Unexpected Contributions in Wartime Coalitions

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Overview

A few empirical areas to look out for:

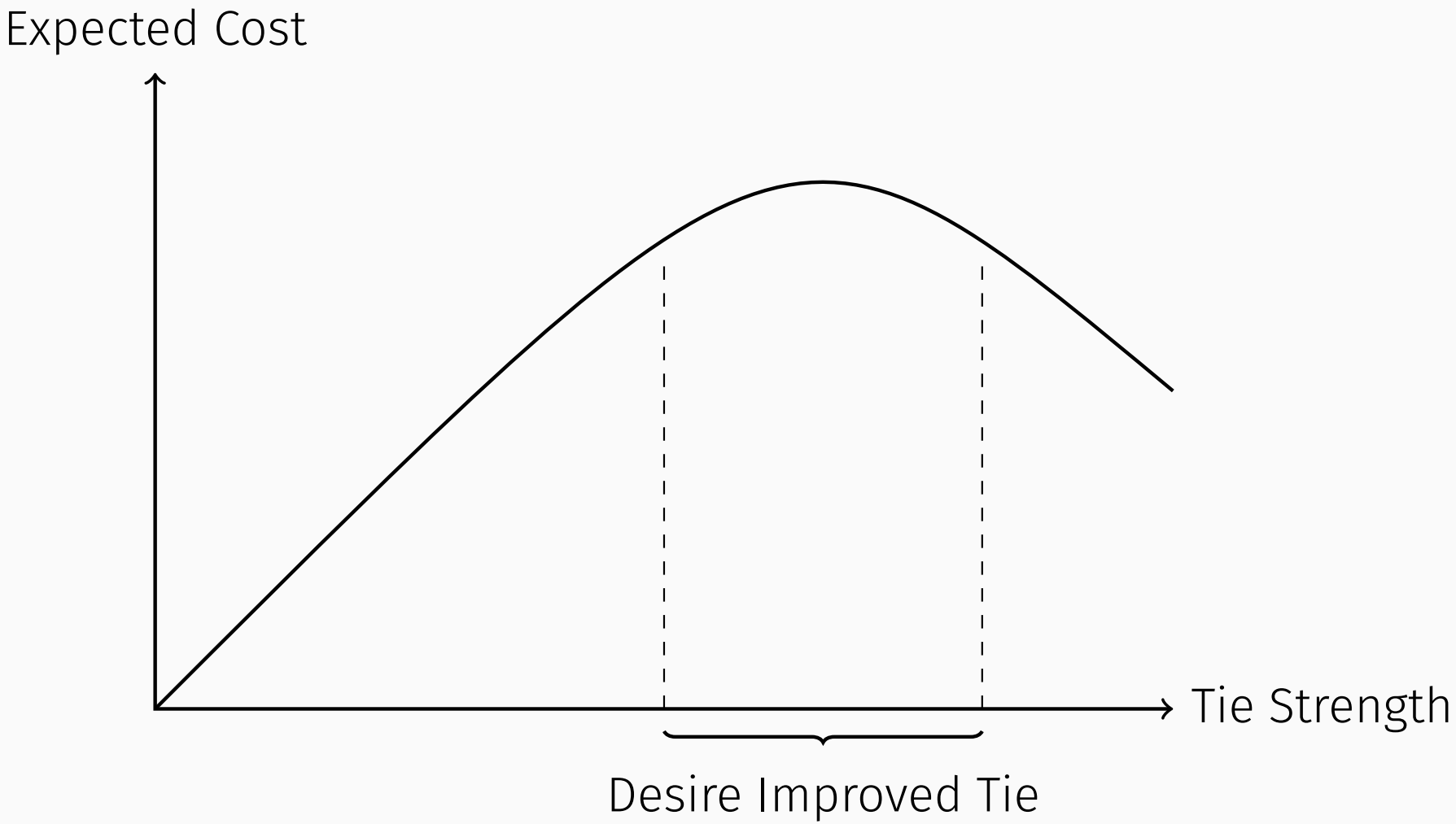
- Does structural equivalence make sense for tie strength?
- How to deal with the Canada outlier?
- Is use of GAMs convincing?

