Appendix: *Formalization of the Argument*

Here, I provide a simple decision-theoretic model in which an incumbent decides how to solicit money. This model underlies the theoretical argument made in Chapter 3 and I provide formal derivations of all implications discussed there.

MODEL SETUP

The basic structure of the model is as follows: There is an incumbent politician (the active player), a financier (a passive player), and a mass of voters (passive as well). They interact over two periods, as shown in Figure 3.1.

The incumbent cares about being in office as well as about their financial situation. In the first period, they decide on a single policy $x \in \{0, 1\}$. They know that the electorate prefers $x = 0$, whereas $x = 1$ is preferred by the financier. The financier has instrumental interests in the policy and is willing to spend a certain amount of money M, but only if the policy they prefer is passed. Since I am interested in *how* money enters politics, I assume that the incumbent choses to engage with the financier, so they set $x = 1$ and special interest money M (which I normalize to 1) enters politics. They can solicit this money for their personal enrichment (R), as a campaign contribution (C), in the form of a golden parachute job salary (S), or any mixture of the three, subject to the condition $R + C + S = M$.

At the end of the first period, there is an election whose outcome probabilistically depends on, among other things, the amount of campaign spending. If the incumbent is reelected, they are in office for a second period (during which, for simplicity, they do not decide on a policy). The other options for the second period are retirement or working in a golden

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parachute job. Next, I describe the actors and their payoffs in more detail. I begin with voters, followed by the financier, and finally the incumbent politician.

Voters

Following the seminal model by Grossman and Helpman (2001), voters care about policy, but are also influenced by campaign spending. They reelect the incumbent if

$$\alpha C - x \geq \theta$$

C captures the effect of campaign spending, weighted by $\alpha > 0$. The larger α, the more important campaigning is for voters, and the less they care about policy. The second term is the effect of policy, so $x = 0$ is more popular than $x = 1$.

The incumbent is confirmed in office if the utility that the electorate gets from their policy choice and their campaign spending exceeds a threshold θ. This threshold is unknown to the candidate ex ante, so they have no way of knowing for sure whether they will be reelected. I model this through a move by nature, which draws θ from a commonly known distribution.

For convenience, I assume that $\theta \sim \text{Triangular}(-h, h, 0)$, where $h > 0$ and the three parameters describe the minimum, maximum, and mode of the distribution. Using this, the probability p that the incumbent wins reelection is

$$p(C) = \begin{cases} \frac{1}{2h^2}(\alpha C - x + h)^2 & \text{if} \quad -h \leq \theta \leq 0 \\ 1 - \frac{1}{2h^2}(h - \alpha C + x)^2 & \text{if} \quad 0 < \theta \leq h \end{cases}$$

Given that θ is equally likely to be positive or negative, this simplifies in expectation to

$$p(C) = \frac{1}{2} + \frac{1}{h}(\alpha C - x)$$

As mentioned earlier, I only consider the case where $x = 1$ here, so

$$p(C) = \frac{1}{2} + \frac{1}{h}(\alpha C - 1)$$

The condition $h > \min\{2, 2(\alpha - 1)\}$ ensures $0 < p(C) < 1$.[1]

Financier

The financier is a passive actor who is willing to pay $M = 1$ to the politician, as long as $x = 1$. This assumes that the benefit that the financier

[1] This condition makes use of the fact that M is normalized to 1, so $0 \leq C \leq 1$.

TABLE A1 *Incumbent's payoffs*. Incumbent's payoffs for the four paths shown in Figure 3.1

	Path	Utility
u_1	Run, GP if Lose	$\log(1+R+\delta(1-p(C))S)+\delta p(C)\phi-k-\delta(1-p(C))e$
u_2	Run, Retire if Lose	$\log(1+R)+\delta p(C)\phi-k$
u_3	Not Run, GP	$\log(1+R+\delta S)-\delta e$
u_4	Not Run, Retire	$\log(1+R)$

derives from having $x=1$ instead of $x=0$ is greater or equal to M. Since I assume here that the incumbent chooses $x=1$, the financier simply pays M to the politician in whatever form(s) the latter desires.

Incumbent

The incumbent is the active player in this decision-theoretic model. First, they care about holding office and about their material wealth. I capture the former through a term $\phi>0$, which can be interpreted as an ego rent or as a more altruistic motivation to do good in office. Second, the incumbent cares about their material wealth. Following standard practice, utility is increasing in the amount of money but with a decreasing marginal effect. For simplicity, I assume a logarithmic functional form, so the amount $A\geq 0$ provides the incumbent with utility $\log(1+A)$.

The incumbent's utility depends on which of the four paths shown in Figure 3.1 they take. Table A1 lists each of them. For the first path, the incumbent runs for reelection and takes up a golden parachute job if they lose. The first term $\log(\cdot)$ is the utility the incumbent receives from material gains. They are twofold. First, there is their personal enrichment R in the first period. Second, with probability $1-p(C)$ they lose the election, which means they receive the golden parachute salary S. Note that since this payment accrues only in the second period, it is discounted by δ, where $0<\delta<1$. In addition to those monetary payoffs, the incumbent wins reelection with probability $p(C)$, in which case they receive utility ϕ from being in office for another term, discounted by δ. They pay the cost $k>0$ for running for reelection, and, if they take a private sector job (with probability $1-p(C)$), they have to make work effort $e>0$ in the second period, again discounted by δ.

When taking the second path, the incumbent runs for reelection, but retires in case they lose. Benefits of retirement are normalized to zero. The incumbent's monetary benefits come from personal enrichment R. Their non-monetary benefits are the utility from holding office ϕ, which happens with probability $p(C)$ and is discounted by δ. In case of an election loss, they retire and have no payoff in the second period. The incumbent again pays a cost k for running.

For the third path, the incumbent does not run for reelection and instead takes up a golden parachute job for sure. In this case, they receive utility from money used for personal enrichment R as well as from the salary for the golden parachute employment S (discounted by δ), for which they have to make effort e (also discounted by δ).

Finally, the fourth path is to not run for reelection and retire. In this case, the only benefit the incumbent receives is in the form of R.

The incumbent thus has multiple decisions to make. There are four possible paths that differ in whether the incumbent runs for reelection or not, and what career options are available to them in the second period. Along all of the paths, the incumbent can solicit money in a combination of the different types. They solve an optimization problem and choose the combination of career path and money allocation that gives them the highest utility.

"STATE OF NATURE" BENCHMARK

I begin by deriving the optimal course of action for the incumbent in a "state of nature" without any restrictions or constraints on how money can enter politics. The first insight is that Paths 1 and 3 are not viable. Looking at u_3, it is clear that any constrained maximization will result in $S = 0$, since $0 < \delta < 1$ and $e > 0$, which means that Path 4 is preferable. Looking at u_1, a similar logic applies when comparing it to u_2.[2]

We therefore have to find the optimal allocation between R and C for Path 2 (resulting in u_2^*), and then compare that to $u_4^* = \log(2)$ (since $R = 1$). The constrained optimization problem for Path 2 (Run, Retire if Lose) is:

$$\max_{R,C} \quad \log(1+R) + \delta p(C)\phi - k \quad \text{s.t.} \quad R + C = 1$$

The solution to which is:

$$C_2 = \begin{cases} 0 & \text{if} \quad \phi \leq \frac{h}{2\alpha\delta} \\ 2 - \frac{h}{\alpha\delta\phi} & \text{if} \quad \frac{h}{2\alpha\delta} < \phi < \frac{h}{\alpha\delta} \\ 1 & \text{if} \quad \phi \geq \frac{h}{\alpha\delta} \end{cases}$$

Naturally, $R_2 = 1 - C_2$.

