

SAND2016-5413C

Economic Interdependence and Conflict

Tom Hickey
Summer 2015

The Question

What is the deterrent effect of interdependent economies on countries' willingness to use force?

Gaps in Existing Literature

“Scholars have yet to resolve in what form and in what sense interdependence is expected to influence conflict of which type and at what level of intensity”

Edward D. Mansfield and Brian D. Pollins

Findings

- Effects of economic interdependence (EI) differ across intensities of conflict
- Continual and continuous conflicts bias results
- Effects of EI differ across time (non-monotonic)
- Effects of EI differ for dyads with a nuclear-power

The Methods

Needs

Dependencies

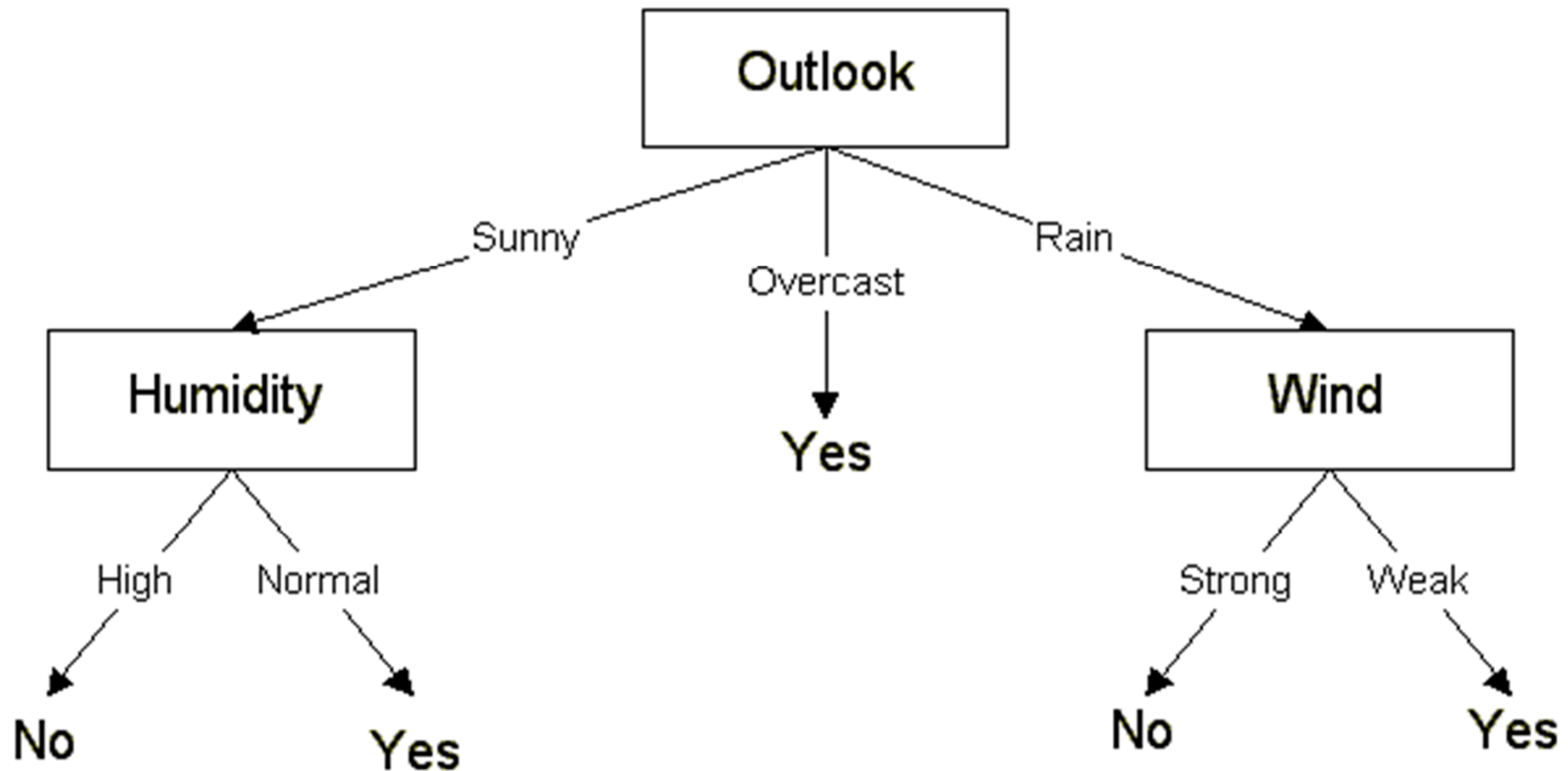
Predictive Power

Tools

Decision Trees

Random Forests

Decision Trees and Random Forests



The Dependent Variables

- Conflict: displays of force, threat of force, and use of force with fewer than 1,000 fatalities
- Deadly Conflict: subset of “Conflict” but only cases with fatalities
- War: officially declared, or any use of force with 1,000 fatalities or more

The Explanatory Variables

120 variables thinned to 16

- Democracy
- Trade Dependence
- Alliance
- Contiguity
- Major Powers
- Military Capability
- GDP
- Openness
- Policy Affinity
- Capital Openness
- Nuclear Weapons
- GDP * Contiguity

Takeaway #1: Important factors differ across types of conflict.

	Conflict		Deadly Conflict		War
1	GDP x Contiguity	1	GDP x Contiguity	1	Military Capability
2	Contiguity	2	Contiguity	2	Policy Affinity
3	Military Capability	3	Military Capability	3	GDP
4	Major Power	4	Major Power	4	Contiguity
5	Policy Affinity	5	Democracy	5	Democracy
13	Trade Dependence	15	Trade Dependence	11	Trade Dependence

Data for 1950-1992