Puzzle

- Why do some countries punch above their weight when contributing to coalition conflicts?

Year	Country	Percent
2001	Denmark	0.66
2001	New Zealand	0.65
2001	United States	0.53
2001	Romania	0.53
2001	Netherlands	0.44
2001	Germany	0.44
2001	Norway	0.34
2001	Australia	0.29
2001	Turkey	0.27
2001	Spain	0.20

Theory



Point

Outsized contributions signal a desire for a stronger relationship *and* reliability as a future partner.

- Costly transmission of information
- Anticipate future payoffs because of reputation and reciprocity

Goal is to convince you that...

Theories of alliance contributions incorrectly focus on:

- *Current* alliance tie, not *desired*
- *Value* of contribution, not *cost*

We can explain contributions to the Afghanistan War (ISAF), particularly over-contributions, better through desired ties better than existing theories.

Problems with conventional explanations

Largest share of forces are contributed by:

1. Collective action (Olsen and Zeckhauser 1966) – powerful states
2. Balance of threat (Walt 19870) – most threatened states
3. Alliance politics (Snyder 1984) – closest friends
4. Domestic politics (Ashraf 2011) – consistency with political ideology

Problems with conventional explanations

Largest share of forces are contributed by:

1. Collective action (Olsen and Zeckhauser 1966) – powerful states
    - Many expected free-riders don't
2. Balance of threat (Walt 19870) – most threatened states
    - Non-threatened states make large contributions
3. Alliance politics (Snyder 1984) – closest friends
    - Closest friends don't over-exert
4. Domestic politics (Ashraf 2011) – consistency with political ideology
    - Extent of contribution unexplained

We instead look at:

- Which states carry the highest burden in US-led operations
- Which states most desired improved ties with the US

Troop Contributions to War in Afghanistan (2001)

Total Troops Contributed

Percent Troops Contributed

Darker countries indicate higher values.
Both maps scaled relative to average contribution level to make values comparable.

Theory

States wanting a closer relationship with the United States will make higher cost contributions to US-led war efforts

- **DV: Higher cost contribution** – larger strain on armed forces
- **IV: Desire for closer relationship** – “acquaintances” wanting to become “best friends”

Theory

States wanting a closer relationship with the United States will make higher cost contributions to US-led war efforts

They are a costly signal of desiring a stronger relationship:

- Benefit to US without immediate benefit to over contributor
- Cost to over-contributor (resource strain, risk of casualties/collateral damage)

Which creates:

- Reputation of reliability
- Expectation of reciprocity

Data

Unit of Analysis:

Country-year (2001-2005)

Troop contributions:

- Binary (commit or not)
- Ratio of available forces

Empirical Data – 2001

Top 10 Contributors

Country	Percent
Denmark	0.66
New Zealand	0.65
United States	0.53
Romania	0.53
Netherlands	0.44
Germany	0.44
Norway	0.34
Australia	0.29
Turkey	0.27
Spain	0.20

