Online Appendix for
Rules and the Containment of Conflict in Congress

Contents

A Comparative Statics for Baseline Model

By Figure 3 in the main text, it is easy to see that a large p and small x make the party more likely to enact a rule and make the rule more stable conditional on it being enacted.

Other comparative statics can be obtained using a series of thresholds:

- $\overline{x}_1 = a_v\eta + (a_v - a_f)c$: If $x \leq \overline{x}_1$, a rule, if enacted, will be stable. If $x \geq \overline{x}_1$, a rule, if enacted, will be unstable.

- $\overline{x}_2 = \frac{a_d\eta+\delta[(a_d-a_f)c+(a_d-pa_f)\eta]}{1+\delta(1-p)}$: If $x \leq \min\{\overline{x}_1, \overline{x}_2\}$, the legislature will enact a stable rule no matter the value of $\hat{y}_1$. Increasing x beyond this point, depending on the value of p, either makes the rule unstable (if it passes $\overline{x}_1$) or prevents the rule from being enacted if $\hat{y}_1 = 0$ (if it passes $\overline{x}_2$).

- $\overline{x}_3 = \frac{(a_d-a_f)c+(a_d-pa_f)\eta}{1-p}$: If $\overline{x}_2 \leq x \leq \min\{\overline{x}_1, \overline{x}_3\}$, the legislature will enact a stable rule if $\hat{y}_1 = 1$ and not enact a rule otherwise. Increasing x beyond this point, depending on the value of p, either makes the rule unstable (if it passes $\overline{x}_1$) or prevents the rule from being enacted even if $\hat{y}_1 = 1$ (if it passes $\overline{x}_3$) .

- $\overline{x}_4 = \delta p(a_v - a_f)(c+\eta) + a_d\eta - \delta(a_v - a_d)(c+\eta)$: If $\overline{x}_1 \leq x \leq \overline{x}_4$, the legislature enacts a rule no matter the value of $\hat{y}_1$ and the rule will be unstable. Increasing the value of x beyond this point prevents the legislature from enacting a rule if $\hat{y}_1 = 0$.

- $\overline{p} = \frac{a_v-a_d}{a_v-a_f}$: If $p \leq \overline{p}$, the legislature does not enact a rule if it will be unstable, $x \geq \overline{x}_1$. If $p \geq \overline{p}$, if $\hat{y}_1 = 1$ (and possibly if $\hat{y}_1 = 0$ as well), the legislature enacts a rule even if it will be unstable.

Therefore, if $\frac{d\overline{p}}{dz} > 0$, $\frac{d\overline{x}_2}{dz} < 0$, $\frac{d\overline{x}_3}{dz} < 0$, and $\frac{d\overline{x}_4}{dz} < 0$, z makes rules less attractive. If $\frac{d\overline{x}_1}{dz} > 0$, z makes rules more stable.

$$\begin{aligned}
\frac{d\overline{p}}{da_v} &= \frac{a_d - a_f}{(a_v - a_f)^2} > 0 \\
\frac{d\overline{x}_1}{da_v} &= \eta + c > 0 \\
\frac{d\overline{x}_2}{da_v} &= 0 \\
\frac{d\overline{x}_3}{da_v} &= 0 \\
\frac{d\overline{x}_4}{da_v} &= -\delta(1-p)(c+\eta) < 0
\end{aligned}$$

Thus, increasing a_v makes rules more stable, but it also makes unstable rules less attractive.

$$\begin{aligned}
\frac{d\overline{p}}{da_d} &= -\frac{1}{a_v - a_f} < 0 \\
\frac{d\overline{x}_1}{da_d} &= 0 \\
\frac{d\overline{x}_2}{da_d} &= \frac{\eta + \delta(c+\eta)}{1+\delta(1-p)} > 0 \\
\frac{d\overline{x}_3}{da_d} &= \frac{c+\eta}{1-p} > 0 \\
\frac{d\overline{x}_4}{da_d} &= \eta + \delta(c+\eta) > 0
\end{aligned}$$

Thus, increasing a_d makes all kinds of rules more attractive.

$$
\begin{aligned}
\frac{d\overline{p}}{da_f} &= \frac{a_v - a_d}{(a_v - a_f)^2} > 0 \\
\frac{d\overline{x}_1}{da_f} &= -c < 0 \\
\frac{d\overline{x}_2}{da_f} &= \frac{-\delta(c + p\eta)}{1 + \delta(1-p)} < 0 \\
\frac{d\overline{x}_3}{da_f} &= -\frac{c + p\eta}{1-p} < 0 \\
\frac{d\overline{x}_4}{da_f} &= -\delta p(c + \eta) < 0
\end{aligned}
$$

Thus, increasing a_f makes all kinds of rules less attractive and also makes rules less stable.

$$
\begin{aligned}
\frac{d\overline{p}}{dc} &= 0 \\
\frac{d\overline{x}_1}{dc} &= a_v - a_f > 0 \\
\frac{d\overline{x}_2}{dc} &= \frac{\delta(a_d - a_f)}{1 + \delta(1-p)} > 0 \\
\frac{d\overline{x}_3}{dc} &= \frac{a_d - a_f}{1-p} > 0 \\
\frac{d\overline{x}_4}{dc} &= \delta p(a_v - a_f) - \delta(a_v - a_d) > 0
\end{aligned}
$$

The last inequality is guaranteed because $\overline{x}_4$ is only relevant for $p \geq \frac{a_v - a_d}{a_v - a_f}$. Thus, increasing c makes rules more stable and makes rules more attractive.

$$\frac{d\overline{p}}{d\eta} = 0$$
$$\frac{d\overline{x}_1}{d\eta} = a_v > 0$$
$$\frac{d\overline{x}_2}{d\eta} = \frac{a_d + \delta(a_d - pa_f)}{1 + \delta(1-p)} > 0$$
$$\frac{d\overline{x}_3}{d\eta} = \frac{a_d - pa_f}{1-p} > 0$$
$$\frac{d\overline{x}_4}{d\eta} = \delta p(a_v - a_f) + a_d - \delta(a_v - a_d) > 0$$

