The Politics of Punishment:
Why Dictators Join the International Criminal Court

Leslie Johns[†] and Francesca Parente[‡]

17 April 2023

Online Appendix

Contents

[†]Professor, UCLA

[‡]Assistant Professor, Christopher Newport University

1 Theory

1.1 Extension 1: No ICC Costs for Dictators

Suppose $\kappa_L = 0$. Then the expected utility to players for outcomes in the theoretical model becomes:

Actor	Don't Join	Join
Dictator	$W\pi - ce_D$	$W\pi - ce_D$
Political Opponent	$W(1-\pi) - e_P$	$W(1-\pi) - (1+\kappa_H)\,e_P$

Proposition A1

The utility maximization calculations from the Proof of Proposition 1 continue to hold, yielding the same best response functions. For the two different subgames, this yields the following equilibrium behavior and outcomes:

	Don't Join	Join
Dictator effort (e_D^*)	$\frac{W}{(1+c)^2}$	$\frac{W(1+\kappa_H)}{(1+c+\kappa_H)^2}$
Political opposition effort (e_P^*)	$\frac{Wc}{(1+c)^2}$	$\frac{Wc}{(1+c+\kappa_H)^2}$
Dictator survival probability (π^*)	$\frac{1}{1+c}$	$\frac{1+\kappa_H}{1+c+\kappa_H}$

And the dictator's expected utility from his two choices is:

$$EU_D\,(\text{Don't Join}) = \frac{W}{(1+c)^2}$$

$$EU_D\,(\text{Join}) = \frac{W(1+\kappa_H)^2}{(1+c+\kappa_H)^2}$$

The dictator will thus be willing to join iff:

$$F \equiv (1+\kappa_H)^2\,(1+c)^2 - (1+c+\kappa_H)^2 \geq 0$$

Note that:

$$
\begin{aligned}
F\left(c=0\right) &= (1+\kappa_H)^2 - (1+\kappa_H)^2 = 0 \\
\frac{\partial F}{\partial c} &= 2(1+\kappa_H)^2\left(1+c\right) - 2\left(1+c+\kappa_H\right) \\
&= 2\kappa_H\left[1+\kappa_H + c(2+\kappa_H)\right] > 0
\end{aligned}
$$

So the dictator is indifferent when $c = 0$ and strictly prefers to join whenever $c > 0$. QED.

Proposition A2

Total violence if the dictator does not join the ICC is:

$$
\frac{W}{(1+c)^2} + \frac{Wc}{(1+c)^2} = \frac{W}{1+c}
$$

Total violence if the dictator joins the ICC is:

$$
\frac{W\left(1+\kappa_H\right)}{(1+c+\kappa_H)^2} + \frac{Wc}{(1+c+\kappa_H)^2} = \frac{W}{1+c+\kappa_H}
$$

Note that the latter quantity is always less than the former quantity because $0 < \kappa_H$ always. So joining the ICC lowers total violence. QED.

Proposition A3

The probability that the dictator survives in office if he joins (weakly) increases (relative to not joining) iff:

$$
\begin{aligned}
\frac{1}{1+c} \leq \frac{1+\kappa_H}{1+c+\kappa_H} \quad &\Leftrightarrow \quad 1+c+\kappa_H \leq (1+\kappa_H)(1+c) \\
&\Leftrightarrow \quad (1+c+\kappa_H)^2 \leq (1+\kappa_H)^2\left(1+c\right)^2
\end{aligned}
$$

Note that this is equivalent to the selection constraint $F \geq 0$. So for dictators that select into the ICC ($c > F$), joining the ICC increases the probability of surviving in office. QED.

1.2 Extension 2: ICC Benefits for Dictators

Assume the basic domestic and international costs as in the main model. Let $\beta > 0$ denote an added benefit to the dictator from joining the ICC. Then the expected utility to players for outcomes in the theoretical model becomes:

Actor	Don't Join	Join
Dictator	$W\pi - ce_D$	$W\pi - ce_D + \beta$
Political Opponent	$W(1-\pi) - e_P$	$W(1-\pi) - (1+\kappa_H)\, e_P$

Proposition B1

The value of β does not affect the best response functions for the choice of effort for either player. So it does not affect the equilibrium effort or survival probabilities.

So the dictator's expected utility from his two choices is:

$$\begin{aligned} EU_D\,(\text{Don't Join}) &= \frac{W}{(1+c)^2} \\ EU_D\,(\text{Join}) &= \frac{W(1+\kappa_H)^2}{(1+c+\kappa_L+\kappa_H)^2} + \beta \end{aligned}$$

The dictator will thus be willing to join iff:

$$G \equiv (1+\kappa_H)^2 (1+c)^2 - (1+c+\kappa_L+\kappa_H)^2 + \beta \geq 0$$

Note that:

$$\begin{aligned} \frac{\partial G}{\partial c} &= 2\,(1+\kappa_H)^2 (1+c) - 2\,(c+\kappa_L+\kappa_H+1) \\ &= 2\left[\kappa_H - \kappa_L + \kappa_H^2 + c\left(2\kappa_H + \kappa_H^2\right)\right] > 0 \\ \lim_{c\to\infty} G &= \lim_{c\to\infty} \left\{\left(1+2\kappa_H+\kappa_H^2\right)(1+c)^2 - \left[(1+c)^2 + 2\,(1+c)\,(\kappa_L+\kappa_H) + (\kappa_L+\kappa_H)^2\right] + \beta\right\} \\ &= \lim_{c\to\infty} \left\{\left(2\kappa_H+\kappa_H^2\right)(1+c)^2 - 2\,(1+c)\,(\kappa_L+\kappa_H) - (\kappa_L+\kappa_H)^2 + \beta\right\} \\ &= \lim_{c\to\infty} (1+c) \times \lim_{c\to\infty} \left[\left(2\kappa_H+\kappa_H^2\right)(1+c) - 2\,(\kappa_L+\kappa_H)\right] - (\kappa_L+\kappa_H)^2 + \beta = \infty \end{aligned}$$

And:

$$G(c=0) = (1+\kappa_H)^2 - (1+\kappa_L+\kappa_H)^2 + \beta$$

So for a small $\beta > 0$, there exists a unique $\bar{c} > 0$ such that $\Psi(c) < 0$ for all $c < \bar{c}$ and $\Psi(c) > 0$ for all $c > \bar{c}$. And for large $\beta > 0$, the dictator always joins the ICC, regardless of the level of political competition (c). QED.

For the remaining results, we assume a small $\beta > 0$.

Proposition B2

The Proof of Proposition 2 still holds. QED.

Proposition B3 (Survival logic does not necessarily hold)

The probability that the dictator survives in office if he joins (weakly) increases (relative to not joining) iff:

$$\frac{1}{1+c} \leq \frac{1+\kappa_H}{1+c+\kappa_L+\kappa_H} \quad \Leftrightarrow \quad 1+c+\kappa_L+\kappa_H \leq (1+\kappa_H)(1+c)$$
$$\Leftrightarrow \quad (1+c+\kappa_L+\kappa_H)^2 \leq (1+\kappa_H)^2 (1+c)^2$$

Because the added benefit β causes some types of the dictator to select into the ICC under constraint G even through this decision does not increase their survival in office suggests that Proposition 3 does not necessarily hold. That is, the dictator trades off a decrease in survival for an increase in rents.

1.3 Extension 3: Pay ICC Costs After Power Transfers

Continue to assume the same players, actions, and preferences if the dictator does not join the Rome Statute. However, assume that if the dictator joins the Rome Statute, then the ICC costs are imposed after the conflict ends. Namely, suppose that the actor that holds power pays a low unit cost, κ_L, while the group that does not hold power pays a high unit cost, κ_H, where $0 < \kappa_L < \kappa_H$.

Then expected utility for the subgame in which the dictator signs the Rome Statute is:

$$\begin{aligned} U_i(e) &= W\pi_i - c_i e_i - \kappa_L e_i \pi_i - \kappa_H e_i (1-\pi_i) \\ &= W\left(\frac{e_i}{e_i+e_j}\right) - c_i e_i - \kappa_L \left(\frac{e_i^2}{e_i+e_j}\right) - \kappa_H \left(\frac{e_i e_j}{e_i+e_j}\right) \end{aligned}$$

Proposition C1

If the dictator does not join the ICC, then subgame behavior matches that in Proposition 1.
However, if the dictator joins the ICC, then the following optimization process applies. We begin with the first- and second-order conditions:

$$\begin{aligned} \frac{\partial U_i(e)}{\partial e_i} &= W\left[\frac{e_j}{(e_i+e_j)^2}\right] - c_i - \kappa_L\left[\frac{e_i^2+2e_ie_j}{(e_i+e_j)^2}\right] - \kappa_H\left[\frac{e_j^2}{(e_i+e_j)^2}\right] \\ \frac{\partial^2 U_i(e)}{\partial e_i^2} &= \frac{-2We_j}{(e_i+e_j)^3} - \kappa_L\left[\frac{(e_i+e_j)^2(2e_i+2e_j) - (e_i^2+2e_ie_j)\,2(e_i+e_j)}{(e_i+e_j)^4}\right] + \frac{2\kappa_H e_j^2}{(e_i+e_j)^3} \\ &= \frac{2e_j\left[(\kappa_H-\kappa_L)e_j - W\right]}{(e_i+e_j)^3} \end{aligned}$$

Note that:

$$\begin{aligned} &\frac{\partial U_i(e)}{\partial e_i}(e_i=0) = W\left(\frac{1}{e_j}\right) - c_i - \kappa_H \\ &\qquad \Rightarrow \quad \frac{\partial U_i(e)}{\partial e_i}(e_i=0|e_j>0) > 0 \quad \Leftrightarrow \quad \frac{W}{c_i+\kappa_H} > e_j \\ &\frac{\partial^2 U_i(e)}{\partial e_i^2} < 0 \Leftrightarrow e_j \in \left(0,\ \frac{W}{\kappa_H-\kappa_L}\right) \end{aligned}$$

So the binding constraint to identify an optimal e_i is:

$$e_j \in \left(0,\ \frac{W}{c_i + \kappa_H}\right)$$

This translates to the system of constraints:

$$\begin{aligned} e_D &\in \left(0,\ \frac{W}{1 + \kappa_H}\right) \\ e_P &\in \left(0,\ \frac{W}{c + \kappa_H}\right) \end{aligned}$$