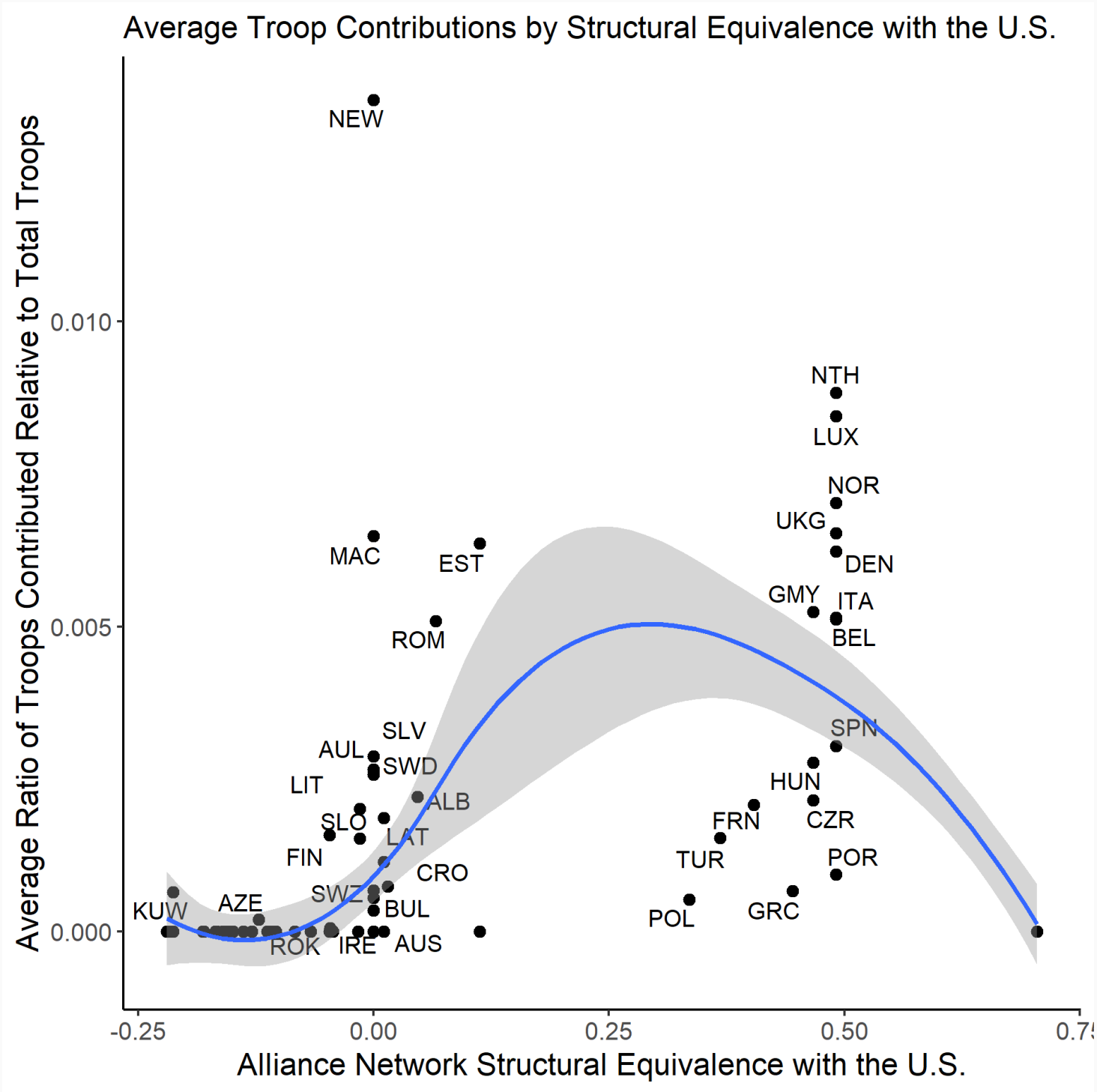
Bottom 10 Contributors

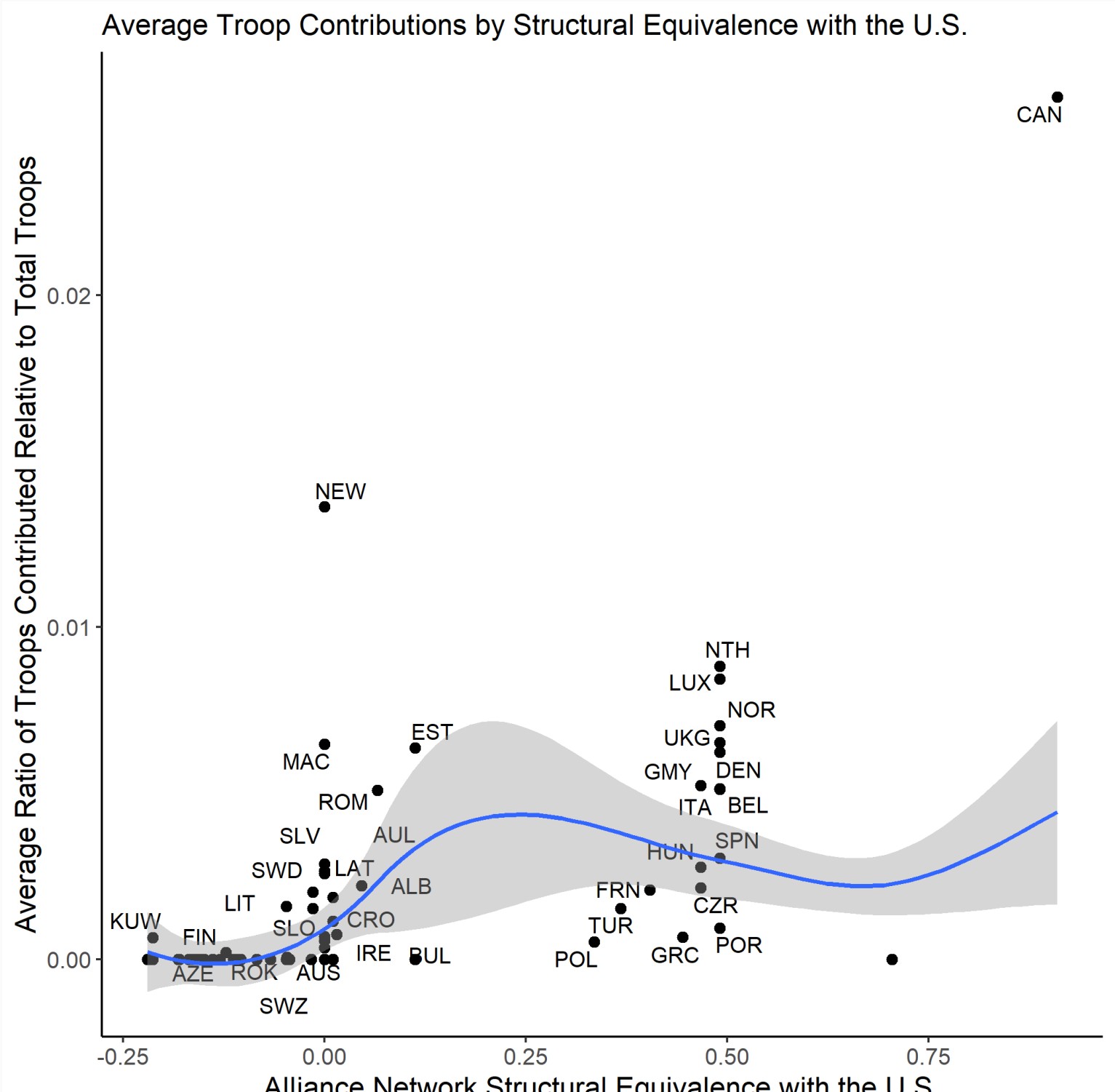
Country	Percent
Finland	0.14
Austria	0.13
Sweden	0.12
Albania	0.11
Greece	0.07
Poland	0.05
Belgium	0.05
Bulgaria	0.04
Portugal	0.02
Czech Republic	0.01

Model

- Who contributes any troops?
- Among contributors, what percent of available troops does each country provide?

$$Contribution \sim f(tie\_strength + ideological\_distance + physical\_distance + democracy)$$


Average Troop Contributions by Structural Equivalence with the U.S.
Average Ratio of Troops Contributed Relative to Total Troops
0.010
0.005
0.000
NEW
MAC
EST
ROM
NTH
LUX
NOR
UKG
DEN
GMY
ITA
BEL
SPN
HUN
CZR
FRN
POR
TUR
GRC
POL
SLV
AUL
SWD
LIT
ALB
SLO
LAT
FIN
CRO
SWZ
BUL
KUW
AZE
ROK
IRE
AUS
-0.25
0.00
0.25
0.50
Alliance Network Structural Equivalence with the U.S.