The last inequality is guaranteed because $\overline{x}_4$ is only relevant for $p \geq \frac{a_v - a_d}{a_v - a_f}$. Thus, increasing c makes rules more stable and makes rules more attractive.

$$\frac{d\overline{p}}{d\delta} = 0$$
$$\frac{d\overline{x}_1}{d\delta} = 0$$
$$\frac{d\overline{x}_2}{d\delta} = \frac{(a_d - a_f)(c + p\eta)}{[1 + \delta(1-p)]^2} > 0$$
$$\frac{d\overline{x}_3}{d\delta} = 0$$
$$\frac{d\overline{x}_4}{d\delta} = p(a_v - a_f)(c + \eta) - (a_v - a_d)(c + \eta) > 0$$

The last inequality is guaranteed because $\overline{x}_4$ is only relevant for $p \geq \frac{a_v - a_d}{a_v - a_f}$. Thus, increasing δ makes all kinds of rules more attractive.

B Choosing from Many Possible Rules

The baseline model assumes the legislature chooses between having no rule and adopting an exogenously generated rule which favors Claimant 1 with probability p. In practice, the legislature can adopt any rule it wants, as long as that rules offers clear enough prescriptions for everyone to agree what the rule prescribes, even if they do not like that outcome (if it did not, then it would not be effective at reducing retaliation). Accordingly, it is instructive to generalize the model to allow the legislature to select any rule from a finite (but potentially very large) discrete set, $\mathcal{Z}$. $\mathcal{Z}$ includes all of the potential rules the legislature can devise. If the resource allocation problem is selecting committee chairs, it includes selecting the most senior member, selecting the member who raised the most funds for the party, selecting by lottery, selecting the shortest member, selecting the member whose last name comes first in the alphabet, selecting the member with more than five terms on the committee whose region controls the fewest chairs, and so on.

Each of these possible rules, $z \in \mathcal{Z}$, provides its own prescription for how the resource should be allocated during the first period, $\hat{y}_1^z$, and for how the resource should be allocated during the second period, $\hat{y}_2^z$. The legislature knows the former, $\hat{y}_1^z$, when it decides which rule (if any) it would like to enact, but the latter, $\hat{y}_2^z$ is a Bernoulli random variable with $Pr(\hat{y}_2^z) = p^z$. Furthermore, let each possible rule have its own anger coefficient when followed or violated, a_f^z and a_v^z.

The logic for this extension is very similar to the baseline model. It is straightforward to identify the most attractive potential rule. The analysis then proceeds exactly as in the baseline model, with the most attractive rule acting as the exogenously given rule in the baseline model.

Let W^z be the expected utility from the second period if the legislature enacts z as a rule. From the baseline analysis,

$$W^z = \begin{cases} p^z(x - a_f^z\eta) - a_f^z c & \text{if } x \leq a_v^z(c+\eta) - a_f^z c \\ x - (p^z - a_f^z + (1-p^z)a_v^z)(c+\eta) & \text{if } x \geq a_v^z(c+\eta) - a_f^z c \end{cases}$$

However, the legislature must also consider the allocation the possible rule prescribes in the first period, $\hat{y}_1^z$. In order to enact the rule, the legislature must follow it during the first period, $y_1 = \hat{y}_1^z$. Therefore, the expected payoff of enacting rule z

is $\hat{y}_1^z[x - a_d(c+\eta)] + (1-\hat{y}_1^z)[-a_d c] + W^z$.

Let z^* be the most attractive of the potential rules,

$$z^* = \arg\max_{z \in \mathcal{Z}} \hat{y}_1^z[x - a_d(c+\eta)] + (1-\hat{y}_1^z)[-a_d c] + W^z$$

This equation shows what makes one possible rule more attractive than another possible rule. The legislature prefers rules that recommend Claimant 1 in the first period, $\hat{y}_1^z = 1$ by the assumption $x \geq a_d \eta$. Additionally, from W^z it is immediately apparent that the legislature prefers rules with higher p^z's to lower ones. Finally, from the continuity of W^z, the legislature prefers rules with lower a_f^z's and a_v^z's.

If $\hat{y}_1^{z^*}[x - a_d(c+\eta)] + (1-\hat{y}_1^{z^*})[-a_d c] + W^{z^*} > (1+\delta)[x - a_d(c+\eta)]$, the legislature sets $y_1 = \hat{y}_1^{z^*}$ and enacts the rule. Otherwise, the legislature sets $y_1 = 1$ and does not enact the rule. The subsequent analysis and comparative statics are exactly like the baseline model.

Thus, the parameters in the baseline model should be interpreted as the parameters for the best rule the legislature is able to engineer. The legislature would like a rule that was certain to award the resource to Claimant 1 (p close to 1) and completely squelched retaliation (a_f close to 0). However, for a rule to be effective at reducing retaliation, its prescriptions must be clear enough for the loser to agree that the rule has been fairly applied. If the legislature is attempting to select a committee chair, it is impossible to construct an objective rule that always selects the chair who will provide the most collective goods for the party. A rule that simply said, "The legislature shall select the claimant who would produce the most collective good for the party" would not mollify losers ($a_f = a_d$, so the rule is not worth considering), and attempts to select based on objective measures that correlate with the collective goods productivity (such as seniority or fundraising for the party) are inevitably prone to error.

C Rules That Are Sometimes Indeterminate

Some rules do not prescribe a specific outcome. Take, for example, the germaneness rule. One claimant wants to consider an amendment and the other wants to prevent its consideration. If the amendment is not germane, the germaneness rule precludes its consideration, which may or may not be what the legislature would have chosen in the absence of the rule. If the amendment is germane, the rule does not provide any guidance, and the legislature must exercise its discretionary authority to resolve the conflict. A one-hour debate limit has the same structure. One claimant wants time to make a speech on the floor and the other does not want to allocate floor time for that speech. If the one hour of debate has already been allocated, the rule prevents the first claimant from making the speech. If not, the legislature must decide whether to award the time to the first claimant or to somebody else.