We can now identify the best response function for each player:

$$\frac{\partial U_i(e)}{\partial e_i} = 0 \Leftrightarrow We_j - c_i(e_i + e_j)^2 - \kappa_L\left(e_i^2 + 2e_ie_j\right) - \kappa_H e_j^2 = 0$$

$$\Leftrightarrow (c_i + \kappa_L)e_i^2 + 2(c_i + \kappa_L)e_ie_j + \left[(c_i - \kappa_H)e_j^2 - We_j\right] = 0$$

$$\begin{aligned} e_i(e_j) &= \frac{-2(c_i + \kappa_L)e_j \pm \sqrt{4(c_i + \kappa_L)^2 e_j^2 - 4(c_i + \kappa_L)\left[(c_i + \kappa_H)e_j^2 - We_j\right]}}{2(c_i + \kappa_L)} \\ &= \frac{(c_i + \kappa_L)^{\frac{1}{2}}\left[We_j + (\kappa_L - \kappa_H)e_j^2\right]^{\frac{1}{2}} - (c_i + \kappa_L)e_j}{(c_i + \kappa_L)} \\ &= \left[\frac{We_j + (\kappa_L - \kappa_H)e_j^2}{(c_i + \kappa_L)}\right]^{\frac{1}{2}} - e_j \end{aligned}$$

This translates to the best response functions:

$$\begin{aligned} e_D(e_P) &= \left(\frac{We_P + (\kappa_L - \kappa_H)e_P^2}{c + \kappa_L}\right)^{\frac{1}{2}} - e_P \\ e_P(e_D) &= \left(\frac{We_D + (\kappa_L - \kappa_H)e_D^2}{1 + \kappa_L}\right)^{\frac{1}{2}} - e_D \end{aligned}$$

One possible solution to this system is: $e_D = e_P = 0$. However, these values do not maximize the utility function because of the second-order condition. Alternatively, substitution yields:

$$
\begin{aligned}
e_D &= \left(\frac{W\left[\left(\frac{We_D+(\kappa_L-\kappa_H)e_D^2}{1+\kappa_L}\right)^{\frac{1}{2}} - e_D\right] + (\kappa_L-\kappa_H)\left[\left(\frac{We_D+(\kappa_L-\kappa_H)e_D^2}{1+\kappa_L}\right)^{\frac{1}{2}} - e_D\right]^2}{c+\kappa_L} \right)^{\frac{1}{2}} \\
&\quad - \left[\left(\frac{We_D+(\kappa_L-\kappa_H)e_D^2}{1+\kappa_L}\right)^{\frac{1}{2}} - e_D\right] \\
\Leftrightarrow\ & \frac{W\left[\left(\frac{We_D+(\kappa_L-\kappa_H)e_D^2}{1+\kappa_L}\right)^{\frac{1}{2}} - e_D\right] + (\kappa_L-\kappa_H)\left[\left(\frac{We_D+(\kappa_L-\kappa_H)e_D^2}{1+\kappa_L}\right)^{\frac{1}{2}} - e_D\right]^2}{c+\kappa_L} \\
&= \frac{We_D+(\kappa_L-\kappa_H)e_D^2}{1+\kappa_L} \\
\Leftrightarrow\ & 0 = W\left[\left(\frac{W+(\kappa_L-\kappa_H)e_D}{1+\kappa_L}\right)^{\frac{1}{2}} - e_D^{\frac{1}{2}}\right] + (\kappa_L-\kappa_H)e_D^{\frac{1}{2}}\left[\left(\frac{W+(\kappa_L-\kappa_H)e_D}{1+\kappa_L}\right)^{\frac{1}{2}} - e_D^{\frac{1}{2}}\right]^2 \\
&\quad - (c+\kappa_L)e_D^{\frac{1}{2}}\left(\frac{W+(\kappa_L-\kappa_H)e_D}{1+\kappa_L}\right)
\end{aligned}
$$

Define

$$
\begin{aligned}
\Delta(x) &\equiv W\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right] + (\kappa_L-\kappa_H)x^{\frac{1}{2}}\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]^2 - (c+\kappa_L)x^{\frac{1}{2}}\Upsilon(x) \\
&\text{where}\quad \Upsilon(x) \equiv \frac{W+(\kappa_L-\kappa_H)x}{1+\kappa_L}
\end{aligned}
$$

Note the following property of the Δ function:

$$
\Delta(0) = W\Upsilon(0)^{\frac{1}{2}} = \frac{W^{\frac{3}{2}}}{(1+\kappa_L)^{\frac{1}{2}}} > 0
$$

Also note that:

$$
\Upsilon\left(\frac{W}{1+\kappa_H}\right)^{\frac{1}{2}} - \left(\frac{W}{1+\kappa_H}\right)^{\frac{1}{2}} = \left(\frac{W+(\kappa_L-\kappa_H)\left(\frac{W}{1+\kappa_H}\right)}{1+\kappa_L}\right)^{\frac{1}{2}} - \left(\frac{W}{1+\kappa_H}\right)^{\frac{1}{2}} = 0
$$

So:

$$
\Delta\left(\frac{W}{1+\kappa_H}\right) = -(c+\kappa_L)\left(\frac{W}{1+\kappa_H}\right)^{\frac{1}{2}}\Upsilon\left(\frac{W}{1+\kappa_H}\right) = -(c+\kappa_L)\left(\frac{W}{1+\kappa_H}\right)^{\frac{3}{2}} < 0
$$

Finally, note that:

$$\begin{aligned}
\Delta'(x) &= W\left[\frac{\Upsilon'(x)}{2\Upsilon(x)^{\frac{1}{2}}}-\frac{1}{2x^{\frac{1}{2}}}\right]+(\kappa_L-\kappa_H)\left\{x^{\frac{1}{2}}2\left[\Upsilon(x)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]\left[\frac{\Upsilon'(x)}{2\Upsilon(x)^{\frac{1}{2}}}-\frac{1}{2x^{\frac{1}{2}}}\right]+\frac{1}{2x^{\frac{1}{2}}}\left[\Upsilon(x)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]^2\right\}\\
&\quad-(c+\kappa_L)\left[x^{\frac{1}{2}}\Upsilon'(x)+\frac{\Upsilon(x)}{2x^{\frac{1}{2}}}\right]\\
&=\frac{W}{2}\left[\frac{\left(\frac{\kappa_L-\kappa_H}{1+\kappa_L}\right)}{\left(\frac{W+(\kappa_L-\kappa_H)x}{1+\kappa_L}\right)^{\frac{1}{2}}}-\frac{1}{x^{\frac{1}{2}}}\right]\\
&\quad+(\kappa_L-\kappa_H)\left[\Upsilon(x)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]\left[\frac{\left(\frac{\kappa_L-\kappa_H}{1+\kappa_L}\right)x^{\frac{1}{2}}}{\left(\frac{W+(\kappa_L-\kappa_H)x}{1+\kappa_L}\right)^{\frac{1}{2}}}+\frac{\Upsilon(x)^{\frac{1}{2}}}{2x^{\frac{1}{2}}}-\frac{3}{2}\right]\\
&\quad-\left(\frac{c+\kappa_L}{2x^{\frac{1}{2}}}\right)\left[2x\left(\frac{\kappa_L-\kappa_H}{1+\kappa_L}\right)+\left(\frac{W+(\kappa_L-\kappa_H)x}{1+\kappa_L}\right)\right]\\
&=\frac{W}{2}\left[\frac{\kappa_L-\kappa_H}{[W+(\kappa_L-\kappa_H)x]^{\frac{1}{2}}(1+\kappa_L)^{\frac{1}{2}}}-\frac{1}{x^{\frac{1}{2}}}\right]\\
&\quad+(\kappa_L-\kappa_H)\left[\Upsilon(x)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]\left[\frac{(\kappa_L-\kappa_H)x^{\frac{1}{2}}}{[W+(\kappa_L-\kappa_H)x]^{\frac{1}{2}}(1+\kappa_L)^{\frac{1}{2}}}+\frac{\Upsilon(x)^{\frac{1}{2}}}{2x^{\frac{1}{2}}}-\frac{3}{2}\right]\\
&\quad-\left(\frac{c+\kappa_L}{2x^{\frac{1}{2}}}\right)\left(\frac{W-3(\kappa_H-\kappa_L)x}{1+\kappa_L}\right)
\end{aligned}$$

Because this equation is continuous, it is possible that multiple values of $x\in\left(0,\frac{W}{1+\kappa_H}\right)$ solve $\Delta(x)=0$. Each of these values would represent a possible equilibrium value of e_D for the subgame in which the dictator joins the ICC.

To ensure that we have a unique equilibrium, we according assume that the value of W is large. Note that $\lim_{W\to\infty}\Upsilon(x)=\infty$. So:

$$\begin{aligned}
\lim_{W\to\infty}\Delta'(x) &= -\frac{1}{2x^{\frac{1}{2}}}\lim_{W\to\infty}[W]-(\kappa_H-\kappa_L)\left[\lim_{W\to\infty}\Upsilon(x)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]\left[\lim_{W\to\infty}\frac{\Upsilon(x)^{\frac{1}{2}}}{2x^{\frac{1}{2}}}-\frac{3}{2}\right]\\
&\quad-\left(\frac{c+\kappa_L}{2x^{\frac{1}{2}}}\right)\lim_{W\to\infty}\left(\frac{W-3(\kappa_H-\kappa_L)x}{1+\kappa_L}\right)=-\infty<0
\end{aligned}$$

By the IVT, for large W there exists a unique $x\in\left(0,\frac{W}{1+\kappa_H}\right)$ that solves $\Delta(x)=0$. This is the dictator's equilibrium level of effort for the subgame in which the dictator joins the ICC.

