (probably because of the low number of cases where such institutional rules exist). Thus, we interpret this result as further evidence that absolute majority requirements for no confidence motions strengthen the compensatory effect for formateur parties. Overall, Models 3-4 show that formateurs are advantaged in portfolio allocation when parliamentary procedures require either absolute majority thresholds for investiture or strong no confidence rules.

To determine the combined effect of the two sets of institutional procedures, Model 5 includes a three-way interaction between the seat share variable, the formateur status indicator, and the categorical variable based on the three institutional scenarios from Table 1. The omitted category in the interaction terms is the scenario where both investiture and no confidence procedures require simple majority support. The interaction effects are presented in Figure 4, which illustrates how the effect of formateur status on cabinet payoffs changes across the range of observed values for party resources under each of the three scenarios that combine weak and strong no confidence regimes (under 95% confidence intervals).

[Figure 5]

The upper-left panel in Figure 5 shows that formateur parties are advantaged in portfolio allocation in countries that provide restrictive investiture and no confidence procedures. This result holds irrespective of party size and is significant at the 0.01 level. Moving on to the scenario that combines weak investiture and strong no confidence provisions (upper-right panel), we see that a portfolio bonus for formateurs exists, but only for relatively small parties. The marginal effect of formateur status is positive only for parties that provide up to 40% of the cabinet's seat share (significant at 5% level). We should also note that the effect remains positive for larger parties as well but loses statistical significance. As anticipated, the least advantageous conditions for formateur parties are provided by the combination of weak investiture and no confidence procedures (lower-left panel). The changeover from over-compensation to under-compensation for formateurs occurs at a seat share of about 46%. That said, the positive and negative effects approach statistical significance (at $p<0.1$ level) only for very small and very large parties respectively, which make up less than 5% of the observations in our data set altogether. Therefore, the results obtained for the weakest institutional scenario indicate a substantially trivial estimate effect.

Portfolio Allocation, Parliamentary Institutions and Coalition Characteristics

So far, our analysis has shown that the formateur advantage predicted by formal bargaining approaches is more likely to operate in the context of restrictive investiture and no confidence procedures. Nevertheless, we must consider the possibility that the formateur advantage effect might also depend on certain coalition characteristics. For example, Browne and Frendreis' (1973) classic study found that coalition size has a significant impact on the payoffs of small and large parties: the former are more likely to be overpaid at the expense of the latter in small coalitions, while the distribution of payoffs is more likely to be

proportional to seat shares in large coalitions. Other works have found that institutional effects on portfolio allocation are contingent on contextual conditions. Falcó-Gimeno and Indridason (2013) showed that a proportional allocation of the cabinet portfolios is more likely under conditions of high uncertainty (i.e. post-electoral government formations) and complexity (i.e. high bargaining power fragmentation). Moreover, Druckman and Roberts' (2005) analysis of patterns of allocation in Western and Eastern European countries revealed a formateur over-compensation effect in "less advanced" Eastern European countries. That said, these authors studied portfolio allocation "within the confines of general parliamentary institutions" in Western and Eastern Europe alike, positing that any differences in portfolio allocation and formateur payoffs must be due to alternative contextual factors (Druckman and Roberts 2005: 339). In contrast, our analysis emphasises institutional variation within parliamentary systems as the source of variation in portfolio allocation.

To check whether the formateur advantage we identified under restrictive investiture and no confidence operates uniformly across different coalition situations, we test the robustness of our results in different bargaining conditions, such as the timing of government formation, regional differences, size, and different types of coalitions. The results are summarised in Table 3. To determine the extent to which the estimated effects are both significant and substantive, we provide information about the seat share range where the effect is statistically significant (at the 10% level in a two-tail test) and the share of observations covered in the sample. Marginal effects plots for each of these relationships can be found in Appendix C.

[Table 3]

The first category of tests presented in Table 3 focuses on different types of government formation situations. As the previous analysis has shown, formateur parties are

advantaged in the strong investiture-no confidence scenario regardless of their size. In the scenario that combines weak investiture and strong no confidence rules, formateurs may reap a bonus as well, but only if their seat share does not exceed 47%. Substantively, this effect is neither negligible nor particularly strong, as it applies to only 33.7 of government formation in the sample. Small formateurs (up to 21% seat share contribution) seem to extract a portfolio bonus even under the weakest institutional scenario, which combines low majority thresholds for both investiture and no confidence rules. However, this expected increase amounts to just 5.4% of the seat share range in the sample, indicating a substantively trivial estimated effect.