To generalize the model to account for these rules which sometimes provide indeterminate recommendations, suppose the prospective rule under consideration favors Claimant 1 with probability $\frac{p}{\alpha}$, favors Claimant 2 with probability $\frac{1-p}{\alpha}$, and provides no guidance with probability $\frac{\alpha-1}{\alpha}$ for $\alpha > 1$ (the reason for this parameterization will soon become clear). If the rule provides no guidance, then the legislature can pick whatever it wants and the loser retaliates with coefficient a_d as if there were no rule. Otherwise, let everything be like the baseline model.

If the legislature has enacted the rule and it provides no guidance, then the legislature awards the resource to Claimant 1, $y_2 = 1$, because $x - a_d(c+\eta) \geq -a_d c$ by assumption. If the rule offers a prescription, the condition for following it is exactly the same as in the baseline model: $y_2 = 1$ if $\hat{y}_2 = 1$, $y_2 = 1$ if $\hat{y}_2 = 0$ and $x \geq a_v(c+\eta) - a_f c$, and $y_2 = 0$ if $\hat{y}_2 = 0$ and $x \leq a_v(c+\eta) - a_f c$.

Let W be the legislature's expected second period payoff from enacting the rule.

$$W = \begin{cases} \frac{p}{\alpha}[x - a_f(c+\eta)] - \frac{1-p}{\alpha} a_f c + \frac{\alpha-1}{\alpha}[x - a_d(c+\eta)] & \text{if } x \leq a_v(c+\eta) - a_f c \\ x - [\frac{p}{\alpha} a_f + \frac{1-p}{\alpha} a_v + \frac{\alpha-1}{\alpha} a_d](c+\eta) & \text{if } x \geq a_v(c+\eta) - a_f c \end{cases}$$

As in the baseline model, there are four cases. If $\hat{y}_1 = 1$ or the rule provides no prescription in the first round (henceforth, $\hat{y}_1 = \emptyset$ as a shorthand) and $x \leq a_v(c+\eta) - a_f c$, the legislature prefers to enact the rule if

$$\begin{aligned} \frac{p}{\alpha}[x - a_f(c+\eta)] - \frac{1-p}{\alpha} a_f c + \frac{\alpha-1}{\alpha}[x - a_d(c+\eta)] &\geq x - a_d(c+\eta) \\ \frac{p}{\alpha}[x - a_f(c+\eta)] - \frac{1-p}{\alpha} a_f c &\geq \frac{1}{\alpha}[x - a_d(c+\eta)] \\ p[x - a_f(c+\eta)] - (1-p) a_f c &\geq x - a_d(c+\eta) \\ \frac{(a_d - a_f)c + (a_d - p a_f)\eta}{1-p} &\geq x \end{aligned}$$

Note that this is precisely the same as in the baseline model. What matters is the ratio of the probability the rule prescribes $\hat{y}_2 = 1$ to the probability it prescribes $\hat{y}_2 = 0$. That is the reason for the strange parameterization; it makes this relationship easy to see.

Likewise, if $\hat{y}_1 = 1$ or $\hat{y}_1 = \emptyset$ and $x \geq a_v(c+\eta) - a_f c$, the legislature prefers to enact the rule if

$$\begin{aligned} x - [\frac{p}{\alpha} a_f + \frac{1-p}{\alpha} a_v + \frac{\alpha-1}{\alpha} a_d](c+\eta) &\geq x - a_d(c+\eta) \\ \frac{1}{\alpha} a_d &\geq \frac{p}{\alpha} a_f + \frac{1-p}{\alpha} a_v \\ a_d &\geq p a_f + (1-p) a_v \\ p &\geq \frac{a_v - a_d}{a_v - a_f} \end{aligned}$$

This too is exactly the same as in the baseline model.

If $\hat{y}_1 = 0$ and $x \leq a_v(c+\eta) - a_f c$, the legislature prefers to enact the rule if

$$-a_d c + \delta[\frac{p}{\alpha}[x - a_f(c+\eta)] - \frac{1-p}{\alpha}a_f c + \frac{\alpha-1}{\alpha}[x - a_d(c+\eta)]] \geq (1+\delta)[x - a_d(c+\eta)]$$

$$a_d\eta + \delta[\frac{p}{\alpha}[x - a_f(c+\eta)] - \frac{1-p}{\alpha}a_f c] \geq x + \delta[\frac{1}{\alpha}[x - a_d(c+\eta)]]$$

$$\frac{\alpha a_d\eta + \delta[p(a_d - a_f)(c+\eta) + (1-p)[\eta + (a_d - a_f)c]]}{\alpha - \delta(1-p)} \geq x$$

This is more restrictive than in the baseline model. The denominator is greater by $\alpha > 1$, the right hand term of the numerator is the same as in the baseline model, and the left hand term of the numerator divided by the denominator is smaller than in the baseline model, $\frac{\alpha a_d\eta}{\alpha-\delta(1-p)} < \frac{a_d\eta}{1-\delta(1-p)}$.

If $\hat{y}_1 = 0$ and $x \geq a_v(c+\eta) - a_f c$, the legislature prefers to enact the rule if

$$-a_d c + \delta[x - [\frac{p}{\alpha}a_f + \frac{1-p}{\alpha}a_v + \frac{\alpha-1}{\alpha}a_d](c+\eta)] \geq (1+\delta)[x - a_d(c+\eta)]$$

$$-\delta[pa_f + (1-p)a_v + (\alpha-1)a_d](c+\eta) \geq \alpha(x + a_d\eta) - \delta\alpha a_d(c+\eta)$$

$$p \geq \alpha\frac{(x + a_d\eta)}{(a_v - a_f)(c+\eta)} + \frac{a_v - a_d}{a_v - a_f}$$

This, too, is more restrictive than the baseline model by $\alpha > 1$.

Thus, the only difference between this extended model where the rule sometimes does not provide a prescription and the baseline model is that the legislature is more reluctant to enact the rule if $\hat{y}_1 = 0$. This result is intuitive; if there is a chance the rule won't do anything in the second period, the party is less inclined to incur a cost to enact the rule during the first period. The less likely the rule is to provide a determinate prescription (the larger α), the more reluctant the legislature becomes to enact the rule if $\hat{y}_1 = 0$.