Note that:

$$\frac{\partial x}{\partial c}=\frac{-\Delta_c}{\Delta_x}=\frac{x^{\frac{1}{2}}\Upsilon(x)}{\Delta_x}<0\quad\text{for large } W$$

The total equilibrium violence when the dictator joins the ICC is then:

$$e_D^* + e_P^* \quad = \quad \left[\frac{Wx + (\kappa_L - \kappa_H)\,x^2}{(1+\kappa_L)}\right]^{\frac{1}{2}}$$

The dictator probability of survival when the dictator joins the ICC is then:

$$\pi = \frac{e_D}{e_D + e_P} \quad = \quad \frac{e_D}{\left[\frac{We_D + (\kappa_L - \kappa_H)e_D^2}{(1+\kappa_L)}\right]^{\frac{1}{2}}} = \frac{e_D^{\frac{1}{2}}\,(1+\kappa_L)^{\frac{1}{2}}}{\left[W + (\kappa_L - \kappa_H)\,e_D\right]^{\frac{1}{2}}} = \left[\frac{x}{\Upsilon(x)}\right]^{\frac{1}{2}}$$

And the dictator's expected utility from joining the ICC is then:

$$\begin{aligned} U_G\,(\text{join}|x) &= W\pi_G - (c+\kappa_H)\,x + (\kappa_H - \kappa_L)\,x\pi_G \\ &= W\left[\frac{x}{\Upsilon(x)}\right]^{\frac{1}{2}} + (\kappa_H - \kappa_L)\left[\frac{x^{\frac{3}{2}}}{\Upsilon(x)^{\frac{1}{2}}}\right] - (c+\kappa_H)\,x \end{aligned}$$

Note that by definition of this value of x:

$$\begin{aligned} \Delta(x) = W\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right] + (\kappa_L + \kappa_H)\,x^{\frac{1}{2}}\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]^2 - (c+\kappa_L)\,x^{\frac{1}{2}}\Upsilon(x) = 0 \\ \Leftrightarrow (c+\kappa_L)\,x^{\frac{1}{2}}\Upsilon(x) = W\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right] + (\kappa_L - \kappa_H)\,x^{\frac{1}{2}}\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]^2 \\ \Leftrightarrow c = W\left[\frac{\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}}{x^{\frac{1}{2}}\Upsilon(x)}\right] + (\kappa_L - \kappa_H)\frac{\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]^2}{\Upsilon(x)} - \kappa_L \\ \Leftrightarrow (c+\kappa_H)\,x = Wx^{\frac{1}{2}}\left[\frac{\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}}{\Upsilon(x)}\right] + (\kappa_H - \kappa_L)\,x\left[\frac{\Upsilon(x) - \left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]^2}{\Upsilon(x)}\right] \end{aligned}$$

So the dictator's expected utility from joining the ICC (given subsequent equilibrium behavior in the subgame) is:

$$\begin{aligned} \Delta(x) = W\left[\frac{x^{\frac{1}{2}}}{\Upsilon(x)^{\frac{1}{2}}}\right] + (\kappa_H - \kappa_L)\left[\frac{x^{\frac{3}{2}}}{\Upsilon(x)^{\frac{1}{2}}}\right] \\ - \left\{Wx^{\frac{1}{2}}\left[\frac{\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}}{\Upsilon(x)}\right] + (\kappa_H - \kappa_L)\,x\left[\frac{\Upsilon(x) - \left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]^2}{\Upsilon(x)}\right]\right\} \\ = W\left[\frac{x}{\Upsilon(x)}\right] - (\kappa_H - \kappa_L)\left[\frac{x^{\frac{3}{2}}\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]}{\Upsilon(x)}\right] \end{aligned}$$

We can now say that the dictator wants to join the ICC iff:

$$\theta(c) \equiv W\left[\frac{x}{\Upsilon(x)}\right] - (\kappa_H - \kappa_L)\left[\frac{x^{\frac{3}{2}}\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]}{\Upsilon(x)}\right] - \frac{W}{(1+c)^2} > 0$$

Define $x_0 \equiv \lim_{c\to 0} x$. Recall that x_0 is finite because it must fall within the interval $\left(0, \frac{W}{1+\kappa_H}\right)$. So:

$$\theta(0) = W\left[\frac{x_0}{\Upsilon(x_0)}\right] - (\kappa_H - \kappa_L)\left[\frac{x_0^{\frac{3}{2}}\left[\Upsilon(x_0)^{\frac{1}{2}} - x_0^{\frac{1}{2}}\right]}{\Upsilon(x_0)}\right] - W < 0$$

$$\Leftrightarrow -(\kappa_H - \kappa_L)\, x_0^{\frac{3}{2}}\left[\Upsilon(x_0)^{\frac{1}{2}} - x_0^{\frac{1}{2}}\right] < W\left[\Upsilon(x_0) - x_0\right]$$

This always holds because $x < \Upsilon(x)$ and $x^{\frac{1}{2}} < \Upsilon(x)^{\frac{1}{2}}$ for all $x \in \left(0, \frac{W}{1+\kappa_H}\right)$.

Next note that:

$$\begin{aligned}
\frac{d\theta(c)}{dc} &= \frac{\partial\theta(c)}{\partial c} + \frac{\partial\theta(c)}{\partial x}\left(\frac{\partial x}{\partial c}\right) \\
&= \frac{2W}{(1+c)^3} + \left(\frac{\partial x}{\partial c}\right)\frac{\partial}{\partial x}\left\{W\left[\frac{x}{\Upsilon(x)}\right] - (\kappa_H - \kappa_L)\left[\frac{x^{\frac{3}{2}}\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]}{\Upsilon(x)}\right]\right\} \\
&= \frac{2W}{(1+c)^3} + \frac{W^2 x^{\frac{1}{2}}}{(1+\kappa_L)\,\Delta_x \Upsilon(x)} \\
&\quad - \left[\frac{(\kappa_H - \kappa_L)\, x}{2\Delta_x}\right]\left\{\frac{x\Upsilon'(x)}{\Upsilon(x)^{\frac{1}{2}}} - x^{\frac{1}{2}} + 3\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right] - 2x\left[\frac{\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}}{\Upsilon(x)}\right]\Upsilon'(x)\right\}
\end{aligned}$$

Note that:

$$\begin{aligned}
& 0 < \frac{d\theta(c)}{dc} \\
\Leftrightarrow\ & 0 < \frac{2}{(1+c)^3} + \frac{W x^{\frac{1}{2}}}{(1+\kappa_L)\,\Delta_x \Upsilon(x)} \\
& - \left[\frac{(\kappa_H - \kappa_L)\, x^{\frac{3}{2}}}{2\Delta_x \Upsilon(x)}\right]\left\{\frac{x\Upsilon'(x)}{W\Upsilon(x)^{\frac{1}{2}}} - \frac{x^{\frac{1}{2}}}{W} + \frac{3\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]}{W} - 2x\left[\frac{\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}}{W\Upsilon(x)}\right]\Upsilon'(x)\right\} \equiv M
\end{aligned}$$

Recall that $\lim_{W\to\infty} \Delta_x = -\infty$. Define $\hat{x} \equiv \lim_{W\to\infty} x$. Recall that $\hat{x}$ is finite because it must fall within the interval $\left(0, \frac{W}{1+\kappa_H}\right)$.

Consider the components of function M:

$$\lim_{W\to\infty}\left\{\frac{2}{(1+c)^3}\right\}=\frac{2}{(1+c)^3}>0$$

$$\begin{aligned}\lim_{W\to\infty}\left\{\frac{Wx^{\frac{1}{2}}}{(1+\kappa_L)\Delta_x\Upsilon(x)}\right\}=&\frac{\hat{x}^{\frac{1}{2}}}{(1+\kappa_L)}\lim_{W\to\infty}\left\{\frac{1}{\Delta_x}\right\}\lim_{W\to\infty}\left\{\frac{W}{\Upsilon(x)}\right\}\\ =&\frac{\hat{x}^{\frac{1}{2}}}{(1+\kappa_L)}\lim_{W\to\infty}\left\{\frac{1}{\Delta_x}\right\}\lim_{W\to\infty}\left\{\frac{1+\kappa_L}{1+\frac{(\kappa_L-\kappa_H)\hat{x}}{W}}\right\}=\hat{x}^{\frac{1}{2}}\lim_{W\to\infty}\left\{\frac{1}{\Delta_x}\right\}=0\end{aligned}$$

$$\lim_{W\to\infty}\left\{\frac{(\kappa_H-\kappa_L)x^{\frac{3}{2}}}{2\Delta_x\Upsilon(x)}\right\}=\frac{(\kappa_H-\kappa_L)\hat{x}^{\frac{3}{2}}}{2}\lim_{W\to\infty}\left\{\frac{1}{\Delta_x\Upsilon(x)}\right\}=0$$

$$\begin{aligned}&\lim_{W\to\infty}\left\{\frac{x\Upsilon'(x)}{W\Upsilon(x)^{\frac{1}{2}}}-\frac{x^{\frac{1}{2}}}{W}+\frac{3\left[\Upsilon(x)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]}{W}-2x\left[\frac{\Upsilon(x)^{\frac{1}{2}}-x^{\frac{1}{2}}}{W\Upsilon(x)}\right]\Upsilon'(x)\right\}\\ &=\hat{x}\Upsilon'(\hat{x})\lim_{W\to\infty}\left\{\frac{1}{W\Upsilon(\hat{x})^{\frac{1}{2}}}\right\}-\hat{x}^{\frac{1}{2}}\lim_{W\to\infty}\left\{\frac{1}{W}\right\}+3\lim_{W\to\infty}\left\{\frac{\Upsilon(\hat{x})^{\frac{1}{2}}-\hat{x}^{\frac{1}{2}}}{W}\right\}\\ &\quad-2\hat{x}\Upsilon'(\hat{x})\lim_{W\to\infty}\left\{\frac{\Upsilon(\hat{x})^{\frac{1}{2}}-\hat{x}^{\frac{1}{2}}}{W\Upsilon(\hat{x})}\right\}\\ &=3\left[\lim_{W\to\infty}\left\{\frac{\Upsilon(\hat{x})^{\frac{1}{2}}}{W}\right\}-\hat{x}^{\frac{1}{2}}\lim_{W\to\infty}\left\{\frac{1}{W}\right\}\right]\\ &\quad-2\hat{x}\Upsilon'(\hat{x})\left[\lim_{W\to\infty}\left\{\frac{1}{W\Upsilon(\hat{x})^{\frac{1}{2}}}\right\}-\hat{x}^{\frac{1}{2}}\lim_{W\to\infty}\left\{\frac{1}{W\Upsilon(\hat{x})}\right\}\right]\\ &=3\lim_{W\to\infty}\left\{\frac{\left(\frac{W+(\kappa_L-\kappa_H)\hat{x}}{1+\kappa_L}\right)^{\frac{1}{2}}}{W}\right\}=\frac{3}{(1+\kappa_L)^{\frac{1}{2}}}\lim_{W\to\infty}\left\{\frac{[W+(\kappa_L-\kappa_H)\hat{x}]^{\frac{1}{2}}}{W}\right\}\\ &=\frac{3}{(1+\kappa_L)^{\frac{1}{2}}}\lim_{W\to\infty}\left\{\frac{1}{2[W+(\kappa_L-\kappa_H)\hat{x}]^{\frac{1}{2}}}\right\}=0\end{aligned}$$