Takeaway #2: Ongoing and recurring conflicts bias results.

					No War	War
Capability > 80%	GDP < 15%	Affinity = minimum	Autocracy	Openness Low	72%	28%!!
“	“	“	“	Open Very Low	100%	0%

					No War	War
Capability > 80%	GDP < 15%	Affinity = minimum	Autocracy	Openness Low	127	51
“	“	“	“	Open Very Low	145	0

Korean War! (Each dyad-year coded independently)

Takeaway #3: Important factors differ across time – and non-monotonically!

1950-1959

	Conflict			Deadly Conflict			War	
1	Openness		1	Military Capability		1	Military Capability	
2	Military Capability		2	Openness		2	Affinity	
3	GDP		3	GDP		3	GDP	

1965-1975

	Conflict			Deadly Conflict			War	
1	Military Capability		1	Military Capability		1	Military Capability	
2	Affinity		2	Capital Openness		2	GDP	
3	Major Power		3	Major Power	---	3	Affinity	---
4	Capital Openness	+ 10	2	Capital Openness	+12	4	Capital Openness	+10
6	Alliance	+ 4	3	Major Power	+7	5	Openness	---
9	Openness	- 8	9	Openness	-7	7	Trade	+5

Takeaway #4: Important factors differ for nuclear-armed dyads

Non-nuclear

Armed

	Conflict		Deadly Conflict		War
1	GDP x Contiguity	1	GDP x Contiguity	1	Military Capability
2	Contiguity	2	Contiguity	2	Policy Affinity
3	Military Capability	3	Military Capability	3	GDP
4	Major Power	4	Major Power	4	Contiguity
5	Policy Affinity	5	Democracy	5	Democracy

At Least One

Nuclear Armed

	Conflict			Deadly Conflict			War	
1	GDP x Contiguity		1	GDP x Contiguity		1	Democracy	
2	Military Capability		2	Democracy		2	GDP * Contiguity	▲
3	Contiguity		3	Contiguity		3	Contiguity	
4	Democracy	▲	4	Military Capability		4	Military Capability	
5	Capital Openness	▲	5	Openness	▲	5	Openness	▲

Data for 1950-1992

Takeaways

1. Are we talking about conflict or war?
2. Is that a rule or is that the Korean War?
3. Times change
4. The rules are different when nukes are involved