D Endogenizing Retaliation

The baseline model assumes the claimants are non-strategic actors mechanically convert the resource into a collective good for the legislature (or party) and mechanically retaliate against the legislature (or party) when they do not get the resource. However, it is straightforward to endogenize these activities by making the claimants strategic actors with appropriately structured utility functions who move after the legislature in each period and then solving for a subgame perfect equilibrium.

For simplicity, let us consider only the second period (the same approach can easily be extended to the first period, but doing so clutters the notation). The interpretation of this extension is that Claimant 1 has a budget of $\frac{c}{x_1}$ for the period and his budget expands by 1 if he gets the resource. He must allocate this budget between public goods provision and rents; z_1 denotes how much of his budget he allocates towards public goods. The angrier he gets, the less he desires public goods and the more he desires rents. Claimant 2's utility function takes the same form but with a budget of $\frac{c+\eta}{x_2}$. Claimants value both the total level of public goods provisions as well as their own rents.

Let the two claimants' payoffs take the following form:

$$u_1(z_1, z_2; y, \hat{y}, r) = \begin{cases} \frac{z_1+z_2}{1-x_1} + \left(\frac{c}{x_1} + 1\right) \log\left(\frac{c}{x_1} + 1 - z_1\right) & \text{if } y = 1 \\ \frac{z_1+z_2}{1-x_1(1-a_d)} + \frac{c}{x_1} \log\left(\frac{c}{x_1} - z_1\right) & \text{if } y = 0 \text{ and } r = 0 \\ \frac{z_1+z_2}{1-x_1(1-a_f)} + \frac{c}{x_1} \log\left(\frac{c}{x_1} - z_1\right) & \text{if } y = 0 = \hat{y} \text{ and } r = 1 \\ \frac{z_1+z_2}{1-x_1(1-a_v)} + \frac{c}{x_1} \log\left(\frac{c}{x_1} - z_1\right) & \text{if } y = 0 \neq \hat{y} \text{ and } r = 1 \end{cases}$$

$$u_2(z_1, z_2, y, \hat{y}, r) = \begin{cases} \frac{z_1+z_2}{1-x_2} + \left(\frac{c+\eta}{x_2} + 1\right) \log\left(\frac{c+\eta}{x_2} + 1 - z_2\right) & \text{if } y = 0 \text{ and } r = 0 \\ \frac{z_1+z_2}{1-x_2(1-a_d)} + \frac{c+\eta}{x_2} \log\left(\frac{c+\eta}{x_2} - z_2\right) & \text{if } y = 1 \text{ and } r = 0 \\ \frac{z_1+z_2}{1-x_2(1-a_f)} + \frac{c+\eta}{x_2} \log\left(\frac{c+\eta}{x_2} - z_2\right) & \text{if } y = 1 = \hat{y} \text{ and } r = 1 \\ \frac{z_1+z_2}{1-x_2(1-a_v)} + \frac{c+\eta}{x_2} \log\left(\frac{c+\eta}{x_2} - z_2\right) & \text{if } y = 1 \neq \hat{y} \text{ and } r = 1 \end{cases}$$

The left hand term is the payoff the claimant gets from public goods. It is the total public goods production in the game divided by $1 - x_i$, so that as x_i increases, the Claimant i gets a higher payoff from a fixed amount of public goods. The right-hand term is the payoff from the resources the claimant holds in reserve as rents. This term is decreasing and concave in z_i. This functional form is convenient, because the claimants' equilibrium choices of z are

$$z_1^*(y,\hat{y},r) = \begin{cases} x_1 + c & \text{if } y = 1 \\ (1-a_d)c & \text{if } y = 0 \text{ and } r = 0 \\ (1-a_f)c & \text{if } y = 0 = \hat{y} \text{ and } r = 1 \\ (1-a_v)c & \text{if } y = 0 \neq \hat{y} \text{ and } r = 1 \end{cases}$$

$$z_2^*(y,\hat{y},r) = \begin{cases} x_2 + c + \eta & \text{if } y = 0 \\ (1-a_d)(c+\eta) & \text{if } y = 1 \text{ and } r = 0 \\ (1-a_f)(c+\eta) & \text{if } y = 1 = \hat{y} \text{ and } r = 1 \\ (1-a_v)(c+\eta) & \text{if } y = 1 \neq \hat{y} \text{ and } r = 1 \end{cases}$$

The legislature gets payoff $z_1 + z_2$. Thus, the difference in payoff between giving the resource to Claimant 1 rather than Claimaint 2 from the perspective of the legislature is

$$\begin{cases} x_1 - x_2 - a_d\eta & \text{if } r = 0 \\ x_1 - x_2 + (a_v - a_f)c - a_f\eta & \text{if } r = 1 \text{ and } \hat{y} = 1 \\ x_1 - x_2 - (a_v - a_f)c - a_v\eta & \text{if } r = 1 \text{ and } \hat{y} = 0 \end{cases}$$

Defining $x \equiv x_1 - x_2$, this differences take precisely the same form as in the baseline model. The parameters in the baseline model can therefore be reinterpreted according to their role in this extended model. x in the baseline model represents the legislature's preference for giving the resource to Claimant 1 rather than Claimant 2. In this model with strategic claimants, x represents the difference in the claimants' taste for public goods. If Claimant 1 has a much stronger taste for public goods, then the legislature has a strong interest in seeing the resource go to Claimant 1. c and η in the baseline model represents the claimants' capacities to retaliate. In this model with strategic claimants, c and η are represent the claimants' capacity to produce (or taste for) rents. As c and η increase, a claimant will respond to *not* getting the resource by pulling more of their resources out of public goods provision.

Note that the utility functions used in this endogenization present no coordination or collective action problem; the first claimant's behavior is assumed to be invariant to the second claimant's choices to simplify the analysis. Similar results would hold if public goods were substitutable so long as first claimant attaches higher marginal utility to the types of public goods he produces than the types of public goods the second claimant produces.