Average Troop Contributions by Structural Equivalence with the U.S.
Average Ratio of Troops Contributed Relative to Total Troops
0.02
0.01
0.00
-0.25
0.00
0.25
0.50
0.75
Alliance Network Structural Equivalence with the U.S.
CAN
NEW
NTH
LUX
NOR
EST
UKG
MAC
GMY
DEN
ROM
ITA
BEL
SLV
AUL
HUN
SPN
SWD
LAT
ALB
FRN
LIT
CZR
KUW
SLO
CRO
TUR
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IRE
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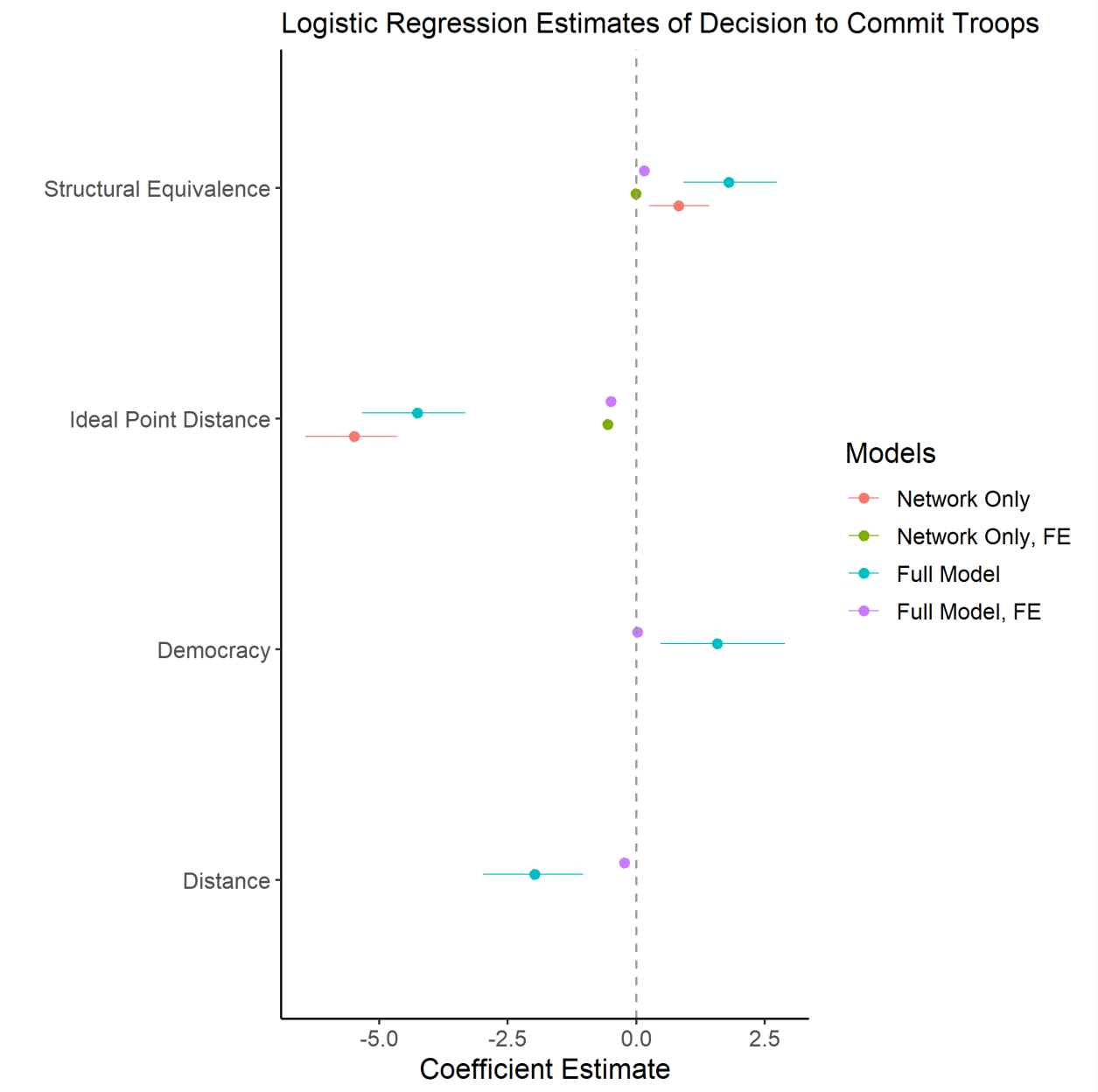
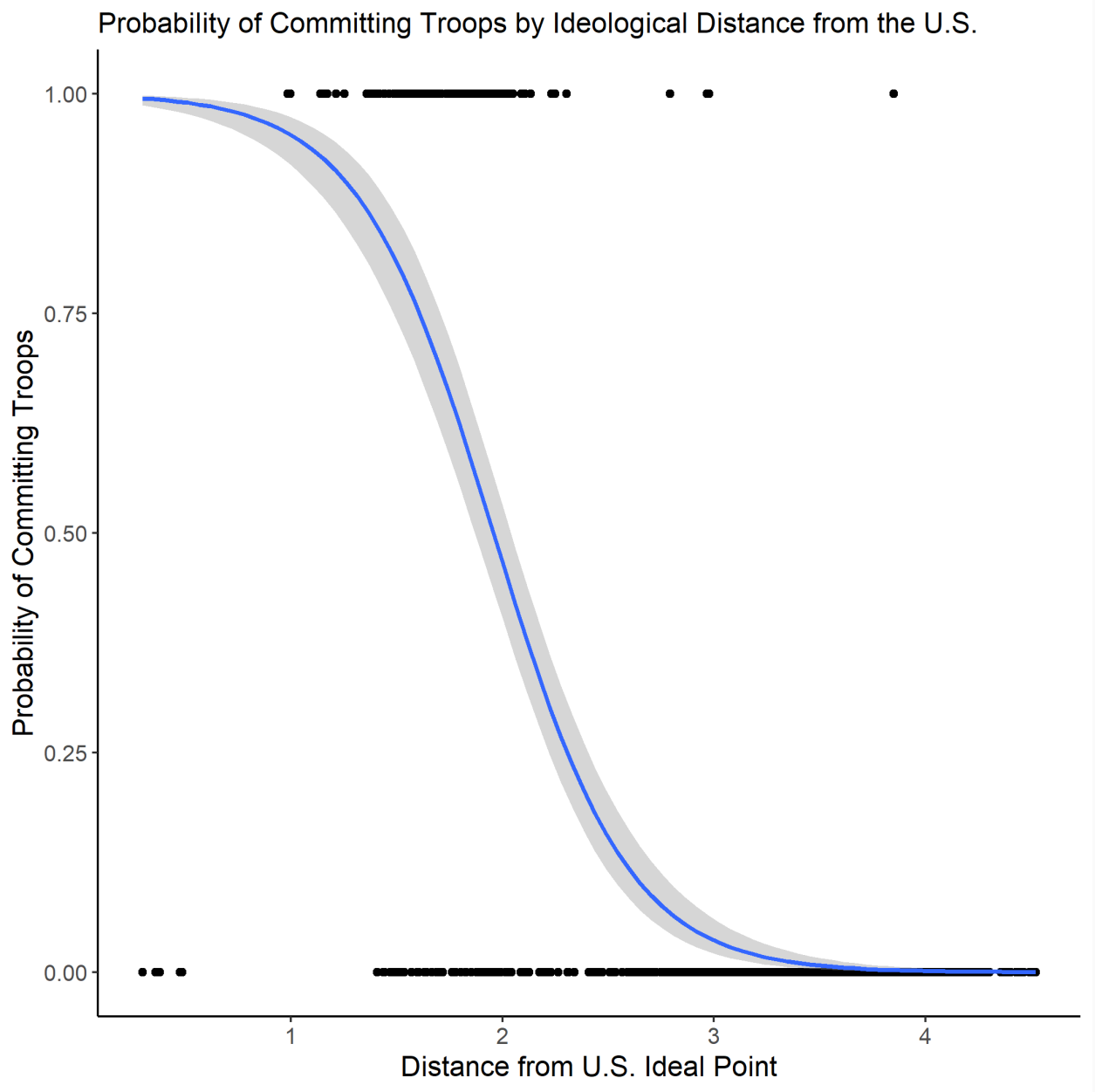
POL
GRC
POR
AZE
ROK
AUS
SWZ

