PSC 102: Intro to International Politics

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Commitment Problems

Introduction

- Three goals for this lecture
  - Discuss general concept of commitment problems
  - Prove that expectation of a sufficiently large future shift in power can lead to a preventive war
  - Demonstrate empirically that real world patterns of conflict match our expectations

Commitment Problems

- No one can credibly commit to any future action that is clearly not in their interests
- True even if presently in their interest to promise they would

- Commitment problems $\rightarrow$ conflict when
  - Power is expected to shift in the future
  - Implementation of agreements cannot be verified

A Model of Crisis Bargaining When Power is Shifting

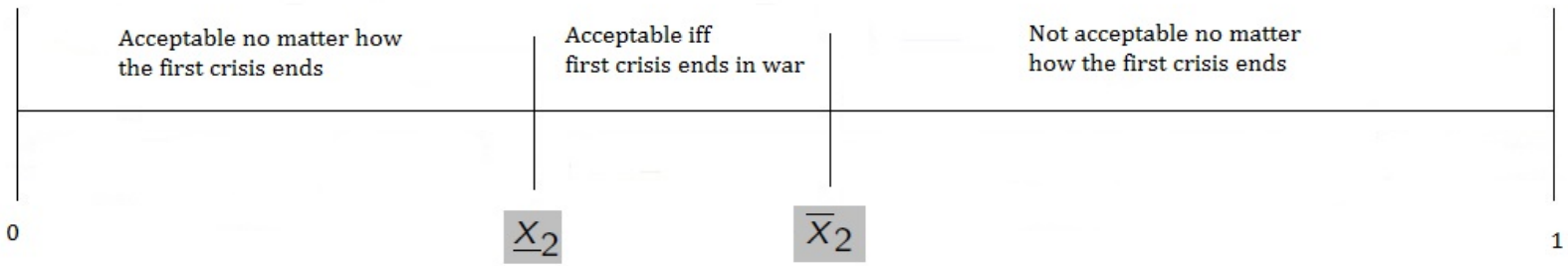
- Assume D is growing stronger relative to C
  - C either sets $x_1 \in [0, 1]$ or launches preventive war
  - If C issues an ultimatum, D can accept or reject
  - Either way, at some point in the future, second crisis emerges
  - C then sets $x_2 \in [0, 1]$, which D can accept or reject
  - Let w_1 denote C's share following war in first stage
  - Let w_2 denote C's share following war in second stage
  - $w_2 = \overline{w}_2$ if war in first stage and $w_2 = \underline{w}_2$ otherwise
  - Where $\underline{w}_2 < \overline{w}_2 < w_1$

Outcomes	u_C	u_D
peace_1, peace_2	$x_1 + x_2$	$1 - x_1 + 1 - x_2$
peace_1, war_2	$x_1 + \underline{w}_2 - c_C$	$1 - x_1 + 1 - \underline{w}_2 - c_D$
war_1, peace_2	$w_1 - c_C + x_2$	$1 - w_1 - c_D + 1 - x_2$
war_1, war_2	$w_1 - c_C + \overline{w}_2 - c_C$	$1 - w_1 - c_D + 1 - \overline{w}_2 - c_D$

Second Stage Analysis

- D's acceptance rule nearly identical to before
  - D accepts iff $u_D(\text{peace}_2) \geq u_D(\text{war}_2)$
  - If war_1, equivalent to $x_2 \leq \overline{x}_2$
  - If peace_1, equivalent to $x_2 \leq \underline{x}_2$
  - Where $\overline{x}_2 \equiv \overline{w}_2 + c_D$ and $\underline{x}_2 \equiv \underline{w}_2 + c_D$
- At second stage, C must prefer $x_2 = w_2 + c_D$
  - In second stage, war is strictly inefficient
  - Thus, peace is certain in second stage
  - Once a shift in power occurs, it has no impact

Visualizing the Acceptance Rule



D's First Stage Acceptance Rule

- D accepts iff $u_D(\text{peace}_1 | x_2 = \underline{x}_2) \geq u_D(\text{war}_1 | x_2 = \overline{x}_2)$
- $\Rightarrow 1 - x_1 + 1 - \underline{x}_2 \geq 1 - w_1 - c_D + 1 - \overline{x}_2$
- $\Rightarrow 1 - x_1 + 1 - \underline{w}_2 - c_D \geq 1 - w_1 - c_D + 1 - \overline{w}_2 - c_D$
- $\Rightarrow -x_1 - \underline{w}_2 \geq -w_1 - c_D - \overline{w}_2$
- $\Rightarrow w_1 + \overline{w}_2 - \underline{w}_2 + c_D \geq x_1$
- Or D accepts iff $x_1 \leq \hat{x}_1$, where $\hat{x}_1 \equiv w_1 + \overline{w}_2 - \underline{w}_2 + c_D$

C's First Stage Choice of x

- C sets $x_1 = \hat{x}_1$ iff $u_C(\text{peace}_1 | x_1 = \hat{x}_1) \geq u_C(\text{war}_1)$
- $\Rightarrow \hat{x}_1 + \underline{x}_2 \geq w_1 - c_C + \overline{x}_2$
- $\Rightarrow w_1 + \overline{w}_2 - \underline{w}_2 + c_D + \underline{w}_2 + c_D \geq w_1 - c_C + \overline{w}_2 + c_D$
- $\Rightarrow c_C + c_D \geq 0$
- So... no war in first stage either?