E Incorporating the Claimants in Collective Choice

The baseline model assumes the decision is made by a unitary legislature that is not itself eligible to receive the resource, but in fact the legislature is a collective body and the claimants get to vote. Suppose all decisions are made by majority vote. As long as there are at least five legislators, there is one who is never a claimant. There are always at least two other legislators who vote with that never-claimant on each decision, so it is as if the never-claimant unilaterally makes all decisions.

To limit notational clutter, it is convenient to consider one decision at a time, starting with the second period allocation decision. There are three non-claimant legislators as well as the second period's Claimant 1 and Claimant 2. Suppose that preferences are as in the baseline model, except Claimant i gets a private benefit of $w_i > 0$ if he gets the resource and incurs a (potentially negative) cost of $k_i : \{a_d, a_f, a_v\} \to \mathbb{R}$ if he does not get the resource. Assume each claimant would rather get the resource than not get it, $w_i \geq \max\{-k_i(a_d), -k_i(a_f), -k_i(a_v)\}$, and would rather be less angry than more angry, $k_i(a_v) > k_i(a_d) > k_i(a_f)$. Formally, the claimants' payoffs for the second period are therefore

$$u_1 = \begin{cases} x + w_1 - a_d(c+\eta) & \text{if } y = 1 \text{ and } r = 0 \\ -a_d c - k_1(a_d) & \text{if } y = 0 \text{ and } r = 0 \\ x + w_1 - a_f(c+\eta) & \text{if } y = 1 = \hat{y} \text{ and } r = 1 \\ x + w_1 - a_v(c+\eta) & \text{if } y = 1 \neq \hat{y} \text{ and } r = 1 \\ -a_v c - k_1(a_v) & \text{if } y = 0 \neq \hat{y} \text{ and } r = 1 \\ -a_f c - k_1(a_f) & \text{if } y = 0 = \hat{y} \text{ and } r = 1 \end{cases}$$

$$u_2 = \begin{cases} x - a_d(c+\eta) - k_2(a_d) & \text{if } y = 1 \text{ and } r = 0 \\ w_2 - a_d c & \text{if } y = 0 \text{ and } r = 0 \\ x - a_f(c+\eta) - k_2(a_f) & \text{if } y = 1 = \hat{y} \text{ and } r = 1 \\ x - a_v(c+\eta) - k_2(a_v) & \text{if } y = 1 \neq \hat{y} \text{ and } r = 1 \\ w_2 - a_v c & \text{if } y = 0 \neq \hat{y} \text{ and } r = 1 \\ w_2 - a_f c & \text{if } y = 0 = \hat{y} \text{ and } r = 1 \end{cases}$$

In the second period allocation decision, the three non-claimants have identical preferences, vote together, and implement their choice. Additionally, whoever gets the resource in equilibrim votes with them by the assumption $w_i \geq \{-k_i(a_d), -k_i(a_f), -k_i(a_v)\}$.

Next, consider the first period decision about whether to implement a rule after the first-period allocation decision has been made. Three of the legislators will not be claimants in the second period and have identical preferences, so they will vote together and implement their preference. Additionally, at least one of the second period claimants will vote with them. If the three non-claimants vote against a rule, Claimant 1 in the second period will vote with them because their payoff for not having a rule is w_1 higher than the non-claimants' and their payoff for implementing a rule is either w_1 higher or $pw_1 - (1-p)k_1(a_f) < w_1$ higher than the non-claimants (depending on whether the rule will be violated). The difference in payoffs between not having a rule and having a rule is therefore always at least as large for the second period's Claimant 1 as the non-claimants, so if the non-claimants do not want a rule, the second period's Claimant 1 does not want a rule either. If the three non-claimants vote to implement a rule that will be violated in equilibrium, the second period's Claimant 1 will vote with them because the difference in payoffs between having and not having the rule is the same for him as the non-claimants (both sides of the inequality are increased by w_1). Finally, if the three non-claimants vote to implement a rule to which the legislature will defer in equilibrium, the second period's Claimant 2 will vote with them because the difference in his payoff between having and not having a rule is larger than it is for the non-claimants by $-pk_2(a_f) + (1-p)w_2 + k_2(a_d) = (1-p)(w_2 + k_2(a_f)) + (k_2(a_d) - k_2(a_f)) \geq 0$. For the next step, it is convenient to define the collaborator as the second period claimant who definitely votes with the other three legislators on whether to enact a rule (Claimant 1 if the legislature will not implement a rule or will implement an unstable rule and Claimant 2 if the legislature will implement a stable rule).

Finally, consider the first period decision about how to allocate the resource. This extension makes no assumption about whether the claimants in the first period are also claimants in the second period and, if so, whether they are Claimant 1 or Claimant 2 in each period. For example, it is possible for a legislator to be Claimant 1 in the first period but Claimant 2 in the second period or Claimant 2 in the first period and not a claimant at all in the second period. This yields three possible configurations of the legislature: there are only two legislators who are claimants at some point in the game, there are three claimants who are claimants at some point in the game, and there are four claimants at some point in the game.

If there are only two legislators who will ever be claimants, then the three never-claimants vote together on how to allocate the resource and are guaranteed to get their way. If four of the legislators will be claimant at one point or another, the never-claimant's preference is supported by whoever gets the resource in the first period and the collaborator for enacting the rule. This is because the first period winner's difference in payoffs is the same as the never-claimants, except they get an extra $w_i + k_i(a_d) > 0$ for giving the resource to themselves rather than the other legislator. Likewise, the collaborator votes with the never-claimant on the first period allocation because their immediate payoff from the first period allocation decision is the same as the never-claimant (because they are not a claimant in the first period by supposition) and their incentives are aligned with the never-claimant's in subsequent steps.