[2] Since $0 < \delta < 1$, $e > 0$, and $0 < p(C) < 1$.

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For the interior solution, it is straightforward to show that $\frac{\partial C_2}{\partial \phi} = \frac{h}{\alpha \delta \phi^2} > 0$, $\frac{\partial C_2}{\partial \delta} = \frac{h}{\alpha \delta^2 \phi} > 0$, and $\frac{\partial C_2}{\partial k} = 0$. The partial derivatives for R_2 have the opposite signs.
For utility u_2, it holds that:

- For the lower corner solution, $\frac{\partial u_2}{\partial \phi} = \frac{\delta(h-2)}{2h} > 0$, since $h > 2$; $\frac{\partial u_2}{\partial \delta} = \frac{\phi(h-2)}{2h} > 0$; and $\frac{\partial u_2}{\partial k} = -1 < 0$.
- For the interior solution, $\frac{\partial u_2}{\partial \phi} = \frac{\delta(4\alpha+h-2)}{2h} - \frac{1}{\phi} > 0$ if $\phi > \frac{2h}{\delta(4\alpha+h-2)}$. This condition holds since $\frac{2h}{\delta(4\alpha+h-2)} < \frac{h}{2\alpha\delta}$, where the latter is the lower boundary for the interior solution. Furthermore, $\frac{\partial u_2}{\partial \delta} = \frac{\phi(4\alpha+h-2)}{2h} - \frac{1}{\delta} > 0$ if $\phi > \frac{2h}{\delta(4\alpha+h-2)}$, which holds by the same argument. Finally, $\frac{\partial u_2}{\partial k} = -1 < 0$.
- For the upper corner solution, $\frac{\partial u_2}{\partial \phi} = \delta(\frac{1}{2} + \frac{\alpha-1}{h}) > 0$ if $\frac{1}{2} + \frac{\alpha-1}{h} > 0$. This condition holds when $h > 2(1-\alpha)$, which is true because $2(1-\alpha) < 2$ (since $\alpha > 0$ and $h > 2$ by assumption). Furthermore, $\frac{\partial u_2}{\partial \delta} = \phi(\frac{1}{2} + \frac{\alpha-1}{h}) > 0$ by the same argument, and $\frac{\partial u_2}{\partial k} = -1 < 0$.

Thus, $\frac{\partial u_2}{\partial \phi} > 0$, $\frac{\partial u_2}{\partial \delta} > 0$, and $\frac{\partial u_2}{\partial k} < 0$.
Since $u_4 = \log(2)$, it follows with respect to ϕ:

- At low levels of ϕ Path 4 is preferred, but at higher levels Path 2 is preferred (since $\frac{\partial u_2}{\partial \phi} > 0$ and $\frac{\partial u_4}{\partial \phi} = 0$).
- As ϕ increases, C weakly increases (since $\frac{\partial C_2}{\partial \phi} \geq 0$ and $\frac{\partial C_4}{\partial \phi} = 0$).

With respect to δ:

- At low levels of δ Path 4 is preferred, but at higher levels Path 2 is preferred (since $\frac{\partial u_2}{\partial \delta} > 0$ and $\frac{\partial u_4}{\partial \delta} = 0$).
- As δ increases, C weakly increases (since $\frac{\partial C_2}{\partial \delta} \geq 0$ and $\frac{\partial C_4}{\partial \delta} = 0$).

Finally, with respect to k:

- At low levels of k Path 2 is preferred, but at higher levels Path 4 is preferred (since $\frac{\partial u_2}{\partial k} < 0$ but $\frac{\partial u_4}{\partial k} = 0$).

LEGAL ENVIRONMENT

Punishing Self-Enrichment

Now, a penalty for self-enrichment is introduced. If the incumbent accepts R, they can now only expect to keep $(1-\sigma)R$. This means that σ

TABLE A2 *Incumbent's payoffs, with penalty for self-enrichment.* Incumbent's Payoffs for the four paths shown in Figure 3.1 with penalty for self-enrichment σ highlighted in gray

	Path	Utility
$u_{1\sigma}$	Run, GP if Lose	$\log(1+\delta(1-p(C))S)+\delta p(C)\phi-k-\delta(1-p(C))e$
$u_{2\sigma}$	Run, Retire if Lose	$\log(1+(1-\sigma)R)+\delta p(C)\phi-k$
$u_{3\sigma}$	Not Run, GP	$\log(1+\delta S)-\delta e$
$u_{4\sigma}$	Not Run, Retire	$\log(1+(1-\sigma)R)$

represents the proportion of the money that the politician anticipates to pay as a fine. It can be thought of as the monetary value of the penalty times the probability of getting caught, so it captures both the strictness of the rules as well as their enforcement. If $\sigma > 1$, the combination of enforcement and penalty is so severe that in expectation, the incumbent loses more than they gain. Since this trivially leads to $R = 0$, I will focus the discussion on cases where $0 < \sigma < 1$. Table A2 shows how this affects the utilities that the incumbent derives from the four possible paths, with the newly added term $1-\sigma$ highlighted. Because Paths 2 and 4 now also have losses, Paths 1 and 3 are potentially viable, so we have to consider all four options. I first discuss each path separately and then put everything together to demonstrate the insights shown in Figure 3.2.

Path 1 (Run for Reelection, Golden Parachute if Lose)

If choosing this path, the incumbent optimally allocates campaign spending C and golden parachute salary S by solving the following constrained maximization problem:

$$\max_{S,C} \quad \log(1+\delta(1-p(C))S)+\delta p(C)\phi-k-\delta(1-p(C))e \quad \text{s.t.} \quad S+C=1$$

The solution to this is:

$$C_{1\sigma} = \begin{cases} 0 & \text{if} \quad \phi \leq \frac{h(2+h)-\alpha(2(e-1)h+\delta e(2+h))}{\alpha(2h+\delta(2+h))} \\ \frac{1}{4\alpha^2\delta(e+\phi)} & \text{if} \quad \frac{h(2+h)-\alpha(2(e-1)h+\delta e(2+h))}{\alpha(2h+\delta(2+h))} \\ (\alpha\eta_\sigma - \sqrt{\alpha^2(\zeta_\sigma+\eta_\sigma)}) & \quad < \phi < \frac{2-2\alpha(1+e)+h}{2\alpha} \\ 1 & \text{if} \quad \phi \geq \frac{2-2\alpha(1+e)+h}{2\alpha} \end{cases}$$

with

$$\eta_\sigma = \delta(2+2\alpha+h)(e+\phi)-4h$$

and

$$\zeta_\sigma = -8\delta(e+\phi)(2\alpha h(e+\phi-1) - h(2+h) + \alpha\delta(2+h)(e+\phi))$$

Of course, $S_{1\sigma} = 1 - C_{1\sigma}$.
For the interior solutions, it holds that $\frac{\partial C_{1\sigma}}{\partial \phi} = \frac{h(4\alpha h + \sqrt{\alpha^2(\zeta_\sigma+\eta_\sigma^2)})}{\alpha\delta(e+\phi)^2\sqrt{\alpha^2(\zeta_\sigma+\eta_\sigma^2)}} > 0$.
For the cutpoints $\underline{\phi}_{1\sigma}$ and $\overline{\phi}_{1\sigma}$ above and below which the corner solution applies, it holds that $\frac{\partial \underline{\phi}_{1\sigma}}{\partial \sigma} = 0$ and $\frac{\partial \overline{\phi}_{1\sigma}}{\partial \sigma} = 0$.
For $u_{1\sigma}$, it holds that $\frac{\partial u_{1\sigma}}{\partial \phi} = \frac{\delta}{2h}(h + 2\alpha C_{1\sigma} - 2) > 0$ since $h > 2$ and $\alpha C_{1\sigma} \geq 0$. It also holds that $\frac{\partial u_{1\sigma}}{\partial \sigma} = 0$.

