Admin Stuff

• Newly registered? Write your first and last name on a note card
• Problem set is online
• Prerequisites?
Agenda

1. Experiment #1
2. Courtroom Analogy
3. Unitary Actor Assumption
4. War’s Inefficiency Puzzle
5. Robustness
6. Empirical Implications
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WHY DO CIVIL WARS OCCUR?
Answers
NO MORE TALKING
Take out a piece of paper.
1) Write your full name
2) Have you taken intro to IR? (Yes/No)
3) Guess 1/2 the Average

- Write a number 0-100
- Justin will find the average
- The person closest to 1/2 that average will earn $1
4) The Real Game

- You are a government
- I am a rebel group thinking of revolting
- I am demanding concessions from you, otherwise I’m starting a war
4) The Real Game

- There is $10 in the front of the room
- Your task: propose a division of that money
  - If I like it, we will implement that division
  - If not, I am going to fight you
The Rules

• My rebel group is very popular. If we fight, I will win 65% of the time. The winner takes all of the money.

• War is costly. We will have to raise armies, people will die, buildings will get destroyed, our economy burn in flames.
The Rules

• We will each “pay” $1 to represent this
• In making my decision whether to accept or reject, I only care about how much money I am receiving
  – I will accept if indifferent
4) The Real Game

• Make your offer to me on line #4
• It must be between $0 and $10 and in $.10 increments
PLEASE PASS THEM UP
Question

• Spend the next couple of minutes discussing how you arrived at your proposal
WHO WINS?
Was There War?

• If yes, a lucky person will receive the “costs” of war
• If not, we’ll be playing two more games next week
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Analogy

• A man falls in your store and sues you for negligence

• Your lawyer and his lawyer agree that:
  1. There is a 60% chance the lawsuit will be successful
  2. If he wins, you will have to pay him $40,000
  3. Court costs each of you $10,000 in lawyer fees
Possible Resolutions

1. You let the court decide the matter
2. One of you concedes immediately
3. You reach an out-of-court settlement
Possible Resolutions

1. You let the court decide the matter
2. One of you concedes immediately
3. You reach an out-of-court settlement
   – Which outcome should we expect?
1. Let the Court Decide

- 60% chance he wins, $10,000 cost
  \[ (.6)($40,000) + (.4)($0) - $10,000 = $14,000 \]

- 40% chance you win, $10,000 cost
  \[ (.6)(-$40,000) + (.4)($0) - $10,000 = -$34,000 \]
2. One of You Concedes

- If he concedes, he receives $0
- Worse than going to court and taking $14,000
- If you concede, you pay $40,000
- Worse than going to court and losing $34,000
2. One of You Concedes

- If he concedes, he receives $0
- Worse than going to court and taking $14,000
- If you concede, you pay $40,000
- Worse than going to court and losing $34,000
- Neither of you will concede
3. Out of Court Settlement

- Let $x$ be the settlement offer.
- He is better off accepting if $x > $14,000.
- You are better off accepting if $x < $34,000.
- $X$ is mutually preferable if $14,000 < x < $34,000.
Conclusion

- It would be weird if the issue went to court.
- Both of you would be better off agreeing to some amount between $14,000 and $34,000.
- Reality: ~95% of cases settled.
War Application

• Trials and war are very similar
  – Both are costly
  – Both have some chance of being won or lost
  – Both are negotiated over

• Should wars be settled as well?
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The Unitary Actor

• For now, assume that state groups are \textit{unitary actors}:
  – There are no cleavages between leaders and their constituencies
  – Leaders act to maximize group welfare
Why?

• It is the “hard case”
  – War is easy to explain if leaders are just power-hungry jerks
  – If wars occur despite perfect leaders, the prospects of peace are not good
Why?

- It tests a leader’s honesty
  - Leaders never say “I like randomly starting wars to distract you from the poor economy”
  - They do say “this war is in our best interest”
Why?