Next, we consider portfolio allocation in post-electoral and inter-electoral government formations. The former bargaining situation seems to be the most difficult to exploit by formateur parties. The results indicate that the only post-electoral situation in which the formateur party can extract a portfolio bonus is one combining strong investiture and no confidence rules. Even under these circumstances, though, the effect is not particularly strong. The effect is positive across all values of observed seat shares but loses statistical significance above 68%, explaining about 64% of the observations in this category. This result seems to corroborate Falcó-Gimeno and Indridason's (2013) findings that higher uncertainty makes it difficult for actors to exploit bargaining advantages they may otherwise possess. In contrast, formateurs are more likely to be overpaid in inter-electoral situations if at least a more demanding no confidence procedure exists. The results for the first two institutional scenarios are highly significant and substantive, as opposed to the weakest institutional scenario.

We also differentiated between government formations in Western and Eastern Europe, to account for the possibility that portfolio allocation follows a different pattern in the newer party systems. The results show that, under the strongest institutional scenario,

formateur parties retain a substantive advantage in portfolio allocation. In institutional environments characterised by strong no confidence rules but weak investiture, as well as in the weakest institutional scenarios, formateurs retain an advantage in Eastern Europe government formations to a certain extent, but not in Western Europe. The difference may be explained by the fact that most of the new democracies in Eastern Europe adopted strong no confidence procedures, as can be seen in the classification in Table 1.

Next, we focus on the size of government coalitions. Browne and Franklin (1973: 462-464) showed that small parties are better able to extract bonus ministries when there are relatively few parties represented in the coalition. We set out to determine whether the formateur underpayment found by previous studies is robust to variation in institutional conditions in both small and large coalitions. As far as small coalitions are concerned (two or three partners), only the strong institutional scenario provides conditions for a positive formateur effect. However, the effect retains statistical significance for a seat share range smaller than 66%, which only covers about 47% of the sample. For the remaining two institutional scenarios, we find a mostly negative but insignificant effect. Moving on to large coalitions (4 or more parties), we find that all formateur parties are advantaged if at least strong no confidence procedures are present (the first two scenarios). Being the formateur party in a large coalition under a weak parliamentary scenario is likely to attract a portfolio bonus only for relatively small formateur parties (if their seat share does not exceed 39%). Overall, the results suggest that large formateurs in small coalitions are likely to be underpaid no matter the institutional setting. On the other hand, strong parliamentary institutions clearly favour formateurs in large coalitions regardless of their size, as opposed to weak parliamentary settings.

Our last set of tests considers different types of coalition cabinets. We find that in majority coalitions, formateurs are able to extract a bonus under the strongest institutional

scenario, but only marginally so in the other two scenarios. In the presence of at least strong no confidence procedures, formateurs are likely to extract a portfolio bonus even in minority coalitions. Conversely, the lack of strong parliamentary procedures is associated with a strong negative effect on portfolio allocation. These highly significant and substantive results suggest that institutions do matter for portfolio allocation, especially under minority conditions, which are likely to provide the strongest incentives for formateurs to make generous offers to their smaller coalition partners. In surplus coalitions, formateurs are more likely to obtain a portfolio bonus under strong institutional conditions. The effect weakens considerably in the other two scenarios. Minimum winning coalitions, which typically include few parties, are largely unaffected by institutional settings. Conversely, surplus coalitions are likely to overlap considerably with large coalitions, which is reflected in the positive and significant positive effect found for formateur parties in the presence of strong no confidence procedures.

Conclusion

This paper has addressed a neglected aspect of government formation in parliamentary systems, namely how the logic of coalition bargaining over the division of high-office spoils changes across different types of parliamentary systems. Anticipating that more restrictive forms of parliamentarism, characterised by higher majority thresholds for cabinet investiture and removal, foster strong and stable governments, we argue that they should also favour the formateur party. Empirical tests support this expectation and allow us to single out some wider implications of our findings.

First, we relate to previous work that recognised the need to consider how cross-national institutional differences shape portfolio allocation. Previous studies have argued that a formateur advantage exists in systems that lack no confidence procedures (Amorim Neto

and Samuels 2010; Golder and Thomas 2014; Indridason 2015; Ariotti and Golder 2017). In this paper, we draw attention to the wide institutional variation that characterises parliamentary systems and includes cabinet formation as well as removal procedures. We argue that restrictive forms of parliamentarism strengthen the executive and make it less susceptible to early removal. Consequently, this is where we also find a formateur advantage. Our results regarding the positive effect of formateur status are robust to different coalition characteristics, such as type of government formations (but note the stronger effect in inter-election compared to post-electoral government formations), regional differences, coalition size, and majority, minority and surplus coalitions. We still find that large formateurs in small coalitions (and by consequence in minimum winning coalitions as well) are likely to be underpaid no matter the institutional conditions.