Path 2 (Run for Reelection, Retire if Lose)
If choosing this path, the incumbent optimally allocates campaign spending C and enrichment in office R as follows:

$$C_{2\sigma} = \begin{cases} 0 & \text{if} \quad \phi \leq \frac{h(1-\sigma)}{\alpha\delta(2-\sigma)} \\ 1 + \frac{1}{1-\sigma} - \frac{h}{\alpha\delta\sigma} & \text{if} \quad \frac{h(1-\sigma)}{\alpha\delta(2-\sigma)} < \phi < \frac{h(1-\sigma)}{\alpha\delta} \\ 1 & \text{if} \quad \phi \geq \frac{h(1-\sigma)}{\alpha\delta} \end{cases}$$

and $R_{2\sigma} = 1 - C_{2\sigma}$.
For the interior solution, it holds that $\frac{\partial C_{2\sigma}}{\partial \phi} = \frac{h}{\alpha\delta\sigma^2} > 0$ and $\frac{\partial C_{2\sigma}}{\partial \sigma} = \frac{1}{(1-\sigma)^2} > 0$.
For the cutpoints $\underline{\phi}_{2\sigma}$ and $\overline{\phi}_{2\sigma}$ above and below which the corner solution applies, it holds that $\frac{\partial \underline{\phi}_{2\sigma}}{\partial \sigma} = -\frac{h}{\alpha\delta} < 0$ and $\frac{\partial \overline{\phi}_{2\sigma}}{\partial \sigma} = -\frac{h}{\alpha\delta(2-\sigma)^2} < 0$, which means that the cutpoints shift to the left as σ increases.
For utility $u_{2\sigma}$, it holds that with respect to ϕ:

- For the lower corner solution, $\frac{\partial u_{2\sigma}}{\partial \phi} = \frac{\delta(h-2)}{2h} > 0$ because $h > 2$.
- For the interior solution, $\frac{\partial u_{2\sigma}}{\partial \phi} = \frac{\delta}{2h}(h + \frac{2\alpha(2-\sigma)}{1-\sigma} - 2) - \frac{1}{\phi} > 0$ if $\phi < \frac{2h(1-\sigma)}{\delta(2\alpha(2-\sigma)+(h-2)(1-\sigma))}$. This condition holds since $\frac{2h(1-\sigma)}{\delta(2\alpha(2-\sigma)+(h-2)(1-\sigma))} < \frac{h(1-\sigma)}{\alpha\delta(2-\sigma)}$, where the latter is the lower boundary for the interior solution.
- For the upper corner solution, $\frac{\partial u_{2\sigma}}{\partial \phi} = \delta(\frac{1}{2} + \frac{\alpha-1}{h}) > 0$ if $h > -2(\alpha-1)$, which is true.

Thus, $\frac{\partial u_{2\sigma}}{\partial \phi} > 0$.

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For utility $u_{2\sigma}$, it holds that with respect to σ:

- For the lower corner solution, $\frac{\partial u_{2\sigma}}{\partial \sigma} = -\frac{1}{2-\sigma} < 0$ since $\sigma < 1$.
- For the interior solution, $\frac{\partial u_{2\sigma}}{\partial \sigma} = \frac{\alpha\delta\phi - h(1-\sigma)}{h(1-\sigma)^2} < 0$ if $\phi < \frac{h(1-\sigma)}{\alpha\delta}$. This condition holds since the latter is the upper boundary for the interior solution.
- For the upper corner solution, $\frac{\partial u_{2\sigma}}{\partial \sigma} = 0$.

Thus, $\frac{\partial u_{2\sigma}}{\partial \sigma} \leq 0$.

Path 3 (Not Run for Reelection, Golden Parachute)
Since $S = 1$, $u_{3\sigma} = \log(1+\delta) - \delta e$, so it follows that $\frac{\partial u_{3\sigma}}{\partial \phi} = 0$ and $\frac{\partial u_{3\sigma}}{\partial \sigma} = 0$.

Path 4 (Not Run for Reelection, Retire)
Since $R = 1$, $u_{4\sigma} = \log(2-\sigma)$, so it follows that $\frac{\partial u_{4\sigma}}{\partial \phi} = 0$ and $\frac{\partial u_{4\sigma}}{\partial \sigma} = -\frac{1}{2-\sigma} < 0$.

Putting Things Together
The overall picture of how money enters politics is as follows: At low levels of σ, Path 4 is the preferred option for small values of ϕ and Path 2 for larger values of ϕ, per the argument made in the benchmark case. Since $\frac{\partial u_{2\sigma}}{\partial \sigma} \leq 0$ and $\frac{\partial u_{4\sigma}}{\partial \sigma} < 0$, but $\frac{\partial u_{1\sigma}}{\partial \sigma} = 0$ and $\frac{\partial u_{3\sigma}}{\partial \sigma} = 0$, it follows that at higher levels of σ, Paths 1 and 3 are preferred. Because $\frac{\partial u_{3\sigma}}{\partial \phi} = 0$ but $\frac{\partial u_{1\sigma}}{\partial \phi} > 0$, Path 3 is preferred for small values of ϕ and Path 4 for larger values of ϕ.
From this, these insights shown in Figure 3.2 follow:

- First panel: We start with Path 2, with low R and high C. As σ increases, C increases (since $\frac{\partial C_{2\sigma}}{\partial \sigma} \geq 0$).
- Second panel: We start with Path 2, but a higher R and lower C than in the first panel. As σ increases, C increases (since $\frac{\partial C_2}{\partial \sigma} \geq 0$). In addition, if σ is high enough, Path 1 is preferred (per the argument in the earlier paragraph). Once Path 1 is taken, C and S do not react to σ, since $\frac{\partial C_{1\sigma}}{\partial \sigma} = 0$.
- Third panel: We start with Path 4, so $R = 1$. Once σ is high enough, Path 3 is preferred (per the argument in the above paragraph).