This leaves one relatively complicated case: the case in which there are two never-claimants, one legislator who is a claimant in both periods, one legislator who is a claimant in the first period but not the second, and another legislator who is a claimant in the second period but not the first. One of the following three things must be true:

- The legislator who is a claimant in the first period but not the second period is the claimant to whom the never-claimants would like to give the resource. By the logic above, this legislator's difference in payoffs is the same as the never-claimants, except they get an extra $w_i + k_i(a_d) > 0$ for giving the resource to themselves rather than the other legislator, so he votes with the non-claimants and successfully secures the first period resource for himself.

- The legislator who is a claimant in the second period but not the first is a collaborator on whether to enact the rule. By the logic above, this legislator's immediate payoff from the first period allocation decision is the same as the never-claimants (because they are not a claimant in the first period by supposition) and their incentives are aligned with the never-claimant's in subsequent steps, so they vote with the non-claimants and win.

- The legislator who is a claimant in both periods is the claimant to whom the never-claimants would like to give the resource in the first period and also a collaborator. The difference in payoffs between giving the first period to himself rather than the other claimant is larger for this legislator than the non-claimants *and* this legislator's preference for following the non-claimants in the decision about whether to implement a rule is at least as strong as the non-claimants, so this legislator votes with the non-claimants.

It is not possible to fully characterize the claimants' behavior without further assumptions because a claimant (1) might prefer to not get the resource in the first period to ensure he gets the resource in the second period or (2) might prefer to not get the resource in the first period to avoid engaging in especially costly retaliation if the rule is violated against his wishes in the second period.

Even so, this analysis shows that whichever legislator is never a claimant is decisive. To fully characterize decisions about resource allocations and whether to enact a rule, it is sufficient to study just that legislator's preferences, as in the baseline model.

This extension assumes non-claimant legislators have identical preferences over allocation decisions and incur identical costs of retaliation. However, the extension just provided offers a blueprint for dealing with heterogeneous non-claimants, because the value of getting the resource and the cost of imposing retaliation for the claimants act like perturbations the parameters. At each step, they must anticipate what the collective choice of the legislature will be in all subsequent steps and plan their behavior accordingly. They must balance short-term considerations about who shall get the resource and what retaliation will be imposed as a result against long-term considerations about the desirability of enacting a rule. There is no natural ordering of the legislators, and hence no opportunity to say that the unitary legislature in the baseline model represents some median legislator. However, the analysis in this appendix shows how the key results of the model - that rules are attractive to legislators who don't care much about who gets the resource, who are likely to find the rule's prescriptions satisfactory, and who are concerned about the costs of retaliation - would remain true in the more generalized version of the model as well. I suspect this is true even if x is endogenized to allow claimants to strategically manipulate who benefits when they get the resource, although explicitly characterizing this process must be left to future research.

F Many Decisions

The baseline model assumes a unitary legislature makes a single allocation decision. Consider an extension to the baseline model in which there are n decisions which must be made per period, violating the prospective rule for even one of those decisions in the first period prevents the enactment of the rule, and violating an enacted rule for even one of the second period decisions erases the protective power of the rule. Those who were entitled to win under the rule retaliate with coefficient a_v and those who lost in accordance with the rule retaliate with coefficient a_d, as if there had been no rule. The n decisions are permitted to be heterogeneous; in each period, the legislature gets x_i for giving the resource to the first claimant to the ith resource. The first claimant to the ith resource has a capacity to retaliate of c_i and the second claimant has a capacity to retaliate of $c_i + \eta_i$. Assume without loss of generality that the claimants are ordered such that $x_i \geq a_d\eta_i$ for all i; that is, the first claimant to each resource gets the resource under discretion.

Let $\hat{y}_t \in \hat{Y}$ describe the allocation proposed by the rule during period t. Let V be the set of $\hat{y}_2$ such that the legislature will violate the rule if $\hat{y}_2 \in V$. Let $\tilde{y}_2(\hat{y}_2)$ be the legislature's preferred allocation if it violates a rule that proposes $\hat{y}_2$. $\tilde{y}_2$ is a function of $\hat{y}_2$ because a claimant retaliates with coefficient a_d if they were supposed to lose under the rule and a_v if they were supposed to win under the rule. $\hat{y}_{2,i} = 1$ implies $\tilde{y}_{2,i}(\hat{y}_2) = 1$ because $x_i \geq a_d\eta_i \implies x_i - a_d(c_i + \eta_i) \geq -a_v c_i$. However,

$\tilde{y}_{2,i}(\hat{y}_2)$ can be 1 or 0 if $\hat{y}_{2,i} = 0$ because the legislature prefers to give the resource to the first claimant if $x_i - a_v(c_i + \eta_i) \geq -a_d(c_i)$, which may be true or false depending on the parameters.

If there is a rule in place during the second period, the party will violate the rule's proposed allocation ($\hat{y}_2 \in V$) if

$$\begin{aligned}\sum_{i=1}^{n} \hat{y}_{2,i}(x_i - a_f\eta_i) - a_f c_i \leq \sum_{i=1}^{n} & \hat{y}_{2,i} \times \tilde{y}_{2,i}(\hat{y}_2) \times [x_i - a_d(c_i + \eta_i)] + \\ & \hat{y}_{2,i} \times [1 - \tilde{y}_{2,i}(\hat{y}_2)] \times [-a_v c_i] + \\ & (1 - \hat{y}_{2,i}) \times \tilde{y}_{2,i}(\hat{y}_2) \times [x_i - a_v(c_i + \eta_i)] + \\ & (1 - \hat{y}_{2,i}) \times [1 - \tilde{y}_{2,i}(\hat{y}_2)] \times [-a_d c_i]\end{aligned}$$

The four terms on the right-hand side of the inequality simply consider the four possible cases of agreement and disagreement between the rule and what the legislature does if it violates the rule for each resource allocation decision in the second period. Exploiting the fact that $\hat{y}_{2,i} = 1 \implies \tilde{y}_{2,i}(\hat{y}_2) = 1$, this simplifies to

$$\begin{aligned}\sum_{i=1}^{n} \hat{y}_{2,i}(x_i - a_f\eta_i) - a_f c_i \leq \sum_{i=1}^{n} & \hat{y}_{2,i}[x_i - a_d\eta_i] - a_d c_i + \\ & (1 - \hat{y}_{2,i}) \times \tilde{y}_{2,i}(\hat{y}_2) \times [x_i - a_v\eta_i - (a_v - a_d)c_i]\end{aligned} \tag{F.1}$$

From this, it is easy to see that the rule becomes more stable as x_i shrinks, a_v grows, a_d grows, a_f shrinks, c_i grows, and η_i grows. The main difference between the baseline result and this result is that increasing a_d now increases the stability of the rule, because it makes it more costly to follow the rule in some places and violate it in others.