Second, we introduce a direct way of measuring deviations from proportionality and get rid of the portfolio "lumpiness" problem. We use the Sainte-Laguë formula of proportional representation to translate seat shares into proportional cabinet portfolio shares that are not affected by cabinet size. As a result, we obtain direct and comparable measures of disproportionality within and across national contexts. Additionally, our analysis is carried out on a data set that provides greater geographical and temporal coverage than previous cross-national studies.

Our direct way of measuring disproportionality allows us to discuss the divergence between bargaining theories, which predict the over-compensation of formateur parties, and the empirical regularity of Gamson's Law from a slightly different perspective. Our results confirm that formateurs are more often underpaid than overpaid in cabinet portfolios. We do, however, note that formateurs get more than their proportional share of portfolios in one out of five cases. Further analyses of the data indicate that under certain institutional circumstances, formateurs are advantaged compared to other parties of a similar size (even if

the portfolio allocation in many of these cases may be less than what strict proportionality would give). Cross-national variation in the fit of the proportionality relationship and the fortunes of formateur parties should draw attention to the way in which institutional constraints in the government formation process impact the relationship between party resources and cabinet payoffs (Laver *et al.* 2011). In this paper, we offer a first insight into how strong and weak parliamentary involvement in the making and breaking of governments shapes the logic of portfolio allocation. Future work could explore in more detail how other aspects of executive-legislative relations, such as assembly dissolution powers and agenda-setting rules, affect the decision-making rationale behind the division of ministerial spoils.

Table 1. Strong and weak parliamentary involvement in cabinet selection and removal (1944-2014)

			Investiture Procedures		
			Strong	Weak	
			Absolute Majority	**Simple Majority**	**None**
No confidence Procedures	*Strong*	**Absolute Majority**	Croatia (2000-2011) France IV (1946-1953) Germany (1949-2014) Hungary (1991-2014) Israel* (1996-2002) Poland (1991-2014) Romania (1991-2014) Slovenia (1992-2014)	Bulgaria (1991-2014) Czechia (1993-2014) Estonia (1992-2015) France IV (1954-1958) Israel (2003-2013) Lithuania (1992-2012) Slovakia (1993-2010) Turkey (1982-1999)	Belgium (1995-2014) France V (1958-2014) Portugal (1976-2011) Sweden (1970-2014)
	Weak	**Simple Majority**		Belgium (1946-1994) Finland (1999-2014) Greece (1987-2015) Ireland (1944-2011) Israel (1949-1995) Italy (1946-2014) Latvia (1991-2014) Luxembourg (1945-2013) United Kingdom (1945-2010)	Australia (1945-2013) Austria (1945-2013) Denmark (1945-2014) Finland (1944-1998) Netherlands (1945-2012) Norway (1945-2013) Iceland (1944-2013) Sweden (1945-1969

**Note*: Israel's experiment with the direct election of the prime minister is located within the absolute majority investiture category.

Table 2. Parliamentary institutions and portfolio allocation

	Dependent Variable: Cabinet Portfolio share				
	Model 1	Model 2	Model 3	Model 4	Model 5
	Coeff/SE	Coeff/SE	Coeff/SE	Coeff/SE	Coeff/SE
Seat contribution	0.81***	0.84***	0.85***	0.85***	0.85***
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
Formateur	0.03***	0.05***	0.03***	0.02**	0.02**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Formateur × Seat contribution		-0.05**	-0.05**	-0.05*	-0.05**
		(0.02)	(0.02)	(0.03)	(0.03)
Institutional rules					
Absolute Majority Investiture			-0.01		
			(0.01)		
Absolute Majority Investiture × Seat contribution			-0.1***		
			(0.04)		
Absolute Majority Investiture × Formateur			0.08***		
			(0.03)		
Absolute Majority Investiture × Formateur × Seat contribution			0.01		
			(0.05)		
Absolute Majority No confidence				-0.02***	
				(0.01)	
Absolute Majority No confidence × Seat contribution				-0.03	
				(0.03)	
Absolute Majority No confidence × Formateur				0.06***	
				(0.02)	
Absolute Majority No confidence × Formateur × Seat contribution				0.01	
				(0.04)	

Institutional Scenarios					
Strong Investiture-Strong No confidence					-0.01*
					(0.01)
Weak Investiture-Strong No confidence					-0.02***
					(0.01)
Strong Investiture-Strong No confidence × Seat contribution					-0.1**
					(0.04)
Weak Investiture-Strong No confidence × Seat contribution					0.03
					(0.04)
Strong Investiture-Strong No confidence × Formateur					0.09***
					(0.03)
Weak Investiture-Strong No confidence × Formateur					0.03
					(0.03)
Strong Investiture-Strong No confidence × Formateur × Seat contribution					0.02
					(0.06)
Weak Investiture-Strong No confidence × Formateur × Seat contribution					-0.01
					(0.06)
Country Fixed Effects	✓	✓	✓	✓	✓
Intercept	0.08***	0.07***	0.07***	0.08***	0.08***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N-Governments	569	569	569	569	569
N-Parties	1589	1589	1589	1589	1589
R2	0.9156	0.9159	0.9181	0.9184	0.9193

Note: Values in parentheses are clustered standard errors, where individual governments are the clusters. One party is randomly dropped from each coalition, as explained in the text. *** p<0.01; ** p< 0.05; *p< 0.10.