So:

$$\lim_{W\to\infty}M=\frac{2}{(1+c)^3}>0$$

Finally, note that:

$$0<\theta\left(c\right)\quad\Leftrightarrow\quad 0<Wx-\left(\kappa_H-\kappa_L\right)x^{\frac{3}{2}}\left[\Upsilon\left(x\right)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]-\frac{\Upsilon\left(x\right)W}{\left(1+c\right)^2}\equiv N\left(c\right)$$

Define $\bar{x}\equiv\lim_{c\to\infty}x\left(c\right)$. Note that $0\leq\bar{x}$ and $\bar{x}$ is finite. Then:

$$\lim_{c\to\infty}N\left(c\right)=W\bar{x}-\left(\kappa_H-\kappa_L\right)\bar{x}^{\frac{3}{2}}\left[\Upsilon\left(\bar{x}\right)^{\frac{1}{2}}-\bar{x}^{\frac{1}{2}}\right]$$

So:

$$0<\lim_{c\to\infty}N\left(c\right)\quad\Leftrightarrow\quad\left(\kappa_H-\kappa_L\right)\bar{x}^{\frac{1}{2}}\left[\Upsilon\left(\bar{x}\right)^{\frac{1}{2}}-\bar{x}^{\frac{1}{2}}\right]<W$$

This holds for large W. So by the IVT, there is a unique crossing for large W at which $\theta\left(c\right)=0$. The dictator joins iff c is sufficiently large. QED

Proposition C2

Step 1: Recall from the Proof of Proposition 1 that the best response function if the leader does not join the ICC in this model extension is:

$$e_i\left(e_j|\text{don't join}\right)=\left(\frac{We_j}{c_i}\right)^{\frac{1}{2}}-e_j$$

Recall from the Proof of Proposition C1 that the best response function if the leader joins the ICC in this model extension is:

$$e_i\left(e_j|\text{join}\right)=\left(\frac{We_j-\left(\kappa_H-\kappa_L\right)e_j^2}{c_i+\kappa_L}\right)^{\frac{1}{2}}-e_j$$

Note that as κ_L and κ_H become arbitrarily small, continuity of the $e_i\left(e_j|\text{join}\right)$-function ensures that the equilibrium values of $e_D\left(\text{join}\right)$ and $e_P\left(\text{join}\right)$ will approach the equilibrium values of $e_D\left(\text{don't join}\right)$ and $e_P\left(\text{don't join}\right)$. So as κ_L and κ_H become arbitrarily small, total violence when the dictator joins that ICC will approach the level of total violence when the dictator does not join the ICC. We can therefore think of violence when the dictator has not joined the ICC as the limiting case of a model with ICC jurisdiction in which $\kappa_L=\kappa_H=0$.

Step 2: By the Proof of Proposition C1, the total violence when the dictator joins the ICC in this model extension is:

$$V\left(\text{join}|x\right) \equiv \left(\frac{Wx - \left(\kappa_H - \kappa_L\right)x^2}{1+\kappa_L}\right)^{\frac{1}{2}} = \left[x\Upsilon\left(x\right)\right]^{\frac{1}{2}} \quad \text{and} \quad \Upsilon\left(x\right) \equiv \frac{W - \left(\kappa_H - \kappa_L\right)x}{1+\kappa_L}$$

where x is the equilibrium value defined by:

$$\Delta\left(x\right) \equiv W\left[\Upsilon\left(x\right)^{\frac{1}{2}} - x^{\frac{1}{2}}\right] + \left(\kappa_L - \kappa_H\right)x^{\frac{1}{2}}\left[\Upsilon\left(x\right)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]^2 - \left(c+\kappa_L\right)\Upsilon\left(x\right) = 0$$

To calculate the impact of changes in κ_L and κ_H on total violence we must consider the total derivatives:

$$\begin{aligned}\frac{dV\left(\text{join}|x\right)}{d\kappa_L} &= \frac{\partial V\left(\text{join}|x\right)}{\partial\kappa_L} + \frac{\partial V\left(\text{join}|x\right)}{\partial x}\left(\frac{\partial x}{\partial\kappa_L}\right)\\ \frac{dV\left(\text{join}|x\right)}{d\kappa_H} &= \frac{\partial V\left(\text{join}|x\right)}{\partial\kappa_H} + \frac{\partial V\left(\text{join}|x\right)}{\partial x}\left(\frac{\partial x}{\partial\kappa_H}\right)\end{aligned}$$

where:

$$\begin{aligned}\frac{\partial V\left(\text{join}|x\right)}{\partial\kappa_L} &= \frac{-1}{2\left[x\Upsilon\left(x\right)\right]^{\frac{1}{2}}}\left[\frac{Wx + \left(1+\kappa_H\right)x^2}{\left(1+\kappa_L\right)^2}\right]\\ \frac{\partial V\left(\text{join}|x\right)}{\partial\kappa_H} &= \frac{-1}{2\left[x\Upsilon\left(x\right)\right]^{\frac{1}{2}}}\left(\frac{x^2}{1+\kappa_L}\right)\\ \frac{\partial V\left(\text{join}|x\right)}{\partial x} &= \frac{1}{2\left[x\Upsilon\left(x\right)\right]^{\frac{1}{2}}}\left[\frac{W - 2\left(\kappa_H - \kappa_L\right)x}{1+\kappa_L}\right]\end{aligned}$$

(a) Changes in κ_L

(i) Note that:

$$\frac{dV\left(\text{join}|x\right)}{d\kappa_L} = \frac{-1}{2\left[x\Upsilon\left(x\right)\right]^{\frac{1}{2}}}\left\{\frac{Wx + \left(1+\kappa_H\right)x^2}{\left(1+\kappa_L\right)^2} + \left[\frac{W - 2\left(\kappa_H - \kappa_L\right)x}{1+\kappa_L}\right]\left(\frac{\Delta_{\kappa_L}}{\Delta_x}\right)\right\}$$

So:

$$\frac{dV\left(\text{join}|x\right)}{d\kappa_L} < 0 \qquad \Leftrightarrow \qquad 0 < Wx + \left(1+\kappa_H\right)x^2 + \left(1+\kappa_L\right)\left[W - 2\left(\kappa_H - \kappa_L\right)x\right]\left(\frac{\Delta_{\kappa_L}}{\Delta_x}\right)$$

Recall that the constraints on equilibrium solutions of x ensure that $\lim_{W\to\infty} x$ is finite and weakly positive. Also recall from the Proof of Proposition C1 that: $\lim_{W\to\infty}\Delta_x = -\infty$. So a sufficient condition for our result to hold when W is large is: $\lim_{W\to\infty}\Delta_{\kappa_L} - \infty$.

(ii) Now note that:

$$\Delta_{\kappa_L} = W\left[\frac{1}{2}\Upsilon(x)^{-\frac{1}{2}}\left(\frac{\partial\Upsilon}{\partial\kappa_L}\right)\right] + x^{\frac{1}{2}}\left\{(\kappa_L-\kappa_H)\,2\left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]\frac{1}{2}\Upsilon(x)^{-\frac{1}{2}}\left(\frac{\partial\Upsilon}{\partial\kappa_L}\right) + \left[\Upsilon(x)^{\frac{1}{2}} - x^{\frac{1}{2}}\right]^2\right\}$$
$$- \left[(c+\kappa_L)\left(\frac{\partial\Upsilon}{\partial\kappa_L}\right) + \Upsilon(x)\right]$$
$$= \left[\frac{W - 2x(\kappa_L-\kappa_H)}{2\Upsilon(x)^{\frac{1}{2}}} + x^{\frac{1}{2}}(\kappa_L-\kappa_H) - (c+\kappa_L)\right]\left(\frac{\partial\Upsilon}{\partial\kappa_L}\right) + x^{\frac{1}{2}}\left[\Upsilon(x) - 2\Upsilon(x)^{\frac{1}{2}}x^{\frac{1}{2}} + x\right] - \Upsilon(x)$$
$$= \left[\frac{W - 2x(\kappa_L-\kappa_H)}{2\Upsilon(x)^{\frac{1}{2}}} + x^{\frac{1}{2}}(\kappa_L-\kappa_H) - (c+\kappa_L)\right]\left(\frac{\partial\Upsilon}{\partial\kappa_L}\right) + \left(x^{\frac{1}{2}} - 1\right)\Upsilon(x) - 2x\Upsilon(x)^{\frac{1}{2}} + x^{\frac{3}{2}}$$
$$= -\left[\frac{(1+\kappa_L)^{\frac{1}{2}}\left[W^{\frac{1}{2}} - \frac{2x(\kappa_L-\kappa_H)}{W^{\frac{1}{2}}}\right]}{2\left(1 - \frac{(\kappa_H-\kappa_L)x}{W}\right)^{\frac{1}{2}}} + x^{\frac{1}{2}}(\kappa_L-\kappa_H) - (c+\kappa_L)\right]\left(\frac{W - (1+\kappa_H)x}{(1+\kappa_L)^2}\right)$$
$$+ \left(x^{\frac{1}{2}} - 1\right)\left(\frac{W - (\kappa_H-\kappa_L)x}{1+\kappa_L}\right) - 2x\left(\frac{W - (\kappa_H-\kappa_L)x}{1+\kappa_L}\right)^{\frac{1}{2}} + x^{\frac{3}{2}}$$
$$= -W\left\{\left[\frac{(1+\kappa_L)^{\frac{1}{2}}\left[W^{\frac{1}{2}} - \frac{2x(\kappa_L-\kappa_H)}{W^{\frac{1}{2}}}\right]}{2\left(1 - \frac{(\kappa_H-\kappa_L)x}{W}\right)^{\frac{1}{2}}} + x^{\frac{1}{2}}(\kappa_L-\kappa_H) - (c+\kappa_L)\right]\left(\frac{1 - \frac{(1+\kappa_H)x}{W}}{(1+\kappa_L)^2}\right)\right.$$
$$\left. + \left(x^{\frac{1}{2}} - 1\right)\left(\frac{1 - \frac{(\kappa_H-\kappa_L)x}{W}}{1+\kappa_L}\right) - \frac{2x}{W^{\frac{1}{2}}}\left(\frac{1 - \frac{(\kappa_H-\kappa_L)x}{W^{\frac{1}{2}}}}{1+\kappa_L}\right)^{\frac{1}{2}} + \frac{x^{\frac{3}{2}}}{W^{\frac{1}{2}}}\right\}$$

Recall that the constraints on equilibrium solutions of x ensure that $\lim_{W\to\infty} x$ is finite and weakly positive. So:

$$\lim_{W\to\infty}\Delta_{\kappa_L} = -\lim_{W\to\infty} W\times$$
$$\left\{\lim_{W\to\infty}\frac{W^{\frac{1}{2}}}{2(1+\kappa_L)^{\frac{3}{2}}} + \lim_{W\to\infty}\left[\frac{x^{\frac{1}{2}}(\kappa_L-\kappa_H) - (c+\kappa_L)}{(1+\kappa_L)^2}\right] + \lim_{W\to\infty}\left(\frac{x^{\frac{1}{2}} - 1}{1+\kappa_L}\right)\right\} = -\infty$$

So $V(\text{join}|x)$ is strictly decreasing in κ_L.