Campaign Finance Regulation

Next, I consider campaign finance legislation. I incorporate this in a similar way as the regulation of enrichment in office: Using money for campaigning purposes is now illegal, and if the incumbent accepts it

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TABLE A3 *Incumbent's payoffs, with campaign finance regulation.* Incumbent's Payoffs for the four paths shown in Figure 3.1 with penalty for campaign spending τ highlighted in gray

	Path	Utility
$u_{1\sigma}$	Run, GP if Lose	$\log(1+\delta(1-p((1-\tau)C))S)+\delta p((1-\tau)C)\phi$ $-k-\delta(1-p((1-\tau)C))e$
$u_{2\sigma}$	Run, Retire if Lose	$\log(1+(1-\sigma)R)+\delta p((1-\tau)C)\phi-k$
$u_{3\sigma}$	Not Run, GP	$\log(1+\delta S)-\delta e$
$u_{4\sigma}$	Not Run, Retire	$\log(1+(1-\sigma)R)$

nevertheless, then τ represents the share of it that they expect to pay as a fine and are therefore unable to use.[3] If the incumbent takes a campaign contribution, they can anticipate to only keep $(1-\tau)$ C. I again assume that $0<\tau<1$. The penalty for self-enrichment and for campaign spending are set separately, since there need to be different laws dealing with the two types of money, and they are typically overseen and prosecuted by different agencies.[4] Table A3 shows the utilities for the four possible paths, with changes highlighted in gray.

Path 1 (Run for Reelection, Golden Parachute if Lose)

With the introduction of τ, the optimal allocation between C and S becomes:

$$C_{1\tau}=\begin{cases} 0 & \text{if } \phi \leq \frac{h(2+h)-\alpha(1-\tau)(2(e-1)h+\delta e(2+h))}{\alpha(1-\tau)(2h+\delta(2+h))} \\ \frac{1}{4\alpha^2\delta(e+\phi)(1-\tau)^2}\Big(\alpha(1-\tau)\eta_\tau- & \text{if } \frac{h(2+h)-\alpha(1-\tau)(2(e-1)h+\delta e(2+h))}{\alpha(1-\tau)(2h+\delta(2+h))} \\ \sqrt{\alpha^2(1-\tau)^2(\zeta_\tau+\eta_\tau)}\Big) & <\phi<\frac{2-2\alpha(1-\tau)(1+e)+h}{2\alpha(1-\tau)} \\ 1 & \text{if } \phi \geq \frac{2-2\alpha(1-\tau)(1+e)+h}{2\alpha(1-\tau)} \end{cases}$$

[3] Note that this means the incumbent is at risk of being penalized from the first dollar they use for campaigning purposes. Most countries allow campaign spending and donations up to a certain amount. I focus on the case where there is a complete ban to contrast with the model discussed so far where all spending is legal. Real-world regulation with a partial ban falls somewhere in between the two extremes.

[4] Of course, it may be that a politician accepts money and then decides themself whether to use it for personal enrichment or for their reelection campaign. In this case, either $\sigma=\tau$, or the penalty depends on the timing of the discover relative to the election. If the violation is discovered while the money is spent during the campaign then τ applies, whereas σ applies if it is discovered while stashed away somewhere in the politician's home or office.

with

$$\eta_\tau = \delta(2+2\alpha(1-\tau)+h)(e+\phi)-4h$$

and

$\zeta_\tau = -8\delta(e+\phi)(2\alpha(1-\tau)h(e+\phi-1)-h(2+h)+\alpha(1-\tau)\delta(2+h)(e+\phi))$

Of course, $S_{1\tau} = 1 - C_{1\tau}$.

First, for the interior solution, it holds that $\frac{\partial C_{1\tau}}{\partial \phi} = \frac{h(4\alpha h(1-\tau)+\sqrt{\alpha^2(1-\tau)^2(\eta_\tau^2+\zeta_\eta)})}{\alpha\delta(e+\phi)^2(1-\tau)\sqrt{\alpha^2(1-\tau)^2(\eta_\tau^2+\zeta_\eta)}} > 0$, so $C_{1\tau}$ increases in ϕ.

Second, for the cutpoints $\underline{\phi}_{1\tau}$ and $\overline{\phi}_{1\tau}$ above and below which the corner solution applies, it holds that $\frac{\partial \underline{\phi}_{1\tau}}{\partial \tau} = \frac{h(2+h)}{\alpha(2h+\delta(2+h))(1-\tau)^2} > 0$ and $\frac{\partial \overline{\phi}_{1\tau}}{\partial \tau} = \frac{2+h}{2\alpha(1-\tau)^2} > 0$. Thus, as τ increases, the cutpoints move to the right.

For the corner solutions, where $C_{1\tau} = 0$ or $C_{1\tau} = 1$, it is clear that increasing τ has no effect (other than shifting the cutpoints). Taken together, this means that $C_{1\tau}$ must be at or below C_1, so $\frac{\partial C_{1\tau}}{\partial \tau} \leq 0$.

For $u_{1\tau}$, the following holds with respect to ϕ:

- For the lower corner solution, $\frac{\partial u_{1\tau}}{\partial \phi} = \frac{\delta(h-2)}{2h} > 0$.
- For the interior solution, $\frac{\partial u_{1\tau}}{\partial \phi} = \frac{\delta}{2h}(h-2+2\alpha(1-\tau)C_{1\tau}) > 0$ since $0 < C_{1\tau} < 1$.
- For the upper corner solution, $\frac{\partial u_{1\tau}}{\partial \phi} = \frac{\delta}{2h}(h-2+2\alpha(1-\tau)) > 0$.

Thus, $\frac{\partial u_{1\tau}}{\partial \phi} > 0$.

For $u_{1\tau}$, the following holds with respect to τ:

- For the lower corner solution, $\frac{\partial u_{1\tau}}{\partial \tau} = 0$.
- For the upper corner solution, $\frac{\partial u_{1\tau}}{\partial \tau} = -\frac{\alpha\delta(e+\phi)}{h} < 0$.
- For the interior solution, note that because $\frac{\partial u_{1\tau}}{\partial \phi} > 0$ as well as $\frac{\partial u_{1\tau}}{\partial \tau} = 0$ for the lower corner solution and $\frac{\partial u_{1\tau}}{\partial \tau} < 0$ for the upper corner solution, it must be that $\frac{\partial u_{1\tau}}{\partial \tau} < 0$.

Thus, $\frac{\partial u_{1\tau}}{\partial \tau} \leq 0$.

Path 2 (Run for Reelection, Retire if Lose)

When choosing this path, the optimal allocation is:

$$C_{2\tau} = \begin{cases} 0 & \text{if} \quad \phi \leq \frac{h(1-\sigma)}{\alpha\delta(2-\sigma)(1-\tau)} \\ 1 + \frac{1}{1-\sigma} - \frac{h}{\alpha\delta\phi(1-\tau)} & \text{if} \quad \frac{h(1-\sigma)}{\alpha\delta(2-\sigma)(1-\tau)} < \phi < \frac{h(1-\sigma)}{\alpha\delta(1-\tau)} \\ 1 & \text{if} \quad \phi \geq \frac{h(1-\sigma)}{\alpha\delta(1-\tau)} \end{cases}$$

and $R_{2\tau} = 1 - C_{2\tau}$.

