Should Audiences Cost? Optimal Domestic Constraints in International Crises

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Outline

Domestic Politics and Crisis Behavior: Two Arguments

Audience costs Threaten leader to strengthen resolve

Fearon 1994, Schultz 2001, Tomz 2007

Institutional constraint Threaten leader to prevent adventurism

Bueno de Mesquita and Lalman 1992, Bueno de Mesquita *et al.* 1992, Jackson and Morelli 2007

Different predictions about reward/punish leader for refraining from fighting

What if Both Problems are Present?

We study a model with

- private information about strength $\Rightarrow$ rationale to increase cost of backing down
- leader bears only fraction of fighting costs $\Rightarrow$ rationale to increase cost of fighting

Combines two canonical theory literatures:

- electoral control model (Barro 1973, Ferejohn 1986)
- crisis bargaining model (Fearon 1995, Powell 1999)

Two Key Distinctions

What do the citizens observe?

Secret settlements Escalate vs. back down

Public settlements All details of settlement

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Punish backing down relative to what?

F audience costs Punish relative to further escalation

T audience costs Punish relative to status quo

Preview of Results

T audience costs are always part of optimal strategy

F audience cost more subtle

- With secret settlements, use only if cost of fighting high
  - Also case when no war on path

- With public settlements, always use for off path offers

With public settlements, (off-path) audience costs allow full surplus extraction conditional on crisis

Outline

The Model

2 countries: Home and Foriegn

Share a perfectly divisible unit of resource

H's status quo share$= y$ and F's status quo share$= 1 - y$

F is a unitary actor, but H is divided into a ruler and a citizen

The ruler makes crisis decisions and the citizen decides whether or not to remove the ruler conditional on the crisis outcome

- Leader has private information
- But, leader and replacement ex-ante identical

The Crisis

H can keep the status quo or to demand more

If it initiates, F proposes a new allocation, $(x, 1-x)$, with $0 \leq x \leq 1$

Home can accept or reject, leading to war

The winner takes all of the resource

The war costs home c_H and foreign c_F

Information

H wins the war with probability p

Common prior is that p uniform on $[0, 1]$

H leader privately observes true value of p

Payoffs

Let

$$\begin{aligned} \pi &= H\text{'s share} \\ w &= \text{war indicator} \\ \rho &= \text{retention indicator} \end{aligned}$$

and let γ be the share of the war cost borne by the H leader

F maximizes

$$\mathbb{E}(1 - \pi - wc_F).$$

Payoffs

Let

$$\begin{aligned} \pi &= H\text{'s share} \\ w &= \text{war indicator} \\ \rho &= \text{retention indicator} \end{aligned}$$

and let γ be the share of the war cost borne by the H leader

The H leader maximizes

$$\mathbb{E}(\pi - w\gamma c_H + \rho).$$

Payoffs

Let

$$\begin{aligned} \pi &= H\text{'s share} \\ w &= \text{war indicator} \\ \rho &= \text{retention indicator} \end{aligned}$$

and let γ be the share of the war cost borne by the H leader

The H citizen maximizes

$$\mathbb{E}(\pi - wc_H).$$

Citizen Behavior

The the electoral control problem here naturally creates candidate indifference for the citizen, so there is a nontrivial optimization problem.

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> *The [audience cost] results here suggest that . . . , if the principal [read voter] could design a 'wage contract' for the foreign policy agent, the principal would want to commit to punishing the agent for escalating a crisis and then backing down.*

Fearon (1994)

Solution Concept

We look for the citizen-optimal retention rule subject to monotone PBE in the induced game between the two leaders

- monotonicity means if H initiates at p', also initiates at $p > p'$
- if H rejects offer x', it also rejects at p' and $p > p'$

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- Non-monotone equilibria are not robust to small chances of war

What the Citizen Observes

Citizen's retention decision conditional on what she observes about outcome

Secret settlements Distinguish between status quo, settle, war

Retention strategy (r_Q, r_S, r_W)

Public settlements Distinguish between status quo, settle on $(x, 1 - x)$, war

Retention strategy (r_Q, r_S, r_W), where $r_S : [0, 1] \to [0, 1]$

Outline

Fight or Accept

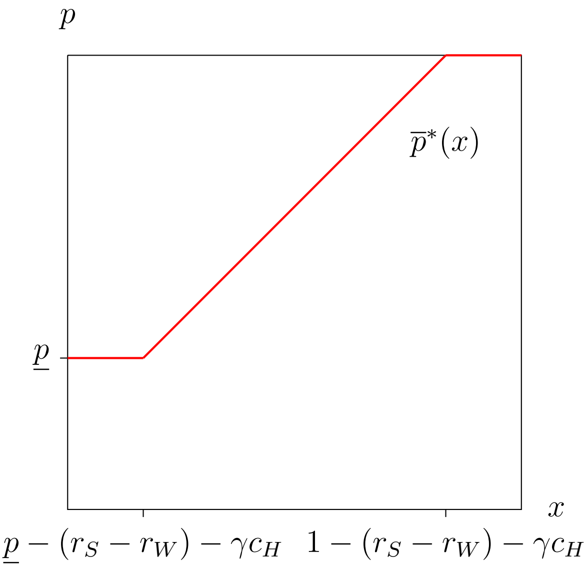
Home will accept the offer $(x, 1-x)$ exactly when