(b) Changes in κ_H

(i) Note that:

$$\frac{dV(\text{join}|x)}{d\kappa_H} = \frac{-1}{2[x\Upsilon(x)]^{\frac{1}{2}}}\left\{\left(\frac{x^2}{1+\kappa_L}\right) + \left[\frac{W - 2(\kappa_H-\kappa_L)x}{1+\kappa_L}\right]\left(\frac{\Delta_{\kappa_H}}{\Delta_x}\right)\right\}$$

So:

$$\frac{dV\left(\text{join}|x\right)}{d\kappa_H}<0 \quad \Leftrightarrow \quad 0<\frac{x^2}{W}+\left[1-\frac{2\left(\kappa_H-\kappa_L\right)x}{W}\right]\left(\frac{\Delta_{\kappa_H}}{\Delta_x}\right)$$

Recall that the constraints on equilibrium solutions of x ensure that $\lim_{W\to\infty} x$ is finite and weakly positive. Also recall from the Proof of Proposition C1 that: $\lim_{W\to\infty}\Delta_x=-\infty$. So our result holds when W is large if: $\lim_{W\to\infty}\Delta_{\kappa_H}-\infty$.

(ii) Now note that:

$$\begin{aligned}
\Delta_{\kappa_H} &= W\left[\frac{1}{2}\Upsilon\left(x\right)^{-\frac{1}{2}}\left(\frac{\partial\Upsilon}{\partial\kappa_H}\right)\right]+x^{\frac{1}{2}}\left\{\left(\kappa_L-\kappa_H\right)2\left[\Upsilon\left(x\right)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]\frac{1}{2}\Upsilon\left(x\right)^{-\frac{1}{2}}\left(\frac{\partial\Upsilon}{\partial\kappa_H}\right)-\left[\Upsilon\left(x\right)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]^2\right\} \\
&\quad -\left(c+\kappa_L\right)\left(\frac{\partial\Upsilon}{\partial\kappa_H}\right) \\
&= \left[\frac{W-2x\left(\kappa_L-\kappa_H\right)}{2\Upsilon\left(x\right)^{\frac{1}{2}}}+x^{\frac{1}{2}}\left(\kappa_L-\kappa_H\right)-\left(c+\kappa_L\right)\right]\left(\frac{\partial\Upsilon}{\partial\kappa_H}\right)-x^{\frac{1}{2}}\Upsilon\left(x\right)+2x\Upsilon\left(x\right)^{\frac{1}{2}}-x^{\frac{3}{2}} \\
&= -\left[\frac{\left(1+\kappa_L\right)^{\frac{1}{2}}\left[W^{\frac{1}{2}}-\frac{2x\left(\kappa_L-\kappa_H\right)}{W^{\frac{1}{2}}}\right]}{2\left(1-\frac{\left(\kappa_H-\kappa_L\right)x}{W}\right)^{\frac{1}{2}}}+x^{\frac{1}{2}}\left(\kappa_L-\kappa_H\right)-\left(c+\kappa_L\right)\right]\left(\frac{x}{1+\kappa_L}\right) \\
&\quad -x^{\frac{1}{2}}\left(\frac{W-\left(\kappa_H-\kappa_L\right)x}{1+\kappa_L}\right)+2x\left(\frac{W-\left(\kappa_H-\kappa_L\right)x}{1+\kappa_L}\right)^{\frac{1}{2}}-x^{\frac{3}{2}} \\
&= -W\left\{\left[\frac{\left(1+\kappa_L\right)^{\frac{1}{2}}\left[1-\frac{2x\left(\kappa_L-\kappa_H\right)}{W}\right]}{2W^{\frac{1}{2}}\left(1-\frac{\left(\kappa_H-\kappa_L\right)x}{W}\right)^{\frac{1}{2}}}+\frac{x^{\frac{1}{2}}\left(\kappa_L-\kappa_H\right)-\left(c+\kappa_L\right)}{W}\right]\left[\frac{x}{\left(1+\kappa_L\right)}\right]\right. \\
&\quad \left.+x^{\frac{1}{2}}\left(\frac{1-\frac{\left(\kappa_H-\kappa_L\right)x}{W}}{1+\kappa_L}\right)-\frac{2x}{W^{\frac{1}{2}}}\left(\frac{1-\frac{\left(\kappa_H-\kappa_L\right)x}{W}}{1+\kappa_L}\right)^{\frac{1}{2}}+\frac{x^{\frac{3}{2}}}{W^{\frac{1}{2}}}\right\}
\end{aligned}$$

Recall that the constraints on equilibrium solutions of x ensure that $\lim_{W\to\infty} x$ is finite and weakly positive. So:

$$\lim_{W\to\infty}\Delta_{\kappa_H}=-\lim_{W\to\infty}W\times\lim_{W\to\infty}\left(\frac{x^{\frac{1}{2}}}{1+\kappa_L}\right)=-\infty$$

So $V\left(\text{join}|x\right)$ is strictly decreasing in κ_H.

This implies that for large W, joining the ICC lowers the total violence in the state. QED

Proposition C3

Note that the dictator's probabilities of survival in office, conditional on his joining decisions, are:

$$\pi\left(\text{don't join}\right)=\frac{1}{1+c}\qquad\text{and}\qquad\pi\left(\text{join}\right)=\left[\frac{x}{\Upsilon(x)}\right]^{\frac{1}{2}}$$

By the Proof of Proposition C1, a dictator only joins the ICC if:

$$\begin{aligned}\theta\left(c\right) &\equiv W\left[\frac{x}{\Upsilon\left(x\right)}\right]-\left(\kappa_H-\kappa_L\right)\left[\frac{x^{\frac{3}{2}}\left[\Upsilon\left(x\right)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]}{\Upsilon\left(x\right)}\right]-\frac{W}{\left(1+c\right)^2}\geq 0\\ &\Leftrightarrow W\left[\frac{x}{\Upsilon\left(x\right)}-\frac{1}{\left(1+c\right)^2}\right]\geq\frac{\left(\kappa_H-\kappa_L\right)x^{\frac{3}{2}}\left[\Upsilon\left(x\right)^{\frac{1}{2}}-x^{\frac{1}{2}}\right]}{\Upsilon\left(x\right)}\end{aligned}$$

As shown in the Proof of Proposition C1, $x^{\frac{1}{2}}<\Upsilon\left(x\right)^{\frac{1}{2}}$ for all relevant values of x, meaning that the right-hand side of the equation above is always positive. This therefore ensures that the left-hand side of the equation is also always positive. So if the dictator joins the ICC, then:

$$\pi\left(\text{don't join}\right)=\frac{1}{1+c}<\pi\left(\text{join}\right)=\left[\frac{x}{\Upsilon(x)}\right]^{\frac{1}{2}}$$

QED.

2 Empirics

2.1 Hypothesis 1: Political Competition Increases Joining

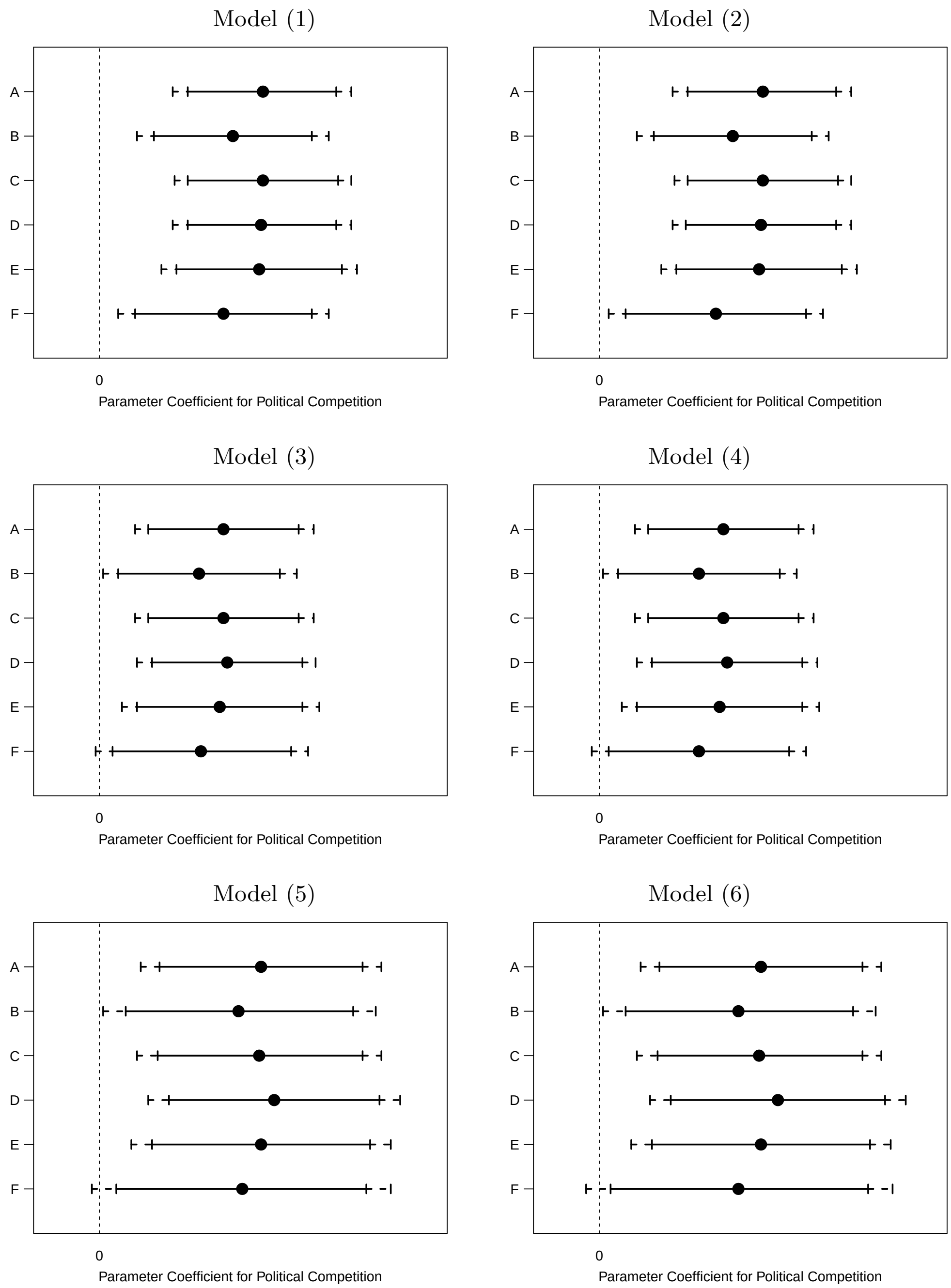
2.1.1 Descriptive Statistics

Table A1: Descriptive Statistics for Models (1)–(6)