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For the interior solution, it holds that $\frac{\partial C_{2\tau}}{\partial \phi} = \frac{h}{\alpha\delta\sigma^2(1-\tau)} > 0$ and $\frac{\partial C_{2\tau}}{\partial \tau} = -\frac{h}{\alpha\delta\phi(1-\tau)^2} < 0$. Comparing $C_{2\tau}$ to C_2, it holds that $C_{2\tau} > C_2$ if $\sigma > \frac{h\tau}{\alpha\delta\phi(1-\tau)+h\tau}$. Thus, if σ is large relative to τ, then $C_{2\tau}$ is larger than C_2. If σ is small relative to τ, then $C_{2\tau}$ is smaller than C_2.
For the cutpoints $\underline{\phi}_{1\tau}$ and $\overline{\phi}_{1\tau}$ above and below which the corner solution applies, it holds that $\frac{\partial \underline{\phi}_{1\tau}}{\partial \tau} = \frac{h(1-\tau)}{\alpha\delta(2-\sigma)(1-\tau)^2} > 0$ and $\frac{\partial \overline{\phi}_{1\tau}}{\partial \tau} = \frac{h(1-\tau)}{\alpha\delta(1-\tau)^2} > 0$. Thus, as τ increases, the cutpoints move to the right.
For utility $u_{2\tau}$, it holds that with respect to ϕ:

- For the lower corner solution, $\frac{\partial u_{2\tau}}{\partial \phi} = \frac{\delta(h-2)}{2h} > 0$.
- For the interior solution, $\frac{\partial u_{2\tau}}{\partial \phi} = \frac{\delta}{2} - \frac{1}{\phi} + \frac{\delta}{h(1-\sigma)}(\alpha(2-\sigma)(1-\tau)+\sigma-1) > 0$ if $\phi > \frac{2h(1-\sigma)}{\delta(2\alpha(2-\sigma)(1-\tau)+(h-2)(1-\sigma))}$. This condition holds since $\frac{2h(1-\sigma)}{\delta(2\alpha(2-\sigma)(1-\tau)+(h-2)(1-\sigma))} < \frac{h(1-\sigma)}{\alpha\delta(2-\sigma)(1-\tau)}$, where the latter is the lower boundary for the interior solution.
- For the upper corner solution, $\frac{\partial u_{2\tau}}{\partial \phi} = \frac{\delta(h-2+2\alpha(1-\tau))}{2h} > 0$.

Thus, $\frac{\partial u_{2\tau}}{\partial \phi} > 0$.
For utility $u_{2\tau}$, it holds that with respect to τ:

- For the lower corner solution, $\frac{\partial u_{2\tau}}{\partial \tau} = 0$.
- For the interior solution, $\frac{\partial u_{2\tau}}{\partial \tau} = \frac{h(1-\sigma)-\alpha\delta\phi(2-\sigma)(1-\tau)}{h(1-\sigma)(1-\tau)} < 0$ if $\phi > \frac{h(1-\sigma)}{\alpha\delta(2-\sigma)(1-\tau)}$. This condition holds since the latter is the lower boundary for the interior solution.
- For the upper corner solution, $\frac{\partial u_{2\tau}}{\partial \tau} = -\frac{\alpha\delta\phi}{h} < 0$.

Thus, $\frac{\partial u_{2\tau}}{\partial \tau} \leq 0$.

Path 3 (Not Run for Reelection, Golden Parachute)
Since $u_{3\tau} = \log(1+\delta) - \delta e$, it follows that $\frac{\partial u_{3\tau}}{\partial \phi} = 0$ and $\frac{\partial u_{3\tau}}{\partial \tau} = 0$.

Path 4 (Not Run for Reelection, Retire)
Since $u_{4\tau} = \log(2-\sigma)$, it follows that $\frac{\partial u_{4\tau}}{\partial \phi} = 0$ and $\frac{\partial u_{4\tau}}{\partial \tau} = 0$.

Putting Things Together
From this, for a case with a low σ, the following insights shown in Figure 3.3 follow:

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TABLE A4 *Incumbent's payoffs, with golden parachute restrictions.* Incumbent's Payoffs for the four paths shown in Figure 3.1 with additional work effort x as the result of a cooling off law highlighted in gray

	Path	Utility
u_{1x}	Run, GP if Lose	$\log(1+\delta(1-p((1-\tau)C))S)+\delta p((1-\tau)C)\phi$ $-k-\delta(1-p((1-\tau)C))(e+x)$
u_{2x}	Run, Retire if Lose	$\log(1+(1-\sigma)R)+\delta p((1-\tau)C)\phi-k$
u_{3x}	Not Run, GP	$\log(1+\delta S)-\delta(e+x)$
u_{4x}	Not Run, Retire	$\log(1+(1-\sigma)R)$

- All panels: We start with Path 2. As τ increases, C decreases (since $\frac{\partial C_{2\tau}}{\partial\tau}\leq 0$).
- All panels: In addition, if τ is high enough, Path 4 is preferred since $\frac{\partial u_{2\tau}}{\partial\tau}\leq 0$ but $\frac{\partial u_{4\tau}}{\partial\tau}=0$.

For a case with a high σ, the following insights shown in Figure 3.4 follow:

- First and second panel: We start with Path 1. As τ increases, C decreases (since $\frac{\partial C_{1\tau}}{\partial\tau}\leq 0$).
- First and second panel: In addition, if τ is high enough, Path 3 is preferred since $\frac{\partial u_{1\tau}}{\partial\tau}\leq 0$ but $\frac{\partial u_{3\tau}}{\partial\tau}=0$.
- Third panel: We start with Path 2 and $C_{2\tau}=1$. Once τ is high enough, Path 1 is preferred since τ affects $C=1$ for Path 2, but $C<1$ for Path 1. Path 3 is not an option since this is someone with high ϕ.

Golden Parachute Restrictions

As I have argued in Chapter 3, cooling off laws are best thought of as increasing the perceived work effort that the former politician has to make for their salary S. I model this through a term $x>0$ that denotes this additional effort. Table A4 shows how this affects the utilities for the four possible paths.

Path 1 (Run for Reelection, Golden Parachute if Lose)
If we define $\eta_\tau=\delta(2+2\alpha(1-\tau)+h)(e+\phi+x)$ and $\zeta_\tau=-8\delta(e+\phi+x)$ $(2\alpha(1-\tau)h(e+\phi+x-1)-h(2+h)+\alpha(1-\tau)\delta(2+h)(e+\phi+x))$ then for the interior solution, it holds that $\frac{\partial C_{1x}}{\partial x}=\frac{h(4\alpha h(1-\tau)+\sqrt{\alpha^2(1-\tau)^2(\eta_x^2+\zeta_x)})}{\alpha\delta(e+\phi+x)^2(1-\tau)\sqrt{\alpha^2(1-\tau)^2(\eta_x^2+\zeta_x)}}>$

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0. For the cutoffs, it holds that $\frac{\partial \underline{\phi}_{1x}}{\partial x} = -1 < 0$ and $\frac{\partial \overline{\phi}_{1x}}{\partial x} = -1 < 0$, so they move to the left as x increases. Thus, it follows that $\frac{\partial C_{1x}}{\partial x} \geq 0$.
For u_{1x}, it holds that:

- For the lower corner solution, $\frac{\partial u_{1x}}{\partial x} = -\delta(\frac{1}{2} + \frac{1}{h}) < 0$.
- For the interior solution, $\frac{\partial u_{1x}}{\partial x} = -\frac{\delta}{2h}(2 + h - 2\alpha C(1-\tau)) < 0$ if $h > 2(\alpha C(1-\tau) - 1)$. This is true since $2(\alpha C(1-\tau) - 1) < 2(\alpha - 1)$ and $h > 2(\alpha - 1)$ by definition.
- For the upper corner solution, $\frac{\partial u_{1x}}{\partial x} = -\frac{\delta}{2h}(2 + h - 2\alpha(1-\tau)) < 0$ if $h > 2(\alpha(1-\tau) - 1)$. This is true since $2(\alpha(1-\tau) - 1) < 2(\alpha - 1)$ and $h > 2(\alpha - 1)$ by definition.