• We make simplifying assumptions about everything in our lives
  – Makes problems more tractable
  – Always better to start with simple problems and then increase complexity from there
When Are Assumptions Bad?

• “This model doesn’t account for x and is therefore bad”
  – Never, ever say this
  – Model still tells us what is true without x
  – Does x even matter for the result? If not, then why include x at all
Problem Set #1

- The model we are working with in this unit is very simple
- Problem Set #1 asks you to relax some of its assumptions
  - Goal: show its central conclusions remain true
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The Basic Model (Fearon 1995)

- Two actors: rebel and government
- Actors must consider a division of the stakes (tax revenue, political rights, autonomy)
- Actors could accept or fight war
The Basic Model (Fearon 1995)

- If war, then:
  - R wins with probability $p_R$
  - G wins with probability $p_G$
  - Assume no draws, so $p_R + p_G = 1$
  - Problem set will relax this assumption
The Basic Model (Fearon 1995)

• If war, then:
  • Actors pay costs $c_R > 0, c_G > 0$
  • Costs reflect how much you care about the issue (resolve) and physical costs of fighting
  • More resolve => costs are smaller
  • More destruction => costs are higher
The Basic Model (Fearon 1995)

- If war, then:
  - Winner takes everything, loser goes home with nothing
  - Total value of the good is worth 1 (100%)
- If peace, actors split the good as offered
Calculating Payoffs

- If R fights, it earns
  - \( p_R(1) + (1 - p_R)(0) - c_R \)
  - \( p_R - c_R \)
Calculating Payoffs

- If g fights, it earns
  - $p_G(1) + (1 - p_G)(0) - c_G$
  - $p_G - c_G$
Calculating Payoffs

• Recall $p_R + p_G = 1$
  • $p_G = 1 - p_R$

• So G’s war payoff can be written as
  • $p_G - c_G$
  • $1 - p_R - c_G$
Deciding to Fight

• Let $x$ be R’s peaceful share of the stakes
• To be satisfied, R must receive at least its war payoff
  • $x \geq p_R - c_R$
Deciding to Fight

- G receives the remainder of the peaceful deal
  - So G receives $1 - x$
- To be satisfied, G must receive at least its war payoff
  - $1 - x \geq 1 - p_R - c_G$
  - $x \leq p_R + c_G$
Peace Constraints

For peace to work, the following must hold:

- \( x \geq p_R - c_R \)
- \( x \leq p_R + c_G \)
- So \( p_R - c_R \leq x \leq p_R + c_G \) must hold
Is Peace Possible?

• $x$ is some division, so $0 \leq x \leq 1$
  • This is the same as saying $0\% \leq x \leq 100\%$
Is Peace Possible?

• So if $p_R - c_R \leq x \leq p_R + c_G$ to be possible, it must be that $p_R - c_R \leq p_R + c_G$
Is Peace Possible?

- So if $p_R - c_R \leq x \leq p_R + c_G$ to be possible, it must be that $p_R - c_R \leq p_R + c_G$
- $c_R + c_G \geq 0$
Is Peace Possible?

• So if \( p_R - c_R \leq x \leq p_R + c_G \) to be possible, it must be that \( p_R - c_R \leq p_R + c_G \)
  • \( c_R + c_G \geq 0 \)
  • Recall that \( c_R > 0 \) and \( c_G > 0 \)
  • This must hold, so settlements always possible
Two actors: R and G

Imagine they are bargaining over how large the rebel group’s autonomous region should be.
R's Base

G's Base
Visual Version

- Two actors: R and G
- Value of the bargaining good is worth 1
Visual Version

- Two actors: R and G
- Value of the bargaining good is worth 1
- \( p_R = \text{probability R wins} = \text{R’s expected share from fighting} \)
- \( 1 - p_R = \text{G’s expected share from fighting} \)
Visual Version

- War costs $c_R > 0$ and $c_G > 0$
R's Expected Share

$\mathcal{P}_R - C_R$

R's War Cost
R's Net Payoff

R's War Cost

\[ p_R - c_R \]

\[ p_R \]
What happens if $X$ is here?