$$x + r_S \geq p + r_W - \gamma c_H.$$

Solve this to see that Home accepts x if and only if

$$p \leq x + (r_S - r_W) + \gamma c_H.$$

The Acceptance Function



The Offer

Let $\underline{p}$ be the least type that initiates crisis

Lemma

Let

$$x^* = \min\langle \underline{p} + c_F, 1 - (r_S - r_W) - \gamma c_H \rangle.$$

1. *If x^* is accepted with positive probability ($x^* > \underline{p} + (r_S - r_W) + \gamma c_H$), then x^* is the unique optimal offer.*
2. *If x^* is rejected with probability one ($x^* \leq \underline{p} + (r_S - r_W) + \gamma c_H$), then any $x \leq \underline{p} + (r_S - r_W) + \gamma c_H$ is an optimal offer. In particular, x^* is optimal.*

Entry

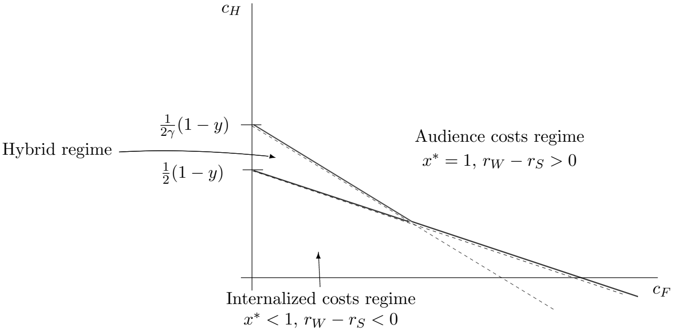
Lemma

In any equilibrium in which there is positive probability that H keeps the status quo and positive probability that H enters and accepts the offer,

$$y + r_Q = x^* + r_S.$$

If this equation is satisfied, any initiation threshold $\underline{p}$ less than least p that rejects x^* can be part of an equilibrium

Optimal Retention



- $r_Q - r_S > 0$ always

How it Works

When the social cost of war is high, F makes an offer the H leader to sure to accept

The offer in this case is

$$x^* = 1 - (r_S - r_W) - \gamma c_H,$$

so F audience costs work in the expected way: they stiffen the leader's stance in bargaining and leads to a bigger share of the pie

If the costs are high enough, the optimal audience costs exactly offsets the leader's cost of fighting, and H gets everything (conditional on entry)

How it Works, II

When the social cost of war is low, the voter induces the leader to fight for sufficiently strong signals

The offer in this case is the lowest type that enters ($\underline{p}$) plus the cost:

$$x^* = \underline{p} + c_F$$

This depends on what happens at subsequent nodes only through the entry decision, the the optimal scheme induces the citizen's benchmark fighting rule: $r_S - r_W = (1 - \gamma)c_H$

How it Works, III

When the social cost of war is low, the voter induces the leader to fight for sufficiently strong signals

The offer in this case is the lowest type that enters ($\underline{p}$) plus the cost:

$$x^* = \underline{p} + c_F$$

The optimal scheme sets $r_Q > r_S$ to increase $\underline{p}$ and, thus, the offer

Outline

Conditional Full Extraction

Suppose H initiates if $p \geq \underline{p}$, and F always fights

- F's payoff $\mathcal{W}_F(\underline{p}) = \frac{1-\underline{p}}{2} - c_F$

Implies upper bound on possible payoff for H

- $\mathcal{I}(\underline{p}) = \min \left\langle 1, \frac{1+\underline{p}}{2} + c_F \right\rangle$

Our main result for this case constructs of a retention strategy that attains this bound