	Models (1)-(2): Polity				Models (3)-(4): V-Dem 0.4				Models (5)-(6): V-Dem 0.5			
Variable	Mean	Min.	Max.	N	Mean	Min.	Max.	N	Mean	Min.	Max.	N
Year	2007	1998	2018	1,194	2007	1998	2018	1,044	2007	1998	2018	1,277
ICC join	0.03	0	1	1,194	0.03	0	1	1,044	0.02	0	1	1,277
Political competition	2.08	0	4	1,100	2.04	0	4	974	2.21	0	4	1,191
Multiparty elections†	−0.50	−3.35	1.66	1,017	−0.74	−3.35	1.57	870	−0.43	−3.35	1.73	1,103
Leader tenure†	11.02	0	49	1,181	11.87	0	49	1,031	10.36	0	49	1,264
Log(GDP per capita)	7.90	5.23	11.15	1,107	7.92	5.23	11.15	957	7.87	5.23	11.15	1,190
Rule of law	−0.71	−2.61	1.84	1,194	−0.73	−2.61	1.84	1,044	−0.82	−2.61	1.84	1,277
Total violence	0.81	0	7	1,194	0.87	0	7	1,044	0.86	0	7	1,277
Inter-state violence	0.09	0	6	1,194	0.07	0	6	1,044	0.08	0	6	1,277
Intra-state violence	0.72	0	7	1,194	0.80	0	7	1,044	0.78	0	7	1,277
Foreign aid*	19.31	−21.41	24.66	1,095	19.10	−21.41	24.66	949	19.34	−21.41	24.66	1,175
Africa	0.46	0	1	1,194	0.45	0	1	1,044	0.45	0	1	1,277
Middle East/North Africa	0.23	0	1	1,194	0.25	0	1	1,044	0.22	0	1	1,277
Asia	0.26	0	1	1,194	0.26	0	1	1,044	0.28	0	1	1,277
Central & South America	0.05	0	1	1,194	0.03	0	1	1,044	0.05	0	1	1,277

†online appendix only *hyperbolic sine transformation

2.1.2 Permutations of Control Variables



A = Political Competition only; B = Political Competition + Economic controls; C = Political Competition + Rule of Law; D = Political Competition + Violence; E = Political Competition + Regional fixed effects; F = Political Competition + All Controls

Black circle = coefficient estimate; Solid line = 90 percent confidence interval; Dashed line = 95 percent confidence internal; Dotted line = 99 percent confidence interval

2.1.3 Robustness Checks

Table A2: Multiparty Elections and Continuous Exposure

Dependent Variable: Years to Join

Explanatory Variable						
Multiparty elections	0.61***	0.60***	0.65**	0.65**	0.52**	0.52**
	(0.22)	(0.22)	(0.28)	(0.28)	(0.23)	(0.23)
Control Variables						
GDP per capita, logged	-0.47*	-0.47*	-0.81**	-0.81**	-0.46*	-0.47*
	(0.26)	(0.26)	(0.34)	(0.35)	(0.26)	(0.26)
Foreign aid	0.00	0.01	-0.04	-0.04	-0.02	-0.02
	(0.10)	(0.10)	(0.08)	(0.08)	(0.07)	(0.07)
Rule of law	0.62	0.62	0.57	0.58	0.44	0.45
	(0.45)	(0.45)	(0.60)	(0.61)	(0.49)	(0.49)
Violence: total	0.07		0.01		0.08	
	(0.13)		(0.16)		(0.13)	
Violence: intra-state		-0.06		-0.03		-0.04
		(0.52)		(0.54)		(0.51)
Violence: inter-state		-0.30		-0.19		-0.18
		(0.61)		(0.60)		(6.11)
Region controls	Yes	Yes	Yes	Yes	Yes	Yes
Dataset	Polity-5	Polity-5	V-Dem-0.4	V-Dem-0.4	V-Dem-0.5	V-Dem-0.5
Events	29	29	17	17	25	25
States	83	83	71	71	87	87
Observations (state-year)	891	891	747	747	969	969

$^{*}p < 0.1,^{**} p < 0.05,^{***} p < 0.01$

Table A3: Leader Tenure and Continuous Exposure

Dependent Variable: Years to Join

Explanatory Variable						
Leader Tenure	-0.06**	-0.06**	-0.06*	-0.06	-0.08**	-0.08**
	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.03)
Control Variables						
GDP per capita, logged	-0.51*	-0.55**	-0.76**	-0.80**	-0.51**	-0.54**
	(0.26)	(0.27)	(0.33)	(0.33)	(0.25)	(0.26)
Foreign aid	0.06	0.07	-0.03	-0.03	-0.01	-0.01
	(0.17)	(0.18)	(0.09)	(0.10)	(0.09)	(0.09)
Rule of law	0.51	0.60	0.14	0.26	0.28	0.34
	(0.45)	(0.46)	(0.56)	(0.58)	(0.49)	(0.50)
Violence: total	0.04		-0.02		0.05	
	(0.13)		(0.16)		(0.13)	
Violence: intra-state		0.11		0.04		0.09
		(0.13)		(0.17)		(0.14)
Violence: inter-state		-0.55		-0.46		-0.39
		(0.66)		(0.64)		(0.62)
Region controls	Yes	Yes	Yes	Yes	Yes	Yes
Dataset	Polity-5	Polity-5	V-Dem-0.4	V-Dem-0.4	V-Dem-0.5	V-Dem-0.5
Events	22	22	12	12	19	19
States	83	83	74	74	91	91
Observations (state-year)	1,008	1,008	861	861	1,084	1,084

$^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

Table A4: Political Competition and New Exposure

Dependent Variable: Years to Join

Explanatory Variable						
Political competition	0.65**	0.61**	0.81**	0.80*	0.48*	0.46
	(0.28)	(0.29)	(0.41)	(0.42)	(0.28)	(0.28)
Control Variables						
GDP per capita, logged	-0.51*	-0.57*	-0.60	-0.62	-0.42	-0.46
	(0.31)	(0.32)	(0.37)	(0.39)	(0.28)	(0.29)
Foreign aid	0.03	0.03	-0.05	-0.05	0.00	0.00
	(0.10)	(0.09)	(0.08)	(0.08)	(0.07)	(0.07)
Rule of law	0.77	0.85	0.36	0.38	0.42	0.47
	(0.51)	(0.53)	(0.61)	(0.63)	(0.53)	(0.54)
Violence: total	0.00		-0.10		-0.07	
	(0.16)		(0.23)		(0.18)	
Violence: intra-state		0.07		-0.08		-0.03
		(0.18)		(0.26)		(0.20)
Violence: inter-state		-0.34		-0.18	-	0.29
		(0.62)		(0.59)		(0.59)
Region controls	Yes	Yes	Yes	Yes	Yes	Yes
Dataset	Polity-5	Polity-5	V-Dem-0.4	V-Dem-0.4	V-Dem-0.5	V-Dem-0.5
Events	22	22	12	12	19	19
States	84	84	74	74	91	91
Observations (state-year)	932	932	809	809	1,016	1,016

$^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

Table A5: Multiparty Elections and New Exposure

Dependent Variable: Years to Join

Explanatory Variable						
Multiparty elections	0.60***	0.59***	0.75***	0.75**	0.51**	0.49**
	(0.22)	(0.22)	(0.29)	(0.30)	(0.22)	(0.23)
Control Variables						
GDP per capita, logged	-0.51**	-0.52**	-0.87**	-0.87**	-0.51**	-0.52**
	(0.26)	(0.26)	(0.35)	(0.35)	(0.25)	(0.25)
Foreign aid	0.03	0.03	-0.05	-0.05	0.00	0.00
	(0.10)	(0.10)	(0.08)	(0.08)	(0.07)	(0.07)
Rule of law	0.68	0.69	0.64	0.64	0.46	0.48
	(0.46)	(0.46)	(0.60)	(0.60)	(0.49)	(0.50)
Violence: total	0.06		-0.02		0.05	
	(0.13)		(0.17)		(0.13)	
Violence: intra-state		0.07		-0.02		0.07
		(0.13)		(0.18)		(0.14)
Violence: inter-state		-0.06		0.00		-0.11
		(0.53)		(0.54)		(0.52)
Region controls	Yes	Yes	Yes	Yes	Yes	Yes
Dataset	Polity-5	Polity-5	V-Dem-0.4	V-Dem-0.4	V-Dem-0.5	V-Dem-0.5
Events	29	29	17	17	25	25
States	83	83	71	71	87	87
Observations (state-year)	891	891	747	747	969	969

$^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

Table A6: Leader Tenure and New Exposure

Dependent Variable: Years to Join

Explanatory Variable						
Leader Tenure	-0.06*	-0.05*	-0.07*	-0.07*	-0.08**	-0.08**
	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.03)
Control Variables						
GDP per capita, logged	-0.54**	-0.60**	-0.78**	-0.82**	-0.54**	-0.58**
	(0.26)	(0.27)	(0.33)	(0.33)	(0.25)	(0.25)
Foreign aid	0.08	0.09	-0.03	-0.03	-0.02	-0.02
	(0.17)	(0.17)	(0.08)	(0.08)	(0.10)	(0.10)
Rule of law	0.55	0.66	0.14	0.24	0.28	0.37
	(0.45)	(0.47)	(0.56)	(0.58)	(0.48)	(0.50)
Violence: total	0.03		-0.07		0.01	
	(0.13)		(0.16)		(0.13)	
Violence: intra-state		0.10		-0.02		0.05
		(0.13)		(0.17)		(0.14)
Violence: inter-state		-0.58		-0.47		-0.46
		(0.70)		(0.63)		(0.61)
Region controls	Yes	Yes	Yes	Yes	Yes	Yes
Dataset	Polity-5	Polity-5	V-Dem-0.4	V-Dem-0.4	V-Dem-0.5	V-Dem-0.5
Events	22	22	12	12	19	19
States	83	83	74	74	91	91
Observations (state-year)	1,008	1,008	861	861	1,084	1,084

$^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

2.2 Hypothesis 2: Joining Decreases Violence

The inclusion of a state into H2 is defined based on the inclusion rule for H1. Any state that joins the ICC as a dictatorship (defined using either the Polity, V-Dem 0.4, or V-Dem 0.5 cutoff) is included in the sample for H2. Thus the numbers are slightly different across each set of models.