R's Net Payoff

R's War Cost
R's net payoff

R's war cost

What happens if X is here?
R'S NET PAYOFF

WHAT HAPPENS IF X IS HERE?

P_R - C_R

R'S WAR COST

X
R's net payoff:

- $P_R - C_R$

Settlements R prefers:

- $P_R$

R's war cost:

$0 \leq C_R \leq P_R \leq 1$
G's Expected Share

G's War Cost

$P_R$

$P_R + C_G$
P_\text{R}'s \text{NET PAYOFF} = P_\text{R} + C_G

\text{G'S WAR COST}

\text{G'S NET PAYOFF}
WHAT HAPPENS IF $X$ IS HERE?

$G$'S NET PAYOFF

$P_R + C_G$

$G$'S WAR COST

$0$ $P_R$ $P_R + C_G$ $X$ $1$
WHAT HAPPENS IF $X$ IS HERE?

$P_R$  $P_R + C_G$

$G$'S WAR COST  $G$'S NET PAYOFF
WHAT HAPPENS IF $X$ IS HERE?

$G$'S NET PAYOFF

$0 \quad D_R \quad X \quad D_R + C_G \quad 1$

$G$'S WAR COST
G's Net Payoff

Settlements G Prefers

G's Net Payoff

0

\( P_R \)

G's War Cost

\( P_R + C_G \)

1
SETTLEMENTS G PREFERS

0 \quad P_R - C_R \quad P_R \quad P_R + C_G \quad 1

SETTLEMENTS R PREFERS
R's Net Payoff

0

\( P_R - C_R \)

R's War Cost

\( P_R \)

G's War Cost

\( P_R + C_G \)

1

G's Net Payoff
R’S NET PAYOFF

P_R - C_R

R’S WAR COST

P_R

BARGAINING RANGE

P_R

G’S WAR COST

P_R + C_G

G’S NET PAYOFF

0

1
Bargaining Range

• The **bargaining range** is the set of settlements mutually preferable to war
• Costs of war ensure the existence of a bargaining range
• Size equal to the sum of costs
War’s Inefficiency Puzzle

• Research question that asks why actors choose to fight wars when there are more efficient solutions (i.e., bargaining)
• Next few lectures will provide some answers
Interpretation

• Does this mean war is irrational?
YOU KNOW WHAT REALLY GRINDS MY GEARS?

WHEN PEOPLE SAY FEARON 1995 PROVES WAR IS IRRATIONAL.
NEVER SAY FEARON 1995 PROVED WAR IS IRRATIONAL

PEOPLE IN-THE-KNOW WILL IMMEDIATELY LOSE ALL RESPECT FOR YOU
Interpretation

- Does this mean war is irrational?
  - Not even remotely
  - It just says that war is a puzzle
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Too Simple?

• Is the model too simple to tell us anything about war?
  – No—results are robust to making more realistic assumptions about war
Too Simple?

• Problem Set #1 asks you to relax assumptions about draws, uncertainty about the probability of winning, and personal benefits.
• Your task is to show that bargained settlements still exist under these conditions.
Example/Practice

• Before: costs were constant regardless of victory or defeat

• More realistic: costs vary if you win or lose
  – Leaders may be killed if they lose the war
New Model

• R wins with probability $p_R$
• G wins with probability $1 - p_R$
• Winner takes everything
The Twist

- R pays $c_R$ if it wins and $c_R'$ if it loses
  - $c_R' > c_R > 0$
- G pays $c_G$ if it wins and $c_G'$ if it loses
  - $c_G' > c_G > 0$
- So costs are cheaper if you win
Question

• Will this change the result?
  – That is, will this new interaction still have settlements that are mutually preferable to war?
Step 1: R’s Expected Payoff