Thus, $\frac{\partial u_{1x}}{\partial x} < 0$.

Path 2 (Run for Reelection, Retire if Lose)
Since this path does not involve golden parachute employment, $\frac{\partial C_{2x}}{\partial x} = 0$ and $\frac{\partial u_{2x}}{\partial x} = 0$.

Path 3 (Not Run for Reelection, Golden Parachute)
Since $C_{3x} = 0$, it follows that $\frac{\partial C_{3x}}{\partial x} = 0$. Since $u_{3x} = \log(1+\delta) - \delta(e+x)$, it follows that $\frac{\partial u_{3x}}{\partial x} = -\delta < 0$.

Path 4 (Not Run for Reelection, Retire)
Since this path does not involve golden parachute employment, $\frac{\partial C_{4x}}{\partial x} = 0$ and $\frac{\partial u_{4x}}{\partial x} = 0$.

Putting Things Together
The following insights follow:

- For Path 1, as x increases, C weakly increases (since $\frac{\partial C_{1x}}{\partial x} \geq 0$).
- If x is high enough, Paths 2 and 4 are preferred to Paths 1 and 3 (since $\frac{\partial u_{1x}}{\partial x} < 0$ and $\frac{\partial u_{3x}}{\partial x} < 0$ but $\frac{\partial u_{2x}}{\partial x} = \frac{\partial u_{4x}}{\partial x} = 0$).

ELECTORAL CAMPAIGN ENVIRONMENT

Effectiveness of Campaign Technology

Recall that the probability of winning an election was defined as

$$p(C) = \frac{1}{2} + \frac{1}{h}(\alpha(1-\tau)C - 1)$$

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The effectiveness of the campaign technology can be incorporated by changing the value of α, where a higher value means that a given amount of campaign spending goes further in persuading voters.

Path 1 (Run for Reelection, Golden Parachute if Lose)

First, for the cutpoints $\underline{\phi}_{1\alpha}$ and $\overline{\phi}_{1\alpha}$, above and below which the corner solution applies, it holds that $\frac{\partial \underline{\phi}_{1\alpha}}{\partial \alpha} = -\frac{h(2+h)}{\alpha^2(1-\tau)(2h+\delta(2+h))} < 0$ and $\frac{\partial \overline{\phi}_{1\alpha}}{\partial \alpha} = -\frac{2+h}{2\alpha^2(1-\tau)} < 0$. Thus, as α increases, the cutpoints move to the left.

We know from earlier that $\frac{\partial C_{1\alpha}}{\partial \phi} > 0$, so $C_{1\alpha}$ increases in ϕ. It follows that for the interior solution, $C_{1\alpha}$ must be above C_1.

For the corner solutions, where $C_{1\alpha} = 0$ or $C_{1\alpha} = 1$, it is clear that increasing α has no effect (other than shifting the cutpoints). Taken together, this means that $\frac{\partial C_{1\alpha}}{\partial \alpha} \geq 0$.

For $u_{1\alpha}$, we know from earlier that $\frac{\partial u_{1\alpha}}{\partial \phi} > 0$. With respect to α, it holds that:

- For the lower corner solution, $\frac{\partial u_{1\alpha}}{\partial \alpha} = 0$.
- For the upper corner solution, $\frac{\partial u_{1\alpha}}{\partial \alpha} = \frac{\delta(e+\phi)(1-\tau)}{h} > 0$.
- For the interior solution, note that because $\frac{\partial u_{1\alpha}}{\partial \phi} > 0$ as well as $\frac{\partial u_{1\alpha}}{\partial \alpha} = 0$ for the lower corner solution and $\frac{\partial u_{1\alpha}}{\partial \alpha} > 0$ for the upper corner solution, it must be that $\frac{\partial u_{1\alpha}}{\partial \alpha} > 0$.

Thus, $\frac{\partial u_{1\alpha}}{\partial \alpha} \geq 0$.

Path 2 (Run for Reelection, Retire if Lose)

For $C_{2\alpha}$, it holds that with respect to α:

- For the lower corner solution, $\frac{\partial C_{2\alpha}}{\partial \alpha} = 0$.
- For the interior solution, $\frac{\partial C_{2\alpha}}{\partial \alpha} = \frac{h}{\alpha^2\delta\phi(1-\tau)} > 0$.
- For the upper corner solution, $\frac{\partial C_{2\alpha}}{\partial \alpha} = \frac{1}{h}(\delta\phi(1-\tau)) > 0$.

Thus, $\frac{\partial C_{2\alpha}}{\partial \alpha} \geq 0$.

For $u_{2\alpha}$, it holds that with respect to α:

- For the lower corner solution, $\frac{\partial u_{2\alpha}}{\partial \alpha} = 0$.
- For the interior solution, $\frac{\partial u_{2\alpha}}{\partial \alpha} = \frac{\alpha\delta\phi(2-\sigma)(1-\tau)-h(1-\sigma)}{\alpha h(1-\sigma)} > 0$ if $\phi > \frac{h(1-\sigma)}{\alpha\delta(2-\sigma)(1-\tau)}$, which is true since the latter is the lower boundary.
- For the upper corner solution, $\frac{\partial u_{2\alpha}}{\partial \alpha} = \frac{1}{h}(\delta\phi(1-\tau)) > 0$.

Thus, $\frac{\partial u_{2\alpha}}{\partial \alpha} \geq 0$.

Path 3 and 4 (Not Run for Reelection)

Since Paths 3 and 4 do not involve running for reelection, it holds that $\frac{\partial C_{3\alpha}}{\partial \alpha} = \frac{\partial C_{4\alpha}}{\partial \alpha} = 0$ and $\frac{\partial u_{3\alpha}}{\partial \alpha} = \frac{\partial u_{4\alpha}}{\partial \alpha} = 0$.

Putting Things Together

The following insights shown in Figures 3.5 and 3.6 follow from the above discussion:

- For Paths 1 and 2, as α increases, C increases weakly (since $\frac{\partial C_{1\alpha}}{\partial \alpha} \geq 0$ and $\frac{\partial C_{2\alpha}}{\partial \alpha} \geq 0$).
- If α is high enough, Paths 1 and 2 are preferred to Paths 3 and 4 (since $\frac{\partial u_{1\alpha}}{\partial \alpha} \geq 0$ and $\frac{\partial u_{2\alpha}}{\partial \alpha} \geq 0$ but $\frac{\partial u_{3\alpha}}{\partial \alpha} = \frac{\partial u_{4\alpha}}{\partial \alpha} = 0$).

Electoral Competitiveness

Finally, I model the effect of differences in the a priori competitiveness of an election. I do so through two terms. First, I shift the baseline probability of winning for the incumbent upwards by adjusting it as follows:

$$p(C) = \frac{1}{\gamma} + \frac{1}{h}\left(\alpha(1-\tau)C - 1\right)$$

where $\gamma < 2$. Thus, the lower γ, the more likely the incumbent is to be reelected. To ensure $p(C) < 1$, I also impose $\gamma > 1$.

Second, as γ decreases (so the a priori chance of winning increases), the marginal effectiveness of campaign spending decreases. This is because someone who starts out with, say, 50 percent support can still convince half the electorate to vote for them. Someone who starts out with 75 percent already has the easily convertible voters on their side, and the quarter of voters left are harder to win over. In other words, as γ decreases, so does α. The impact of the latter has been discussed in the previous section. I first discuss the comparative statics for γ and then consider the impact of γ and α together.