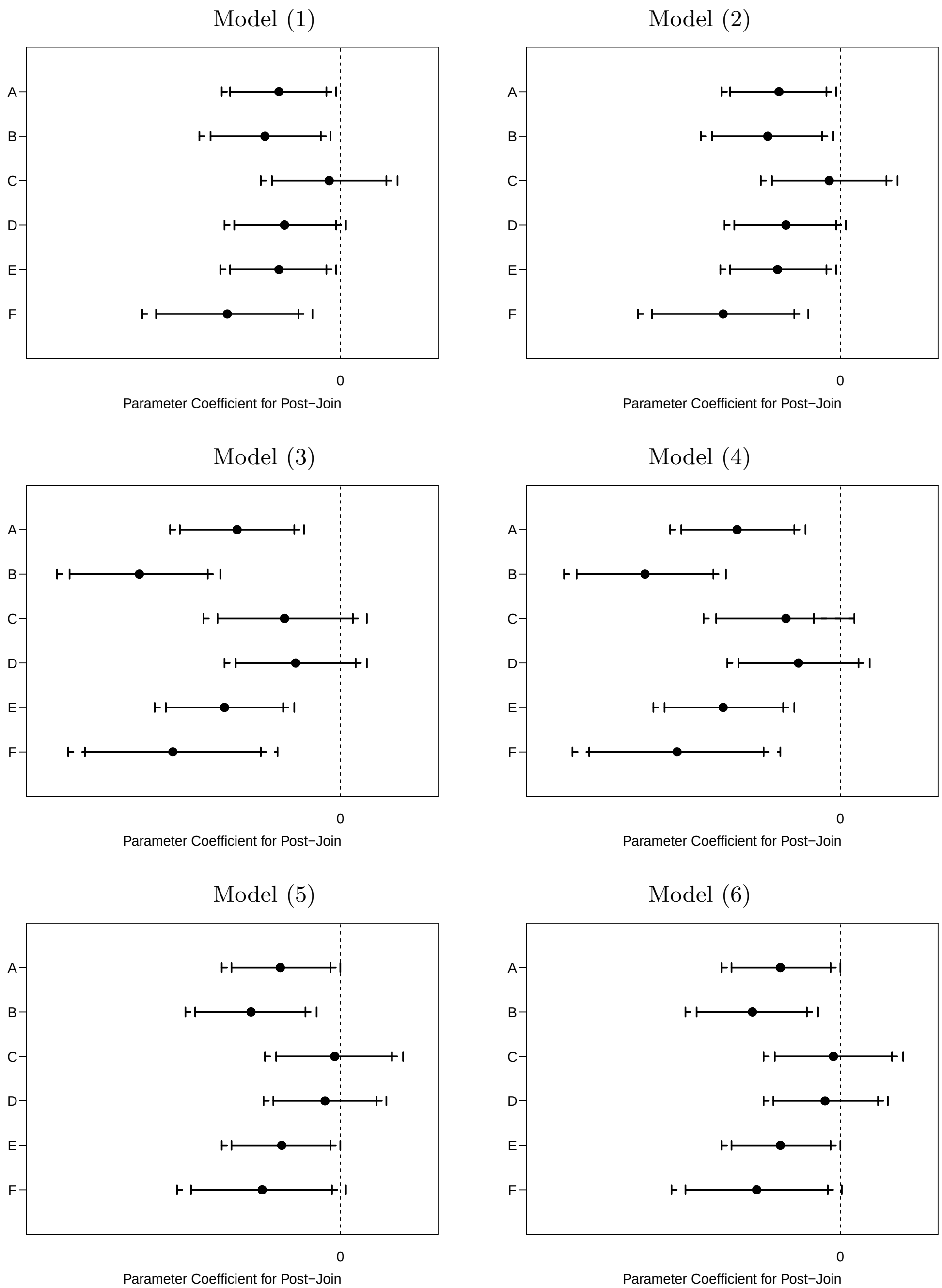
2.2.1 Descriptive Statistics

Table A7: Descriptive Statistics for Models (7)–(12)

	Models (7)-(8): Polity				Models (9)-(10): V-Dem 0.4				Models (11)-(12): V-Dem 0.5			
Variable	Mean	Min.	Max.	N	Mean	Min.	Max.	N	Mean	Min.	Max.	N
Total violence	0.69	0	7	651	0.89	0	7	399	0.80	0	7	559
Intra-state violence	0.68	0	7	651	0.88	0	7	399	0.79	0	7	559
PRIO violence†	0.34	0	4	651	0.42	0	4	399	0.36	0	4	559
Post-join	0.77	0	1	651	0.77	0	1	399	0.76	0	1	559
Log(GDP per capita)	6.95	5.35	7.52	625	9.54	5.35	24.23	373	9.50	5.35	24.46	533
Rule of law	−0.75	−2.13	0.46	651	−0.90	−2.13	0.46	399	−0.85	−2.13	0.46	559
Foreign aid*	20.71	−17.05	23.89	651	20.34	−17.05	23.36	399	20.63	−17.05	23.89	559
Polity	1.89	− 7	8	617	-	-	-	-	-	-	-	-
Polyarchy	-	-	-	-	0.34	0.07	0.77	399	0.37	0.07	0.77	559
Africa	0.45	0	1	651	0.74	0	1	399	0.77	0	1	559
Middle East/North Africa	0.26	0	1	651	0.11	0	1	399	0.08	0	1	559

†online appendix only *hyperbolic sine transformation

2.2.2 Permutations of Control Variables



A = Post-Join only; B = Post-Join + Economic controls; C = Post-Join + Rule of Law; D = Post-Join + Regime score; E = Post-Join + Regional fixed effects; F = Post-Join+ All Controls

Black circle = coefficient estimate; Solid line = 90 percent confidence interval; Dashed line = 95 percent confidence internal

2.2.3 Robustness Checks

Table A8: Joining the ICC Decreases PRIO Violence

Dependent Variable: Violence

Explanatory Variable			
Post-join	-0.53**	-1.35***	-0.59**
	(0.26)	(0.33)	(0.26)
Control Variables			
GDP per capita, logged	-0.36**	-0.06**	-0.06***
	(0.18)	(0.03)	(0.02)
Foreign aid	0.71***	1.17***	0.92***
	(0.13)	(0.16)	(0.13)
Rule of law	-1.69***	-1.70***	-2.03***
	(0.24)	(0.29)	(0.27)
Polity	-0.07**		
	(0.03)		
Polyarchy (V-Dem)		-3.49***	-4.50***
		(1.37)	(1.16)
Region controls	Yes	Yes	Yes
Dataset	Polity-5	V-Dem-0.4	V-Dem-0.5
States	30	19	27
Observations (state-year)	592	373	533

$^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

Table A9: Joining the ICC Decreases Violence: Post-2002 Data Only

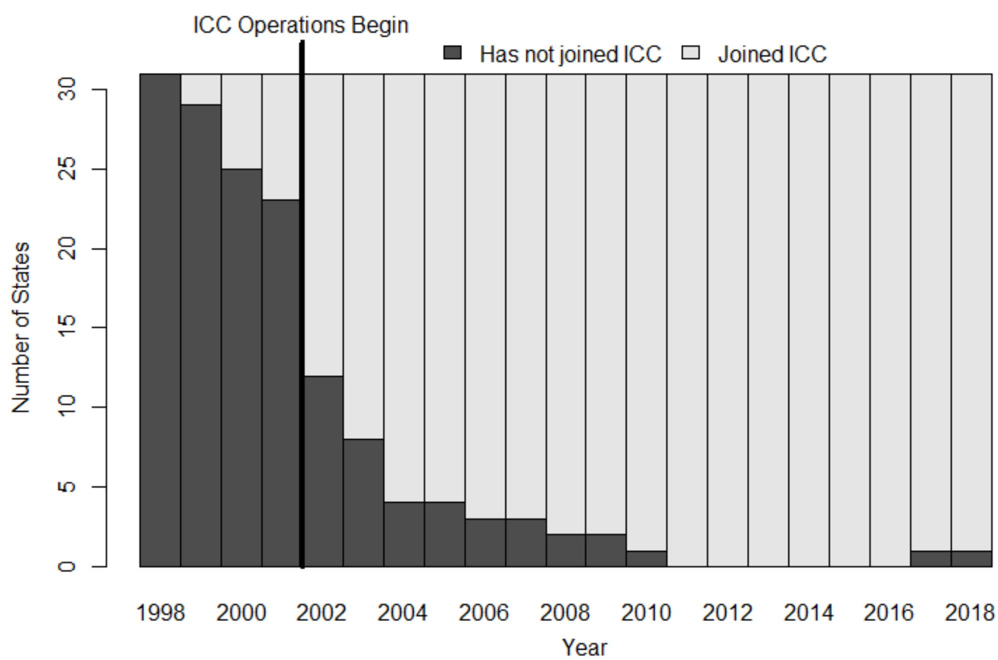
Dependent Variable: Violence

Type of Violence	Total	Intra-state	Total	Intra-state	Total	Intra-state
Explanatory Variable						
Post-join	-0.16	-0.26	-0.75	-0.86	-0.15	-0.25
	(0.52)	(0.53)	(0.56)	(0.58)	(0.49)	(0.50)
Control Variables						
GDP per capita, logged	-0.07	-0.07	0.10***	0.10***	0.03	0.03
	(0.24)	(0.24)	(0.03)	(0.03)	(0.02)	(0.02)
Foreign aid	1.46***	1.47***	1.71***	1.72***	1.42***	1.42***
	(0.19)	(0.20)	(0.24)	(0.25)	(0.18)	(0.18)
Rule of law	-5.05***	-5.11***	-4.67***	-4.79***	-5.01***	-5.09***
	(0.47)	(0.48)	(0.60)	(0.64)	(0.51)	(0.52)
Polity	-0.01	0.05				
	(0.04)	(-0.27)				
Polyarchy			-3.78*	-4.08*	-1.81	-1.81
			(1.98)	(2.09)	(1.54)	(1.58)
Region controls	Yes	Yes	Yes	Yes	Yes	Yes
Dataset	Polity-5	Polity-5	V-Dem-0.4	V-Dem-0.4	VDem-0.5	VDem-0.5
States	30	30	19	19	27	27
Observations (state-year)	482	482	307	307	439	439