- \( p_R(1 - c_R) + (1 - p_R)(0 - c'_R) \)
- \( p_R - p_R c_R - (1 - p_R)c'_R \)
Step 2: G’s Expected Payoff

- $p_R(0 - c_G') + (1 - p_R)(1 - c_G)$
- $1 - p_R - p_Rc_G' - (1 - p_R)c_G$
Step 3: R’s Peace Constraint

- R receives $x$ from a settlement.
- $x \geq p_R - p_R c_R - (1 - p_R)c_R'$
Step 4: G’s Peace Constraint

• \( G \) receives \( 1 - x \) from a settlement.
• \[ 1 - x \geq 1 - p_R - p_R c'_G - (1 - p_R)c_G \]
• \[ x \leq p_R + p_R c'_G + (1 - p_R)c_G \]
Step 5: Mutually Acceptable Offers

- $p_R - p_R c_R - (1 - p_R)c_R' \leq p_R + p_R c_G' + (1 - p_R)c_G$
Step 5: Mutually Acceptable Offers

- \( p_R - p_R c_R - (1 - p_R) c'_R \leq p_R + p_R c'_G + (1 - p_R) c_G \)
- \( -p_R c_R - (1 - p_R) c'_R \leq p_R c'_G + (1 - p_R) c_G \)
Step 5: Mutually Acceptable Offers

- \[ p_R - p_R c_R - (1 - p_R)c_R' \leq p_R + p_R c_G' + (1 - p_R)c_G \]
- \[ -p_R c_R - (1 - p_R)c_R' \leq p_R c_G' + (1 - p_R)c_G \]
- \[ p_R c_G' + (1 - p_R)c_G + p_R c_R + (1 - p_R)c_R' \geq 0 \]
Step 5: Mutually Acceptable Offers

- \( p_R - p_R c_R - (1 - p_R) c_R' \leq p_R + p_R c_G' + (1 - p_R) c_G \)
- \( -p_R c_R - (1 - p_R) c_R' \leq p_R c_G' + (1 - p_R) c_G \)
- \( p_R c_G' + (1 - p_R) c_G + p_R c_R + (1 - p_R) c_R' \geq 0 \)
- Everything on the left is greater than 0, so this holds. Settlements exist.
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Frequency of War

• Should war be common or uncommon?
Frequency of War

• Should war be common or uncommon?
  – Uncommon: costs encourage actors to bargain
  – Most possible combatants aren’t fighting most other combatants most of the time
  – War is the exception, not the rule
Policy Differences

• Common explanation for war: actor x and actor y disagree over policy z
  – Doesn’t explain why the actors couldn’t have bargained instead
  – Need issue + bargaining problem
Policy Differences

- Policy differences are a very common explanation for war
  - Be careful not to fall for the trap
Stable Agreements

• What makes a distribution of benefits stable?
  – Hint: the answer should incorporate the probability of victory
Stable Agreements

• Agreements are stable when they (roughly) match the distribution of power
  – Costs of war give some wiggle room
Stable Agreements

• Fairness? Justice? Democracy?
  – Nice, but concepts of “fairness” quickly disappear when guns come out
  – If you want these things, you need to be smart about the institutions you create
Syrian Civil War (2011-)

- What caused the Syrian Civil War?
Common Answers

• Ethnic fractionalization
Sunni: 60%
Alawite: 12%
Kurd: 9%
Greek Orthodox Christian: 9%
Armenian Christian: 4%
Duze Ismaeli: 3%
Others: 1%
White 63%
African American 13%
White Hispanic/Latino 15%
Mixed/Others 4%
Asian American 4%
Native American 1%
Common Answers

- Ethnic fractionalization
- Economic inequality
Gini Coefficient

- Measurement of income inequality
  - 0 perfect parity
  - 1 complete inequality
Gini Coefficient

• Measurement of income inequality
  – 0 perfect parity
  – 1 complete inequality