The Size and Speed of the Shift

- If $\hat{x}_1 > 1$, demanding $\hat{x}$ is demanding more than everything
- So C either sets $x_1 = 1$ or launches preventive war
- Prefers to set $x_1 = 1$ iff $u_C(\text{peace}_1 | x_1 = 1) \geq u_C(\text{war}_1)$
- $\Rightarrow 1 + \underline{x}_2 \geq w_1 - c_C + \overline{x}_2$
- $\Rightarrow 1 + \underline{w}_2 + c_D \geq w_1 - c_C + \overline{w}_2 + c_D$
- $\Rightarrow 1 + c_C \geq w_1 + \overline{w}_2 - \underline{w}_2$
- This need not be true
- War more likely as this condition becomes harder to meet
- War more likely then as $c_C \downarrow$, $w_1 \uparrow$, $\overline{w}_2 \uparrow$, and $\underline{w}_2 \downarrow$

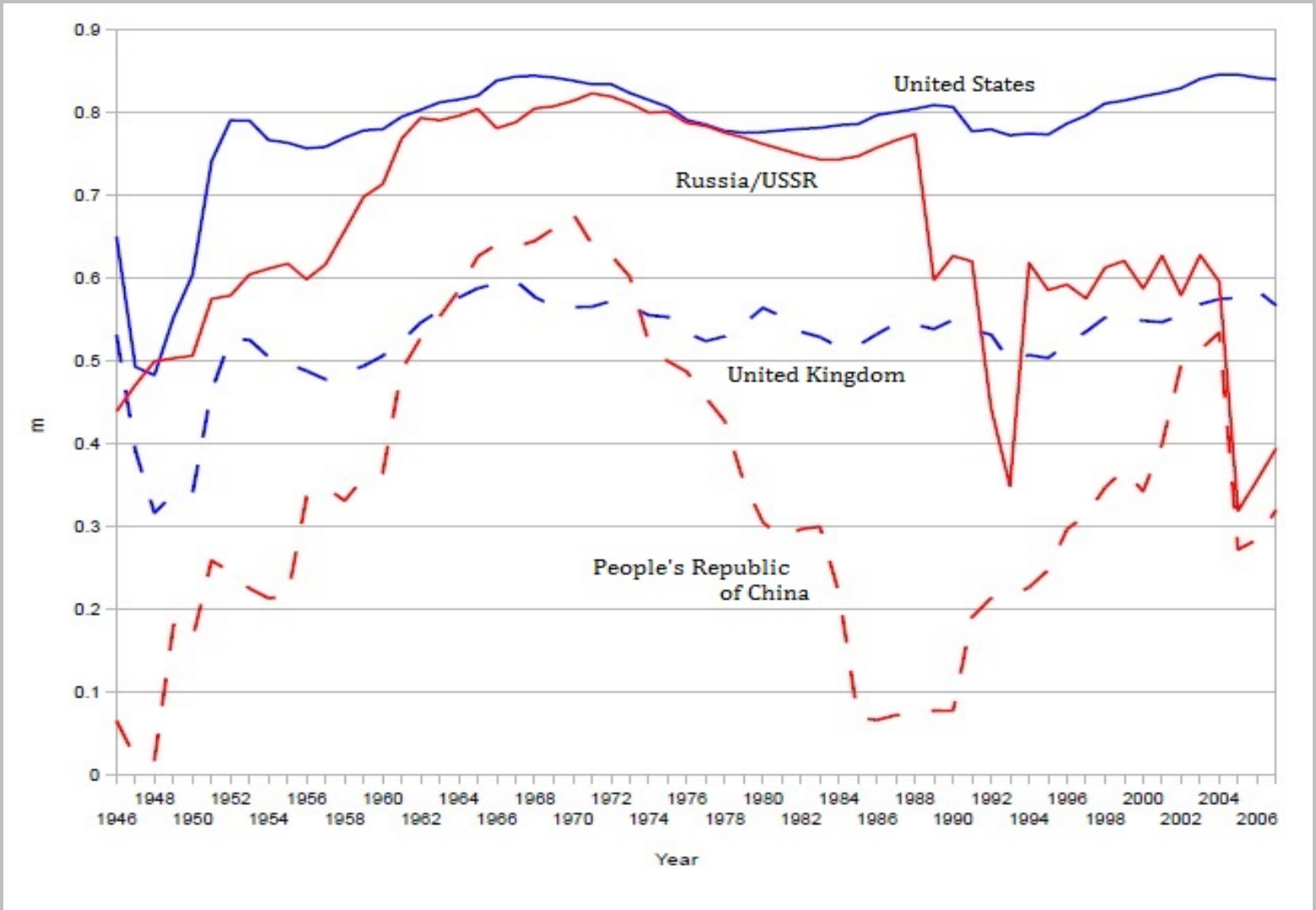
American Civil War

- Slavery as key issue of contention, but not cause
  - Three-fifths compromise
  - Territorial expansion and balance of power
  - Crittenden proposal and Corwin Amendment
- Lincoln's change of strategy
  - After attack on Fort Sumter, Lincoln's cabinet met
  - Decided against invasion, choosing blockade instead
  - Two months later, Lincoln decided to invade
  - Fear of British recognition

Data

- Observations: all dyad-years from 1821 to 1913, 1946 to 2007
- Dependent variable: outbreak of war w/ 2 states on opp sides
  - Taken from Correlates of War interstate war data
  - Excludes those who suffered <10% of fatalities on their side, unless that state fought alone for an extended period
- Independent variables: Milcap Share, $\overline{\text{Likely}}$, $\underline{\text{Likely}}$
  - Milcap Share $= \frac{m_H}{m_L + m_H}$ where m_H is larger m score
  - m scores depend on standardized personnel and spending
  - Likely shares are based on current Milcap share, trend, war

A Look at the *m* Scores



Results

	War
Milcap Share	$+$
Likely	$+^*$
Likely	$-^*$