$^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

The coefficient on Post-join in the post-2002 sample is not statistically significant, although it is signed consistently negative. The issue is that most dictators who would join the ICC had done so by 2002. Thus, most of the "Has not joined ICC" observations come from 1998–2001. Excluding those years excludes the vast majority of the "Has not joined ICC" observations, making comparisons of behavior before and after joining nearly impossible. Figure A1 illustrates this issue, using the Polity sample of the 30 dictatorships that join. When subsetting the sample to 2002 and later, one is losing everything to the left of the solid black line, leaving only the sample to the right. The light grey bars indicate the states that are under the ICC's jurisdiction in that year, while the darker grey bars indicate the states that have not yet joined. About 90% of the observations in the post-2002 period are from states that already joined the ICC, leaving an insufficient number of "has not joined ICC" states to make adequate comparisons.

Figure A1: Composition of the Polity Sample



Note: The 30 states included here are the 30 dictatorships that join the ICC as dictatorships based on the Polity sample.

2.3 Hypothesis 3: Joining Increases Leader Survival

The inclusion of a state into H3 is defined based on the inclusion rule for H1. Any state that joins the ICC as a dictatorship (defined using either the Polity, V-Dem 0.4, or V-Dem 0.5 cutoff) is included in the sample for H3. Thus the numbers are slightly different across each set of models.

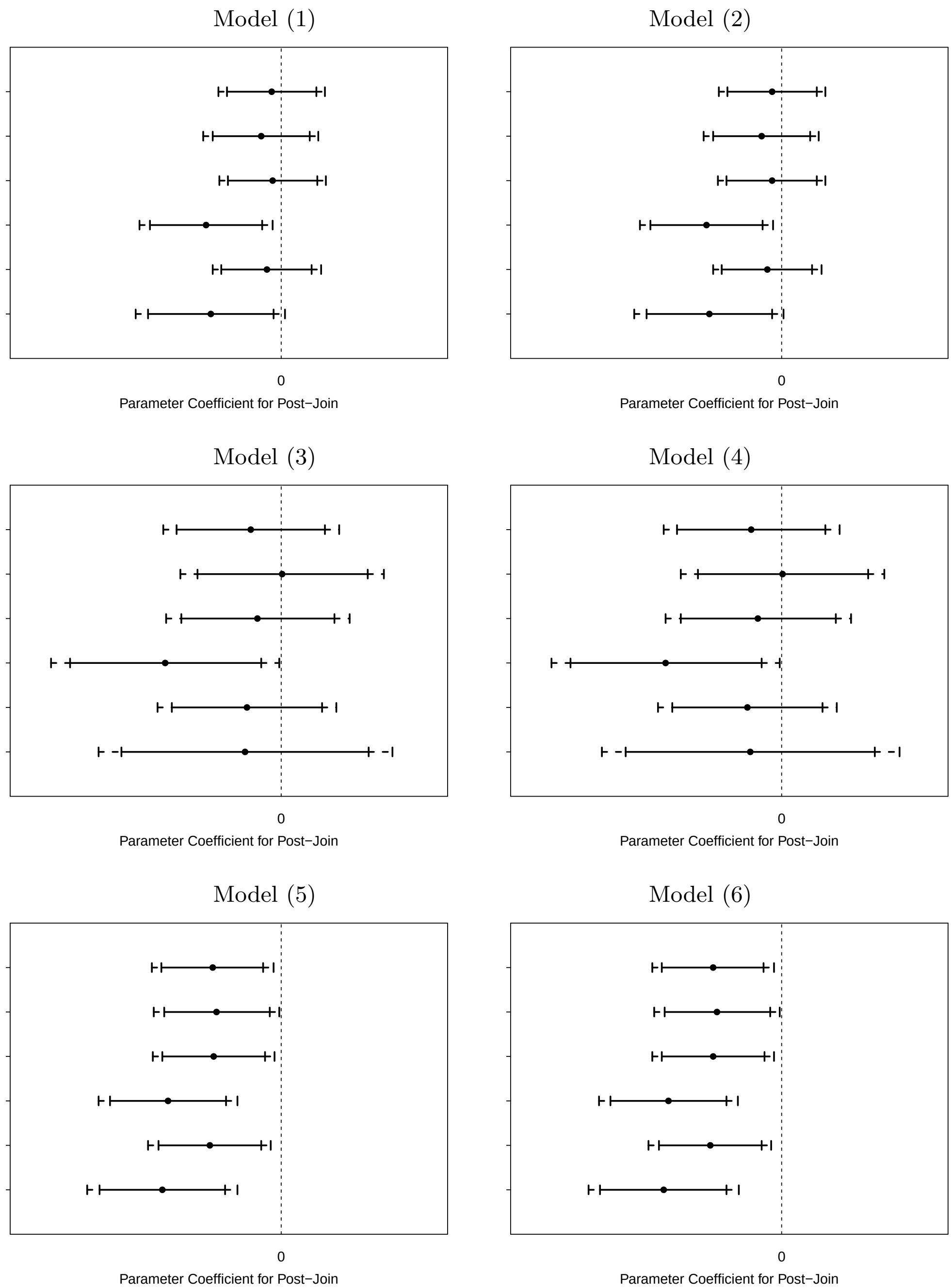
2.3.1 Descriptive Statistics

Table A10: Descriptive Statistics for Models (13)–(15)

	Model (13): Polity				Models (14): V-Dem 0.4				Model (15): V-Dem 0.5			
Variable	Mean	Min.	Max.	N	Mean	Min.	Max.	N	Mean	Min.	Max.	N
Post-join	0.77	0	1	758	0.76	0	1	410	0.75	0	1	601
Out of office	0.13	0	1	758	0.07	0	1	410	0.08	0	1	601
Tenure year	7.64	0	46	758	10.46	0	46	410	8.38	0	46	601
Log(GDP per capita)	6.73	5.35	9.38	730	9.62	5.35	24.23	382	9.51	5.35	24.46	573
Rule of law	−0.73	−2.13	0.46	758	−0.86	−2.13	0.46	410	−0.80	−2.13	0.46	601
Total violence	0.67	0	7	758	0.83	0	7	410	0.75	0	7	601
Inter-state violence	0.01	0	1	758	0.02	0	1	410	0.01	0	1	601
Intra-state violence	0.66	0	7	758	0.82	0	7	410	0.73	0	7	601
Foreign aid*	20.74	−17.05	23.89	758	20.36	−17.05	23.36	410	20.62	−17.05	23.89	601
Polity	2.09	− 7	8	691	-	-	-	-	-	-	-	-
Polyarchy	-	-	-	-	0.34	0.07	0.77	410	0.38	0.07	0.77	601
Africa	0.79	0	1	758	0.72	0	1	410	0.77	0	1	601
Middle East/North Africa	0.06	0	1	758	0.12	0	1	410	0.08	0	1	601
Asia	0.12	0	1	758	0.16	0	1	410	0.15	0	1	601

*hyperbolic sine transformation

2.3.2 Permutations of Control Variables



A = Post-Join only; B = Post-Join + Economic controls; C = Post-Join + Violence; D = Post-Join + Regime score; E = Post-Join + Regional fixed effects; F = Post-Join+ All Controls

Black circle = coefficient estimate; Solid line = 90 percent confidence interval; Dashed line = 95 percent confidence internal

2.3.3 Robustness Checks

Table A11: Joining the ICC Increases Leader Survival in Office: Post-2002 Data Only

	Dependent Variable: Years to Losing Office *(Event: Removal from Office)*					
Explanatory Variable						
Post-join	-1.10^{*}	-1.12^{*}	-0.47	-0.55	-1.67^{***}	-1.71^{***}
	(0.60)	(0.59)	(1.01)	(1.02)	(0.56)	(0.56)
Control Variables						
GDP per capita, logged	0.06	0.06	-0.15^{*}	-0.15^{*}	-0.07	-0.07
	(0.22)	(0.22)	(0.09)	(0.09)	(0.05)	(0.05)
Foreign aid	-0.18	-0.18	-0.98^{**}	-1.03^{**}	-0.38^{*}	-0.40^{*}
	(0.22)	(0.22)	(0.42)	(0.42)	(0.21)	(0.21)
Violence: total	0.22^{*}		0.86^{***}		0.33^{**}	
	(0.12)		(0.30)		(0.16)	
Violence: intra-state		0.22^{*}		0.85^{***}		0.33^{**}
		(0.12)		(0.30)		(0.16)
Violence: inter-state		2.18		20.03		3.25^{*}
		(1.73)		(4168)		(1.84)
Polity	0.21^{***}	0.21^{***}				
	(0.06)	(0.06)				
Polyarchy			6.68^{**}	6.72^{**}	5.38^{***}	5.45^{***}
			(2.68)	(2.75)	(1.86)	(1.89)
Region controls	Yes	Yes	Yes	Yes	Yes	Yes
Dataset	Polity-5	Polity-5	V-Dem-0.4	V-Dem-0.4	V-Dem-0.5	V-Dem-0.5
Events	52	52	21	21	40	40
States	30	30	18	18	26	26
Observations (leader-year)	415	415	316	316	471	471

$^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$