• Syria (2004, world bank): .358
Gini Coefficient

• Measurement of income inequality
  – 0 perfect parity
  – 1 complete inequality

• Syria (2004, world bank): .358
• United states (2007, world bank): .45
Common Answers

• Ethnic fractionalization
• Economic inequality
• Arab Spring
These Aren’t Satisfying

• Fractionalization? Why not just increase social/economic freedoms and avoid war?
• Inequality? Why not give people money?
• Arab Spring? Why not give people money?
Qatar’s Solution

• Increase pay!
  – Civilians: 60% increase
  – Unranked military: 50% increase
  – Military staff/officers: 120% increase
  – Pensions to match!
TL;DR

- Standard explanations for Syrian Civil War are unsatisfying
- Why didn’t Assad strike a bargain with the rebels?
Case Study: Iraq

• Saddam era: minority rule
  – 63% Shi’a Muslim
  – 34% Sunni Muslim
  – 3% other
Case Study: Iraq

• Saddam Hussein was Sunni
  – Sunnis lived the good life, filling most of the gov’t positions
  – Shi’a, others repressed
Case Study: Iraq

- Horribly unequal, but made sense
  - Saddam’s regime held virtually all of the power
  - Shi’a brutally repressed
Ba’ath Party

- Saddam institutionalized the distribution of benefits with the Ba’ath Party
- Created a one-party system within the country, centralizing power in Saddam’s hands
Ba’ath Party

• If you wanted to be someone of consequence, you had to be a member
  – Civil servants, government positions, military, educators, doctors/nurses, national Olympic committee
  – College students often included, too
Ba’ath Party

• If we were in 2000 Iraq, I would have to have been a Ba’ath Party member
  – I might have joined just because I am good at this, not because I wanted to be BFFs with Saddam
Iraq War

• March 2003: United States invades, wins easily, topples Saddam’s regime.
  – Many soldiers ignore orders and go home
• Why not celebrate on an aircraft carrier?
Recap

• With only a little hyperbole...
  – Everyone who was well educated
  – Everyone who knew how to run the government
  – Everyone with a gun
• ...was a member of the Ba’ath Party.
GUESS WHAT HAPPENED NEXT...
De-Ba’athification

- All members of the Ba’ath Party were fired and banned from being rehired
- Washington planned to replace them with exiled Iraqis and internal dissidents
WHY THE [HECK]

WOULDN'T YOU FIRE EVERYONE WITH A GUN?
Role Playing

- Imagine you were a professor with a university owned computer
- You learn you are fired and will never, ever be able to get your job back
- What are you going to do?
Role Playing

• Imagine you were a central banker with access to cash reserves
• You learn you are fired and will never, ever be able to get your job back
• What are you going to do?
Role Playing

- Imagine you were a soldier with guns and tactical knowledge
- You learn you are fired and will never, ever be able to get your job back
- What are you going to do?
Making Matters Worse

- Whom does democracy favor?
- Whom does it not favor?
Making Matters Worse

• Democracies favor majorities
  – Iraq: 63% Shi’a Muslim/34% Sunni Muslim
Making Matters Worse

- Democracies favor majorities
  - Iraq: 63% Shi’a Muslim/34% Sunni Muslim
  - Shi’a: had a lot of political power
  - Sunnis: had a lot of guns
Making Matters Worser

- Iraq was in the middle of rebuilding
- The most competent people around to do that were unemployed
- Inefficiency abound
Result

• Insurgency breaks out
• De-Ba’athification policy eventually revised, but a little late in the game
De-Ba’athification ran contrary to everything we know about bargaining theory

United States paid the price for it for the next 10+ years
Bush administration’s fault?

• Three perspectives
  1. Administration completely failed to anticipate the consequences of de-Ba’athification
  2. Administration failed to plan for post-war Iraq because focus was on winning the war
  3. Bush administration gambled that U.S. forces could quell any uprising