Table 3. Cabinet portfolios payoffs for the formateur party in different types of coalitions and legislative party systems

Institutional Scenario	Strong Investiture Strong No confidence			Weak Investiture Strong No confidence			Weak Investiture Weak No confidence		
	Effect ($p<0.1$)	*Seat share range where the effect is observed (% PM party size in coalition)*	*Sample observations covered (%)*	*Effect ($p<0.1$)*	*Seat share range where the effect is observed (% PM party size in coalition)*	*Sample observations covered (%)*	*Effect ($p<0.1$)*	*Seat share range where the effect is observed (% PM party size in coalition)*	*Sample observations covered (%)*
Government formations									
All	Positive	All	100	Positive	Up to 47	33.7	Positive	Up to 21	5.4
Post-election	Positive	Up to 68	64	Not significant		-	Not significant		-
Inter-election	Positive	All	100	Positive	Up to 63	56.4	Not significant		-
WE	Positive	All	100	Positive	Up to 20	5.1	Not significant		-
CEE	Positive	Up to 74	77.7	Positive	10-74	77.7	Positive	30-49	23.2
Size of coalition									
Small (2-3 partners)	Positive	Up to 66	46.7	Not significant		-	Not significant		-
Large (4 or more partners)	Positive	All	100	Positive	Up to 71	93.5	Positive	5-39	42
Types of coalitions									
Majority	Positive	Up to 82	88.2	Positive	Up to 24	6.4	Positive	Up to 39	20.7
Minority	Positive	Above 12	99.1	Positive	15-87	85.6	Negative	Above 28	95.5
MWC	Positive	Up to 38	10.8	Not significant		-	Not significant		-
Surplus	Positive	All	100	Positive	3-58	65.4	Positive	Up to 39	31.9

Note: Results based on 95% confidence intervals. MWC = Minimum winning coalitions; WE = Western Europe; CEE = Central and Eastern Europe.

Figure 1. Relationship between portfolio share and seat contribution to executive coalitions