The expected payoff for having a rule in period 2 is given by

$$\sum_{\hat{y}\notin V} p(\hat{y}) \sum_{i=1}^{n} \hat{y}_i(x_i - a_f\eta_i) - a_f c_i + \sum_{\hat{y}\in V} p(\hat{y}) \sum_{i=1}^{n} \hat{y}_i[x_i - a_d\eta_i] - a_d c_i +$$
$$(1-\hat{y}_i) \times \tilde{y}_{2,i}(\hat{y}) \times [x_i - a_v\eta_i - (a_v - a_d)c_i]$$

The total payoff for playing the game with no rule is

$$(1+\delta) \sum_{i=1}^{n} x_i - a_d(c_i + \eta_i)$$

The total payoff for playing the game with a rule which proposes $\hat{y}_1$ in the first period is $\sum_{i=1}^{n} \hat{y}_{1,i}(x_i - a_d\eta_i) - a_d c_i$ plus the expected payoff from having a rule in the second period. Therefore, the legislature prefers to enact the rule if

$$\begin{aligned}
&\sum_{i=1}^{n}(1-\hat{y}_{1,i})(x_i - a_d\eta_i) \leq \qquad\qquad (F.2)\\
&\delta \sum_{\hat{y}_2\notin V} p(\hat{y}_2) \sum_{i=1}^{n}(a_d - a_f)c_i + \hat{y}_{2,i}(a_d - a_f)\eta_i - (1-\hat{y}_{2,i})(x_i - a_d\eta_i) +\\
&\delta \sum_{\hat{y}_2\in V} p(\hat{y}_2) \sum_{i=1}^{n}(1-\hat{y}_{2,i}) \times \tilde{y}_{2,i}(\hat{y}_2) \times [x_i - a_v\eta_i - (a_v - a_d)c_i] - (1-\hat{y}_{2,i}) \times (x_i - a_d\eta_i)
\end{aligned}$$

Comparative statics can be obtained by taking the derivatives of both sides of Inequalities F.1 and F.2 and figuring out what makes the inequality easier to satisfy. The results convey the same intuition as the baseline model, although their precise statements are in some cases more nuanced.

- As x_i increases, rules become less stable and the legislature becomes less inclined to enact rules.
- As a_v increases, rules become more stable but the legislature becomes less inclined to enact rules.
- As a_d increases, rules become more stable the legislature becomes more inclined

to enact rules.

- As a_f increases, rules become less stable and the legislature becomes less inclined to enact rules.

- If $\sum_{\hat{y}_2 \in V} p(\hat{y}_2)$ is large enough, the legislature prefers not to enact rules.

- As c_i increases, rules become more stable and the legislature becomes more inclined to enact rules as long as the rule is sufficiently likely to be stable.

- As η_i increases, rules become more stable and the floor becomes more inclined to enact rules as long as the rule is sufficiently likely to be stable.

- As δ increases, if the legislature is willing to enact a rule for $\hat{y}_{1,i} = 1$ for all $i = 1, \ldots, n$, the legislature becomes more willing to enact a rule for all $\hat{y}_1$.

The results for x_i and a_f follow trivially from the inequalities, but a_v, a_d, p, c_i, η_i, and δ call for more elaboration.

Because increasing a_v makes the rule more stable and, conditional on V, makes rules less attractive, it is natural to wonder if the increasing stability offsets making rules less attractive in cases where they are violated. But it is in fact obvious that increasing a_v decreases the payoff in cases where the rule is violated but does not increase the payoff in the case where the rule is followed, so it must be decrease the payoff associated with the rule overall. A similar argument follows for a_d.

For p, note that the legislature gets a higher payoff when there is no rule than it gets for any allocation where it violates the rule. For any $\hat{y}_2 \in V$,

$$\begin{aligned}
\sum_{i=1}^{n} x_i - a_d(c_i + \eta_i) &\geq \sum_{i=1}^{n} \hat{y}_{2,i}(x_i - a_d\eta_i) - a_d c_i + (1 - \hat{y}_{2,i})\tilde{y}_{2,i}(\hat{y}_2)[x_i - a_v\eta_i - (a_v - a_d)c_i] \\
\sum_{i=1}^{n}(1 - \hat{y}_{2,i})(x_i - a_d\eta_i) &\geq \sum_{i=1}^{n}(1 - \hat{y}_{2,i})\tilde{y}_{2,i}(\hat{y}_2)[x_i - a_v(c_i + \eta_i) + a_d c_i] \\
\sum_{i=1}^{n}(1 - \hat{y}_{2,i})\tilde{y}_{2,i}(\hat{y}_2)(x_i - a_d\eta_i) &\geq \sum_{i=1}^{n}(1 - \hat{y}_{2,i})\tilde{y}_{2,i}(\hat{y}_2)[x_i - a_v(c_i + \eta_i) + a_d c_i] \\
0 &\geq -\sum_{i=1}^{n}(1 - \hat{y}_{2,i})\tilde{y}_{2,i}(\hat{y}_2)(a_v - a_d)(c_i + \eta_i)
\end{aligned}$$

The third inequality follows from $x_i - a_d\eta_i \geq 0$, which is true by assumption. This means that if the legislature will violate the rule for sure, it prefers to not enact a rule.