Path 1 (Run for Reelection, Golden Parachute if Lose)

First, for the cutpoint $\underline{\phi}_{1\gamma}$, it holds that $\frac{\partial \underline{\phi}_{1\gamma}}{\partial \gamma} = \frac{h^2(h-\alpha\delta(1-\tau))}{\alpha(1-\tau)(h\gamma+\delta(\gamma-h(1-\gamma)))^2} > 0$ if $\alpha < \frac{h}{\delta(1-\tau)}$. For $p(C) < 1$, it needs to hold that $\alpha < \frac{1+h-\frac{h}{\gamma}}{1-\tau}$. Thus, if we

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establish that $\frac{h}{\delta(1-\tau)} > \frac{1+h-\frac{h}{\gamma}}{1-\tau}$, then $\alpha < \frac{h}{\delta(1-\tau)}$ as well. The former is true since $\frac{h}{\delta} > 2$ (as $h > 2$ and $0 < \delta < 1$) and $1+h-\frac{h}{\gamma} < 2$ (as $\gamma < h$).

For the cutpoint $\overline{\phi}_{1\gamma}$, $\frac{\partial \overline{\phi}_{1\gamma}}{\partial \gamma} = \frac{h}{\alpha\gamma^2(1-\tau)} > 0$. Thus, as γ increases, the cutpoints move to the right.

We know from earlier that $\frac{\partial C_{1\gamma}}{\partial \phi} > 0$, so $C_{1\gamma}$ increases in ϕ. It follows that for the interior solution, $C_{1\gamma}$ must be below C_1. Taken together, this means that $\frac{\partial C_{1\gamma}}{\partial \gamma} \leq 0$.

For $u_{1\gamma}$, we know from above that $\frac{\partial u_{1\gamma}}{\partial \phi} > 0$. With respect to γ, it holds that:

- For the lower corner solution, $\frac{\partial u_{1\gamma}}{\partial \gamma} = -\frac{\delta(h\gamma(e+\phi-S)+\delta(e+\phi)S(h(\gamma-1)+\gamma))}{\gamma^2(h\gamma+\delta S(h(\gamma-1)+\gamma))} < 0$ since $\gamma > 1$ and $\phi > S-e$. The latter must be true since otherwise a strategy in which a golden parachute job is the backup option in case of an election loss is not optimal.
- For the upper corner solution, $\frac{\partial u_{1\gamma}}{\partial \gamma} = -\frac{\delta(e+\phi)}{\gamma^2} < 0$.
- For the interior solution, note that because $\frac{\partial u_{1\gamma}}{\partial \phi} > 0$ as well as $\frac{\partial u_{1\gamma}}{\partial \gamma} < 0$ for the lower and upper corner solutions, it must be that $\frac{\partial u_{1\gamma}}{\partial \gamma} < 0$ for the interior solution.

Thus, $\frac{\partial u_{1\gamma}}{\partial \gamma} < 0$.

Path 2 (Run for Reelection, Retire if Lose)

Since γ does not affect the marginal utility of either C or R, $\frac{\partial C_{2\gamma}}{\partial \gamma} = 0$. With respect to $u_{2\gamma}$,

$$\frac{\partial u_{2\gamma}}{\partial \gamma} = -\frac{\delta\phi}{\gamma^2} < 0$$

Path 3 and 4 (Not Run for Reelection)

Since Paths 3 and 4 do not involve running for reelection, it holds that $\frac{\partial C_{3\gamma}}{\partial \gamma} = \frac{\partial C_{4\gamma}}{\partial \gamma} = 0$ and $\frac{\partial u_{3\gamma}}{\partial \gamma} = \frac{\partial u_{4\gamma}}{\partial \gamma} = 0$.

Putting Things Together

These insights shown in Figure 3.7 follow from the previous discussion:

- If γ is low enough (so the a priori chance of winning is high enough), Path 2 is preferred to Path 4 (since $\frac{\partial u_{2\gamma}}{\partial \gamma} < 0$ but $\frac{\partial u_{4\gamma}}{\partial \gamma} = 0$).

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TABLE A5 *Incumbent's payoffs, with financier's electoral/expressive campaign contribution.* Incumbent's Payoffs for the four paths shown in Figure 3.1 with expressive campaign contribution C_E highlighted in gray

	Path	Utility
u_1	Run, GP if Lose	$\log(1+\delta(1-p((1-\tau)(C+C_E)))S)+\delta p((1-\tau)(C+C_E))\phi-k-\delta(1-p((1-\tau)(C+C_E)))(e+x)$
u_2	Run, Retire if Lose	$\log(1+(1-\sigma)R)+\delta p((1-\tau)(C+C_E))\phi-k$
u_3	Not Run, GP	$\log(1+\delta S)-\delta(e+x)$
u_4	Not Run, Retire	$\log(1+(1-\sigma)R)$

- If the incumbent takes Path 2, a smaller γ leads to less C and more R. This is because while $\frac{\partial C_{2\gamma}}{\partial \gamma}=0$, α decreases as γ decreases, and $\frac{\partial C_{2\alpha}}{\partial \alpha}\geq 0$.

For Figure 3.8, these insights follow:

- If γ is low enough (so the a priori chance of winning is high enough), Path 1 is preferred to Path 3 (since $\frac{\partial u_{1\gamma}}{\partial \gamma}<0$ but $\frac{\partial u_{3\gamma}}{\partial \gamma}=0$).
- If γ is low enough, Path 1 can also be preferred to Path 2. It is the case that both $\frac{\partial u_{1\gamma}}{\partial \gamma}<0$ and $\frac{\partial u_{2\gamma}}{\partial \gamma}<0$. However, α decreases when γ decreases, so the campaign spending ($C=1$) in Path 2 becomes less effective. Of course, campaign spending also becomes less effective in Path 1, but the impact is less strong since $C<1$ in that case.
- When Path 1 is chosen, the impact of γ on C and S is indeterminate since $\frac{\partial C_{1\gamma}}{\partial \gamma}\leq 0$ but $\frac{\partial C_{1\gamma}}{\partial \alpha}\geq 0$.

ROBUSTNESS AND EXTENSIONS

Electoral or Expressive Motives for Campaign Contributions

Table 3.2 laid out the motivations that financiers have for the different forms of money in politics. While an instrumental motivation is common to all of them, there are also motivations specific to certain forms. For campaign contributions, financiers may also have an electoral motive (cf. Grossman and Helpman, 2001). That is, they want to boost the chances that their preferred candidate is elected. Or, alternatively, they may simply express their preference in the same way that small-scale donors do. I incorporate this motivation through an exogenous parameter C_E, which is the amount of money the financier gives for electoral or expressive reasons.