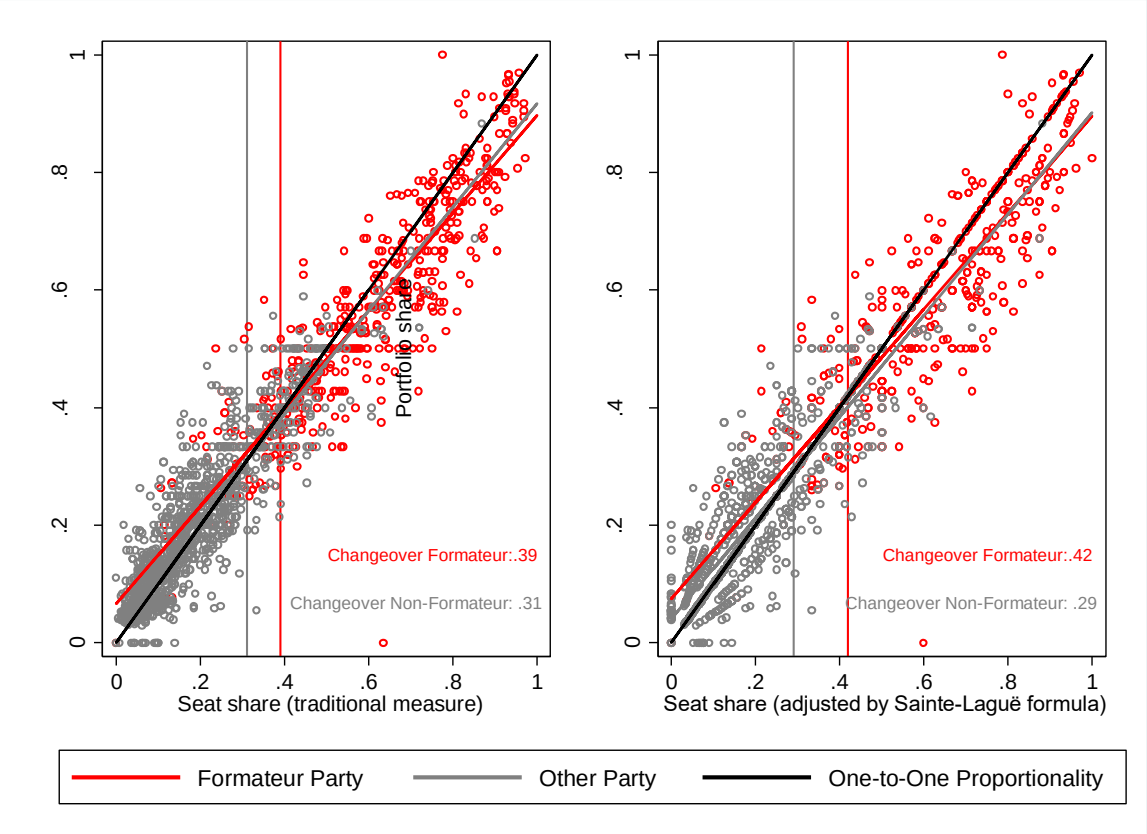


Figure 2a. Deviations from proportionality at cabinet level (N=569)