Perhaps surprisingly, moving probability mass from a $\hat{y} \in V$ to a $\hat{y} \notin V$ (to a prescription that will not be violated) does not necessarily make enacting the rule more attractive. Suppose there are two claimants and $a_v = 1.5$, $a_d = 1$, $a_f = 0.5$, $c_1 = c_2 = 1$, $\eta_1 = 0$, $\eta_2 = 9$, $x_1 = 10$, and $x_2 = 11$. Then if $\hat{y}_2 = (1, 0)$, the legislature gets 5 for violating the rule and 9 for following the rule, so $(1, 0) \notin V$. If $\hat{y}_2 = (0, 1)$, the legislature gets 9.5 for violating the rule and 5.5 for following the rule, so $(0, 1) \in V$. The legislature gets a higher payoff from violating $(1, 0)$ than from following $(0, 1)$, so moving probability mass from $(1, 0)$ to $(0, 1)$ decreases the attractiveness of enacting the rule.

For c_i, the comparative static for the attractiveness of the rule in the first place is obtained by taking the derivative on both sides of Inequality F.2 and showing the right-hand side exceeds the left-hand side, which simplifies to

$$(a_d - a_f) \sum_{\hat{y}_2 \notin V} p(\hat{y}_2) \geq (a_v - a_d) \sum_{\hat{y}_2 \in V} p(\hat{y}_2) \times (1 - \hat{y}_{2,i}) \times \tilde{y}_{2,i}(\hat{y}_2)$$

This is true if $\sum_{\hat{y}_2 \notin V} p(\hat{y}_2)$ is large enough and false if it is small enough. Likewise, the inequality for η_i is

$$\sum_{\hat{y}_2 \notin V} p(\hat{y}_2) \times (a_d - \hat{y}_{2,i} a_f) \geq \sum_{\hat{y}_2 \in V} p(\hat{y}_2) \times (1 - \hat{y}_{2,i}) \times [-\tilde{y}_{2,i}(\hat{y}_2) a_v + a_d]$$

This is also true if $\sum_{\hat{y}_2 \notin V} p(\hat{y}_2)$ is large enough and can be false if it is small enough and a_v is not too large in relation to a_d.

The comparative static for δ is given by the expected value of having a rule in the second period minus the value of not having a rule in the second period. If Inequality F.2 is true for $\hat{y}_{1,i} = 1$ for all $i = 1, \ldots, n$, then (1) the legislature enacts a rule if the rule recommends to give the resource to the first claimant in every first period decision and (2) the attractiveness of enacting a rule is increasing in δ.

Thus, a model where the legislature makes many allocation decisions each period provides qualitatively similar results as the simpler baseline model in which the party makes a single allocation decision per period.

G Linking Rules

Consider an extension to the model in which there are two resource allocation problems which are potentially governed by two separate rules. To keep the solution legible, assume these two problems are ex ante identical. The same approach can be used to analyze the game with two resource allocation problems that have distinct parameters, but that more general problem has many tedious cases that make the solution difficult to follow. The linkage between the two problems is that if there is a rule in place for both during the second period, violating one (even if the other is not violated) increases the anger coefficient associated with following the other from a_f to βa_f, with $a_f < \beta a_f < a_v$.

The analysis for the second period is the same as in the baseline model except for the case in which there is a rule for both allocation problems. Let $y_{2,1}$ and $y_{2,2}$ be the allocation decisions during the second period for the first and second problems, respectively. Define $\hat{y}_{2,1}$ and $\hat{y}_{2,2}$ analogously for the rules' proposed allocations. Obviously, if $\hat{y}_{2,1} = \hat{y}_{2,2} = 1$, the legislature has no reason to violate either rule, so it follows both rules. If $\hat{y}_{2,1} \neq \hat{y}_{2,2}$ such that one of the rules makes a recommendation consistent with what the legislature would do in the absence of a rule and the other does not, the legislature follows both rules if

$$
\begin{aligned}
2x - \beta a_f(c+\eta) - a_v(c+\eta) &\leq x - a_f(c+\eta) - a_f c \\
x &\leq (a_v - a_f)c + a_v\eta + (\beta - 1)a_f(c+\eta)
\end{aligned}
$$

Otherwise, it follows the rule that recommends the preferred candidate for that resource allocation problem and violates the others.

If $\hat{y}_{2,1} = \hat{y}_{2,2} = 0$, the legislature follows both rules if

$$
\begin{aligned}
2x - 2a_v(c+\eta) &\leq -2a_f c \\
x &\leq (a_v - a_f)c + a_v\eta
\end{aligned}
$$

Otherwise, it violates both rules. Note that $x \leq (a_v - a_f)c + a_v\eta$ is precisely the condition for deferring to the rule in the baseline model.

The condition for violating a rule if $\hat{y}_{2,1} = \hat{y}_{2,2} = 0$ is stricter than the condition for violating a rule if $\hat{y}_{2,1} \neq \hat{y}_{2,2}$, $(a_v - a_f)c + a_v\eta \leq (a_v - a_f)c + a_v\eta + (\beta - 1)a_f(c+\eta)$, so there are three cases: (1) the legislature will follow both rules no matter what, which happens if $x \leq (a_v - a_f)c + a_v\eta$, (2) the legislature will follow both rules unless $\hat{y}_{2,1} = \hat{y}_{2,2} = 0$, which happens if $(a_v - a_f)c + a_v\eta \leq x \leq (a_v - a_f)c + a_v\eta + (\beta - 1)a_f(c+\eta)$, or (3) the legislature will only follow the rules if both $\hat{y}_{2,1} = \hat{y}_{2,2} = 1$, which happens if $x \geq (a_v - a_f)c + a_v\eta + (\beta - 1)a_f(c+\eta)$.

Thus, if rules are enacted for each of the two allocation problems, it increases the stability of both rules. Even if x is too large to guarantee that the rule will be followed, as long as x is not too large, the legislature will still follow a rule as long as the other rule suggests giving the resource to the favored claimant for the other resource allocation problem.

It is not necessary to delve into the legislature's first period allocation decision to see how this affects the incentive to enact a rule in the first place, because it is easy to see that this deters enacting rules in the first place. If the legislature enacts both rules, violating just one of the rules has a lower payoff but following that rule does not have a higher payoff compared to the baseline model. Enacting one or zero rules provides the same payoff as in the baseline model.