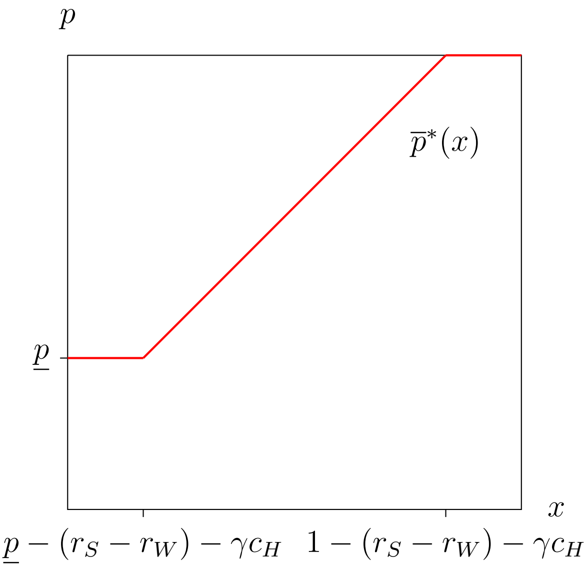
Extracting the Peace Dividend

We can restrict attention to *cutoff retention strategies:*

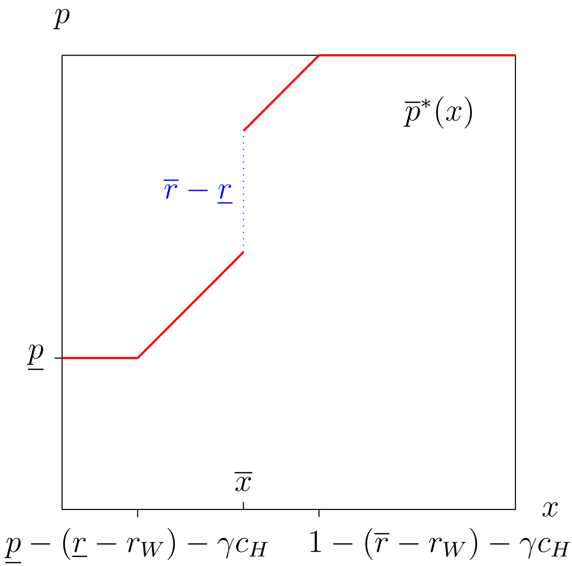
$$r_S(x) = \begin{cases} \overline{r} & \text{if } x \geq \overline{x} \\ \underline{r} & \text{if } x < \overline{x} \end{cases}$$

Creates a jump in the acceptance function, $\overline{p}^*$, at $\overline{x}$

Changes This...



...To This



p
$\overline{p}^*(x)$
$\overline{r} - \underline{r}$
$\underline{p}$
$\overline{x}$
x
$\underline{p} - (\underline{r} - r_W) - \gamma c_H$
$1 - (\overline{r} - r_W) - \gamma c_H$

Full Extraction: An Example

Let $\overline{x} = \mathcal{I}(\underline{p})$, and suppose $\underline{p} \leq \overline{x} + \gamma c_H \leq 1$

Set:

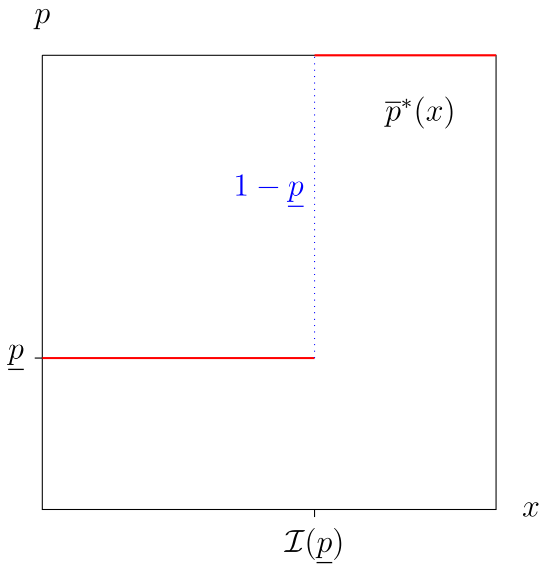
- $\overline{r} = 1 - \underline{p}$
- $\underline{r} = 0$
- $r_W = \overline{x} + \gamma c_H - \underline{p}$

Equilibrium acceptance strategy simplifies to:

$$\overline{p}^*(x) = \begin{cases} 1 & \text{if } x < \overline{x} \\ \underline{p} & \text{if } x \geq \overline{x} \end{cases}$$

F offers $\overline{x}$, and it is be accepted

The Example in a Picture



The Main Result

Say that (r_S, r_W) is fully extractive at $\underline{p}$ if it induces a continuation equilibrium in which Home gets payoff $\mathcal{I}(\underline{p})$

- Implies Foreign offers $\mathcal{I}(\underline{p})$, and all types accept

Proposition

Fix $\underline{p}$. There exists a pair (r_S, r_W) such that (r_S, r_W) is fully extractive at $\underline{p}$

How Far Can We Push This?

Suppose H initiates whenever $p \geq \underline{p}$, and attains $\mathcal{I}(\underline{p})$ in that event

- H's payoff is $\underline{p}y + (1 - \underline{p})\mathcal{I}(\underline{p})$

A strategy is maximally extractive if it attains the payoff

$$\mathcal{V} = \max_{\underline{p} \in [0,1]} \underline{p}y + (1 - \underline{p})\mathcal{I}(\underline{p})$$

Maximal Extraction

Proposition

Fix y and $c_F < \frac{1}{2}$. There exists a maximally extractive strategy.

- *If $y \leq c_F$, all types enter and the offer is $x^\dagger = \frac{1}{2} + c_F$*
- *If $c_F < y < 1 - c_F$, entry is limited and $\frac{1}{2} + c_F < x^\dagger < 1$*
- *If $1 - c_F \leq y$, then entry is limited and $x^\dagger = 1$*

Outline

Lessons for Audience Costs

Our model robustly recommends punishing settlement relative to keeping the status quo

But other audience cost statements are more fragile

- With secret settlements, reward to fighting higher than reward to settlement only if costs of war are big enough
- With public settlements, crucial that reward to fighting higher than reward to settlement, but only off the equilibrium path