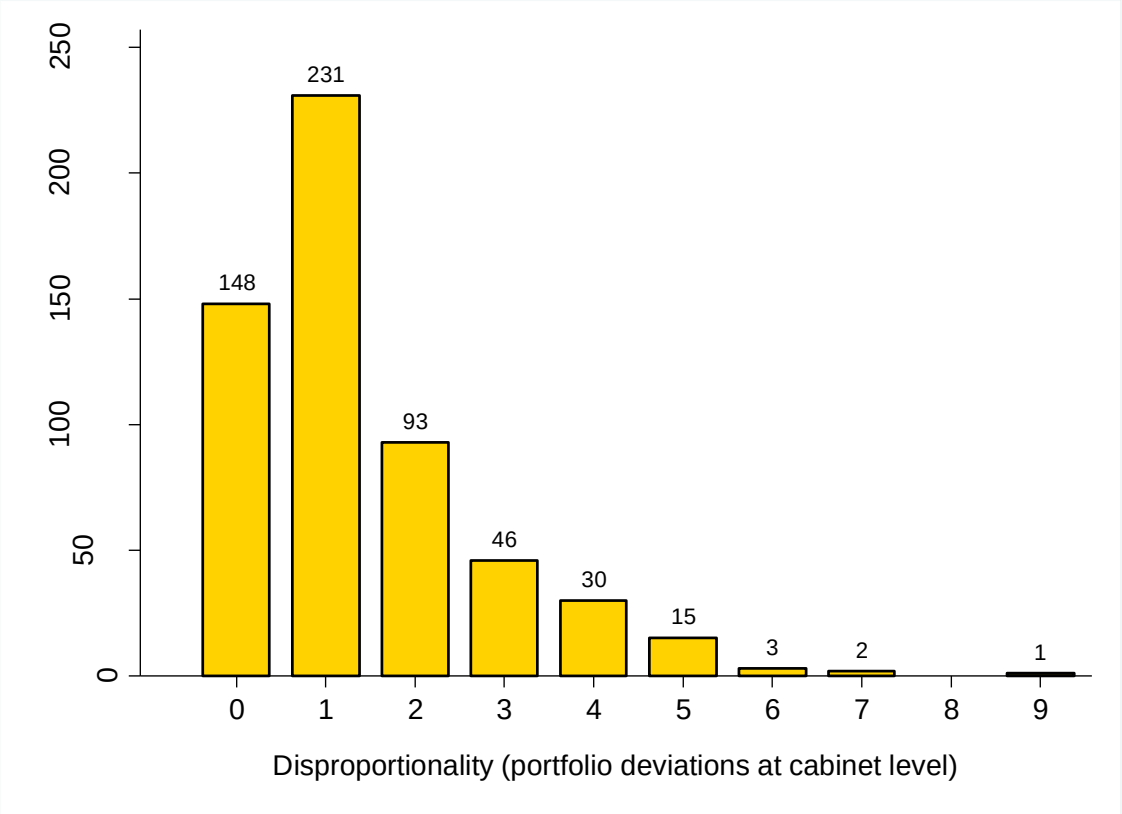
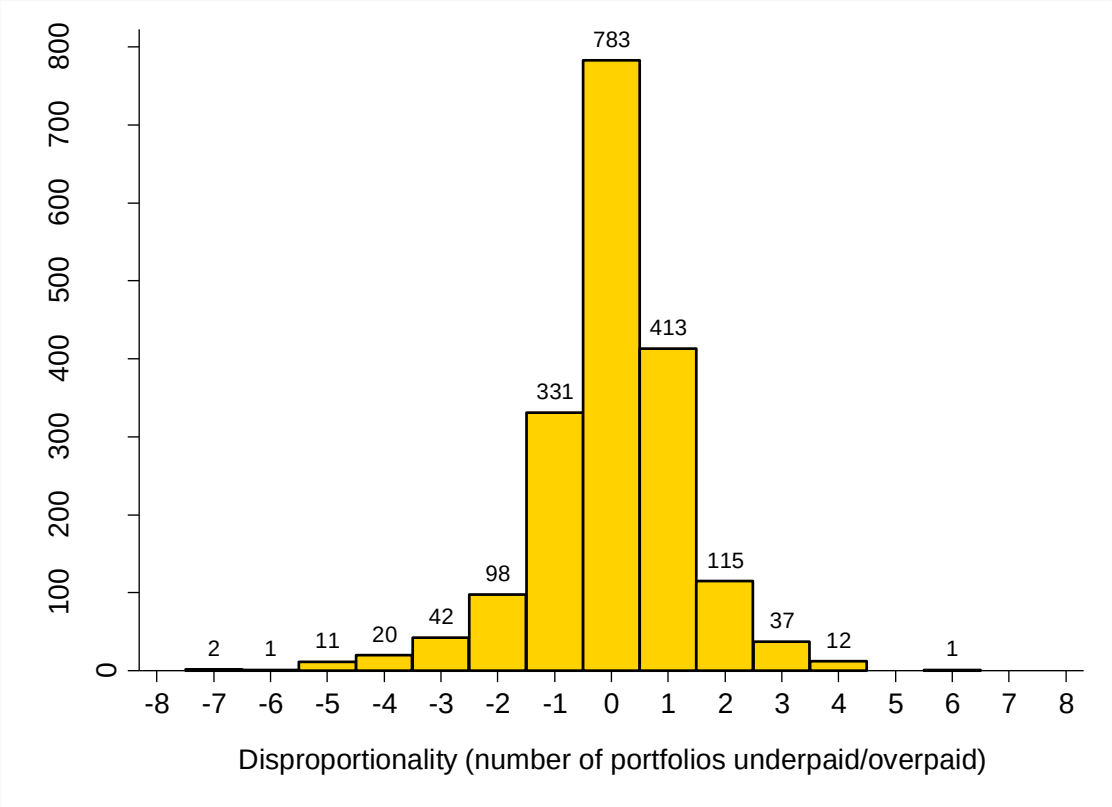
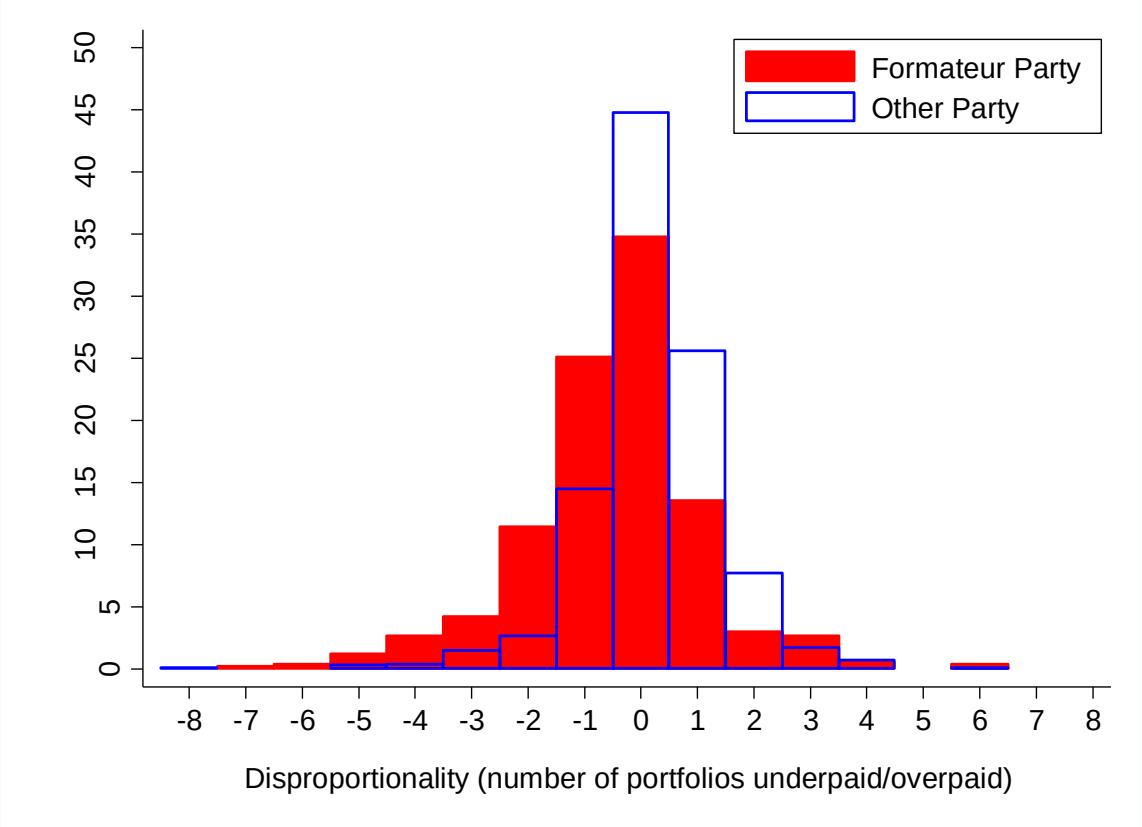