TABLE A6 *Incumbent's payoffs, with human capital motivation for golden parachute*. Incumbent's payoffs with earnings for their human capital S_H and human capital work effort e_H highlighted in gray

	Path	Utility
u_{1a}	Run, GP if Lose	$\log(1+\delta(1-p((1-\tau)C))S)+\delta p((1-\tau)C)\phi$ $-k-\delta(1-p((1-\tau)C))(e+x)$
u_{1b}	Run, GP + HC if Lose	$\log(1+\delta(1-p((1-\tau)C))(S+S_H))+\delta p((1-\tau)$ $C)\phi-k-\delta(1-p((1-\tau)C))(e+x+e_H)$
u_{2a}	Run, Retire if Lose	$\log(1+(1-\sigma)R)+\delta p((1-\tau)C)\phi-k$
u_{2b}	Run, HC if Lose	$\log(1+(1-\sigma)R+\delta(1-p((1-\tau)C))S_H)$ $+\delta p((1-\tau)C)\phi-k-\delta(1-p((1-\tau)C))(e_H+x)$
u_{3a}	Not Run, GP	$\log(1+\delta S)-\delta(e+x)$
u_{3b}	Not Run, GP + HC	$\log(1+\delta(S+S_H))-\delta(e+x+e_H)$
u_{4a}	Not Run, Retire	$\log(1+(1-\sigma)R)$
u_{4b}	Not Run, HC	$\log(1+(1-\sigma)R+\delta S_H)-\delta(e_H+x)$

It is clear from Table A5 that this additional campaign money enters u_1 and u_2 as an additive term. Its presence does not meaningfully change the comparative statics described earlier for σ, τ, x, α, and γ, so the main implications discussed in Chapter 3 are robust when the financier has electoral or expressive motivations.

Human Capital Motivation for Golden Parachute Employment

As Table 3.2 made clear, financiers can have a couple of motivations for making golden parachute hires. Besides an instrumental motivation, they may also be interested in employing former politicians because they bring valuable human capital to their company. This means that the incumbent can use their human capital to get a job independent of their decisions in office. The salary that they receive for their human capital is denoted by the exogenous parameter S_H, for which they have to make effort e_H. For any path where they retired before (Paths 2 and 4), they now also have the option of taking a private sector job in the second period due to their human capital. Similarly, for any path where they used to take a golden parachute job (Paths 1 and 3) with (endogenous) salary S and effort e, they now have the additional option of taking a job with salary $S+S_H$ and work effort $e+e_H$.

Adding this possibility provides a couple of insights (see Table A6). First, there now is the possibility for the incumbent to enrich themselves in office and then take up a job in the private sector (see u_{2b} and u_{4b}). However, they get that job purely for their human capital and not because of their actions in office.

Second, whether the incumbent chooses to put their human capital to use in the private sector depends on the relative size of S_H and e_H. For example, comparing u_{4a} and u_{4b}, in which $R = 1$, it is straightforward that the incumbent will work for a company if

$$e_H \leq \frac{1}{\delta}(\log(2-\sigma+\delta S_H) - \log(2-\sigma) - \delta x)$$

so if the efforts they have to make using their human capital are lower than what the salary they receive for it adds to their utility. Similar arguments can be made for the other paths. The relation between S_H and e_H depends on the individual-specific factors that the existing literature on the revolving door has highlighted, such as a politicians' connections and expertise.

However, note that because the human capital motivation enters as additive terms, it does not substantially alter the comparative statics of the impact of σ, τ, x, α, and γ. Thus, the insights and empirical implications of the model remain the same when introducing a human capital motivation for golden parachute hires. By normalizing the costs and benefits of a job based on human capital to zero, as I have implicitly done earlier, the model is much simpler and little insight is lost.

How Much Money Enters Politics

In the model here as well as in Chapter 3, I have assumed that money enters politics, and have set its amount M exogenously. This was appropriate since my interest in this book is to examine how money enters politics, and the results of the constrained maximization I have discussed previously hold for any M. Here, I briefly discuss how to endogenize M and how that has implications for the connection between *how* and *whether* money enters politics, which I mention as an area for future research in Chapter 8.

Money enters politics only if both the incumbent and the financier are better off that way. We therefore have to discuss the utilities of the incumbent and financier when they choose not to engage with each other. The incumbent then has two options. First, they can run for reelection without financial backing by the financier, but with the benefit of having pursued the popular policy $x = 0$. Their utility then is

$$u_5 = \frac{\delta\phi}{\gamma} - k$$

which makes use of the fact that their probability of winning office when $C = 0$ and $x = 0$ is $\frac{1}{\gamma}$. Second, the incumbent can simply not run again and retire, in which case

$$u_6 = 0$$

Thus, the incumbent only engages with the financier if the highest utility from Paths 1 to 4 is larger than the larger utility from Paths 5 and 6. Obviously, they will do so if M is high and will not do so if M is low. Denote the point at which the incumbent is indifferent between taking and not taking money by $\underline{M}$.

For the financier, denote their benefits from having $x = 1$ instead of $x = 0$ by β. This might be a monetary benefit, or it could capture internal satisfaction about having one's favorite policy become law. A high β might mean that the financier's fortune depends heavily on having policy go their way, for example if they are exposed to more regulation or depend on government contracts. The term could also vary depending on which politician the financier is dealing with. For example, a minister, party leader, or a chair of a powerful committee has a lot of power over policy, so their decisions are more consequential for the financier (high β). A backbench member of parliament has much less influence over policy and the fate of the financier (low β). If M is low the financier will not spend money on politics, and if it is high they will. The point at which they are indifferent is $\overline{M}$.

Therefore, if $M < \underline{M}$, the politician is better off not engaging with the financier, and if $M > \overline{M}$, it is too expensive for the financier to influence policy. Any M that satisfies $\underline{M} \leq M \leq \overline{M}$ means that both actors are better off by engaging with each other.

Without further assumptions, there is no way to determine where within this range the actual M falls. Ultimately, it depends on the bargaining power between the incumbent and the financier. If the financier group has all the bargaining power, they will want to set $M = \underline{M}$, so that the incumbent is indifferent between setting $x = 1$ and taking the money and setting $x = 0$ and not taking it.[5] If the incumbent has all the bargaining power, they will want to set $M = \overline{M}$, making the financier indifferent between paying up and living with the unfavorable policy. There is no work that I am aware of that identifies the bargaining power balance between politicians and financiers. In particular, it may well be that this

[5] This would result in relatively little money entering politics. Indeed, given the benefits that special interest can potentially reap from favorable policy, the amount of money in politics is often considered to be quite small (Tullock, 1972; Ansolabehere, de Figueiredo, and Snyder, 2003).

balance depends on both structural factors of the country as well as the specifics of particular politician-financier dyads.

As mentioned, the argument on *how* money enters politics is unaffected by this ambiguity. However, it does have implications for the connection between how and whether money enters politics discussed in Chapter 8. There, I argue that stricter regulation of some type of money will push up the indifference point of the incumbent, so $\underline{M}_{New} > \underline{M}$. If $\underline{M}_{New} \leq M$, the amount of money will be the same as before. If $M < M_{New} < \overline{M}$, the reform leads to *more* money in politics. Only if $\underline{M}_{New} \geq \overline{M}$ is there no more money in politics.

Where M lies within the interval $[\underline{M}, \overline{M}]$ affects the space in which the amount of money stays the same after the reform is introduced versus where it increases. At one extreme, if $M = \underline{M}$ then penalizing one form of money will lead to *more* money if $\underline{M}_{New} \geq \overline{M}$. In contrast, if $M = \overline{M}$, then a reform will have *no* effect if $\underline{M}_{New} \geq \overline{M}$. The closer M is to $\underline{M}$, the larger the space in which a reform leads to more money, and the closer it is to $\overline{M}$ the larger the space in which it has no effect on the amount of money in politics.