Figure 2b. Deviations from proportionality at party level (N=1807)



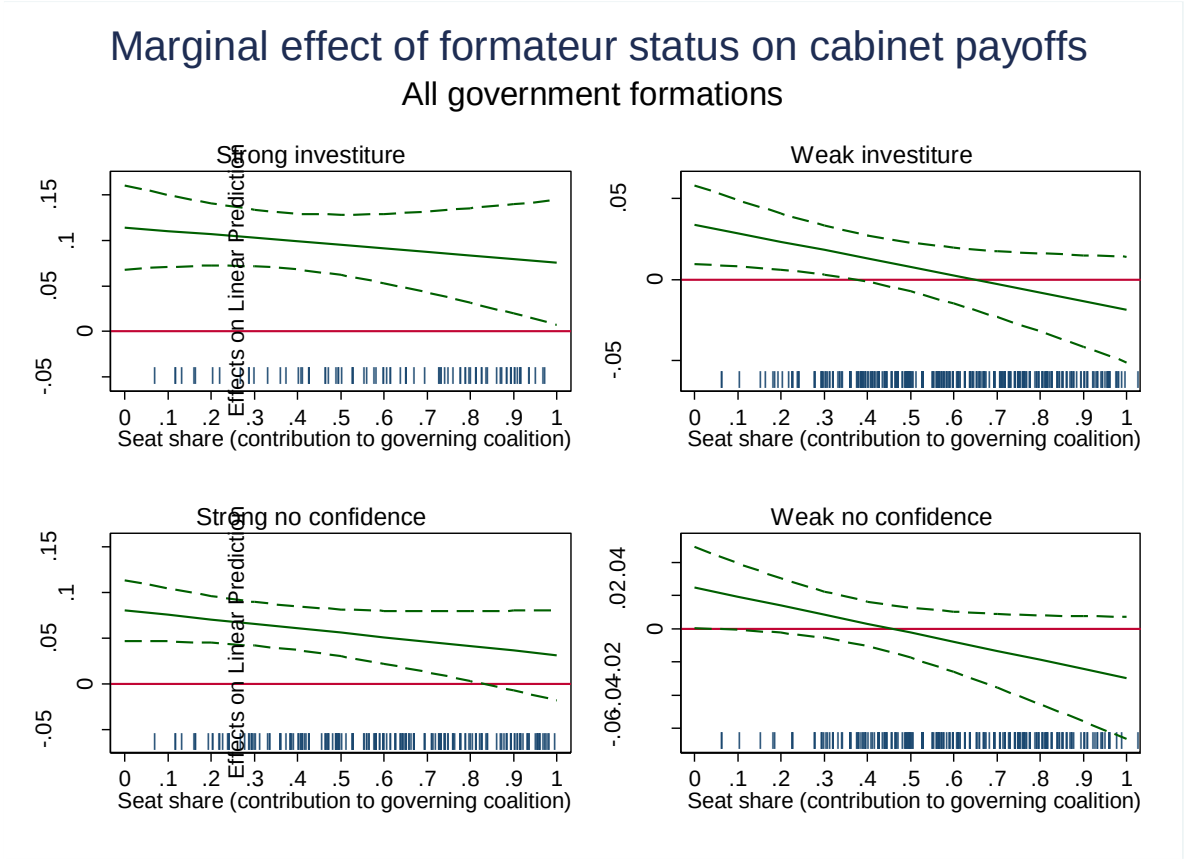
Note: The number of parties included in the regression models in Table 2 is smaller because one party is dropped from each coalition, as explained in the text.

Figure 3. Deviations from proportionality according to party status (N Formateur Party=569; N Non-Formateur Party = 1238)



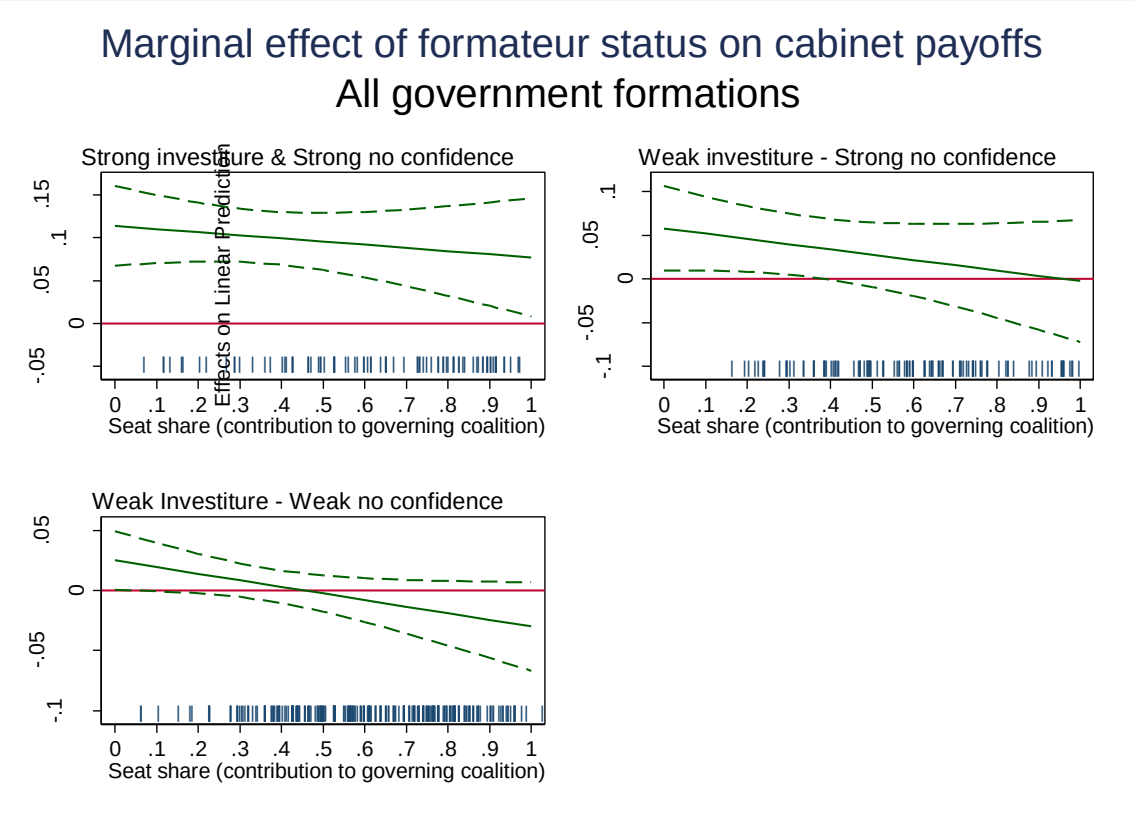
Note: The number of parties included in the regression models is smaller because one party is dropped from each coalition, as explained in the text.

Figure 4. Cabinet portfolio payoffs for the formateur party in countries with strong and weak parliamentary involvement in the formation and removal of the cabinet



Note: Estimations based on Models 3-4 (Table 2), 95% confidence intervals.

Figure 5. Cabinet portfolio payoffs for the formateur party under four institutional scenarios



Note: Estimations based on Model 5 (Table 2), 95% confidence intervals.

Notes

[1] According to Baron and Ferejohn (1989: 1194), the probability "of being asked to form the government is closely related to seats held in the legislature."

[2] We also include Israeli governments formed during 1996-2002 in this category. They are coded as requiring absolute majority support for investiture because the direct election strengthened the PM's role in government formation considerable and decreased the leverage of small party leaders on legislative bargaining (Rahat and Hazan 2005: 347). The results of the analysis do not change if we remove the case of Israel.

[3] These calculations disregard the unequal weight of cabinet posts. As Warwick and Druckman (2006) show, weighing portfolios by their salience does not have a significant impact on outcomes of portfolio allocation.

[4] Although the analysis focuses on variables that are largely fixed within most countries in our sample, fixed effects do not prevent the effects of institutions on seat shares and formateur status to vary across countries and institutional settings.

[5] Table A1 in the Appendix provides the results of model estimations using an independent variable that is based on raw seat shares. As expected, the results obtained using the two independent variables are very similar. Nevertheless, we believe that the use of an independent variable that removes artificial deviations from proportionality and increases the empirical rigorousness of our analysis is preferable even if does not seem to alter the results dramatically.

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