Who Contributes?



Who Contributes?

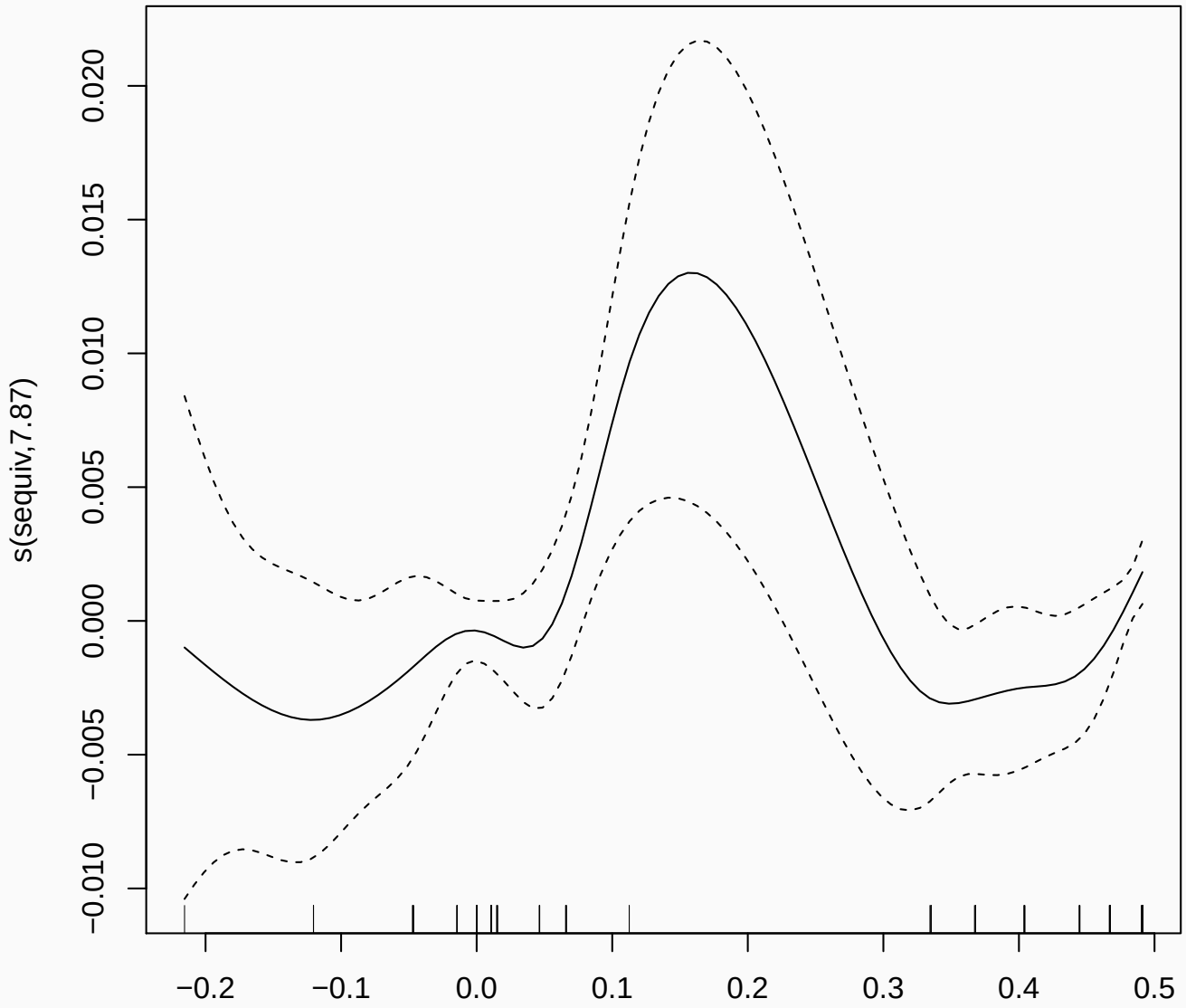


Number of Contributions

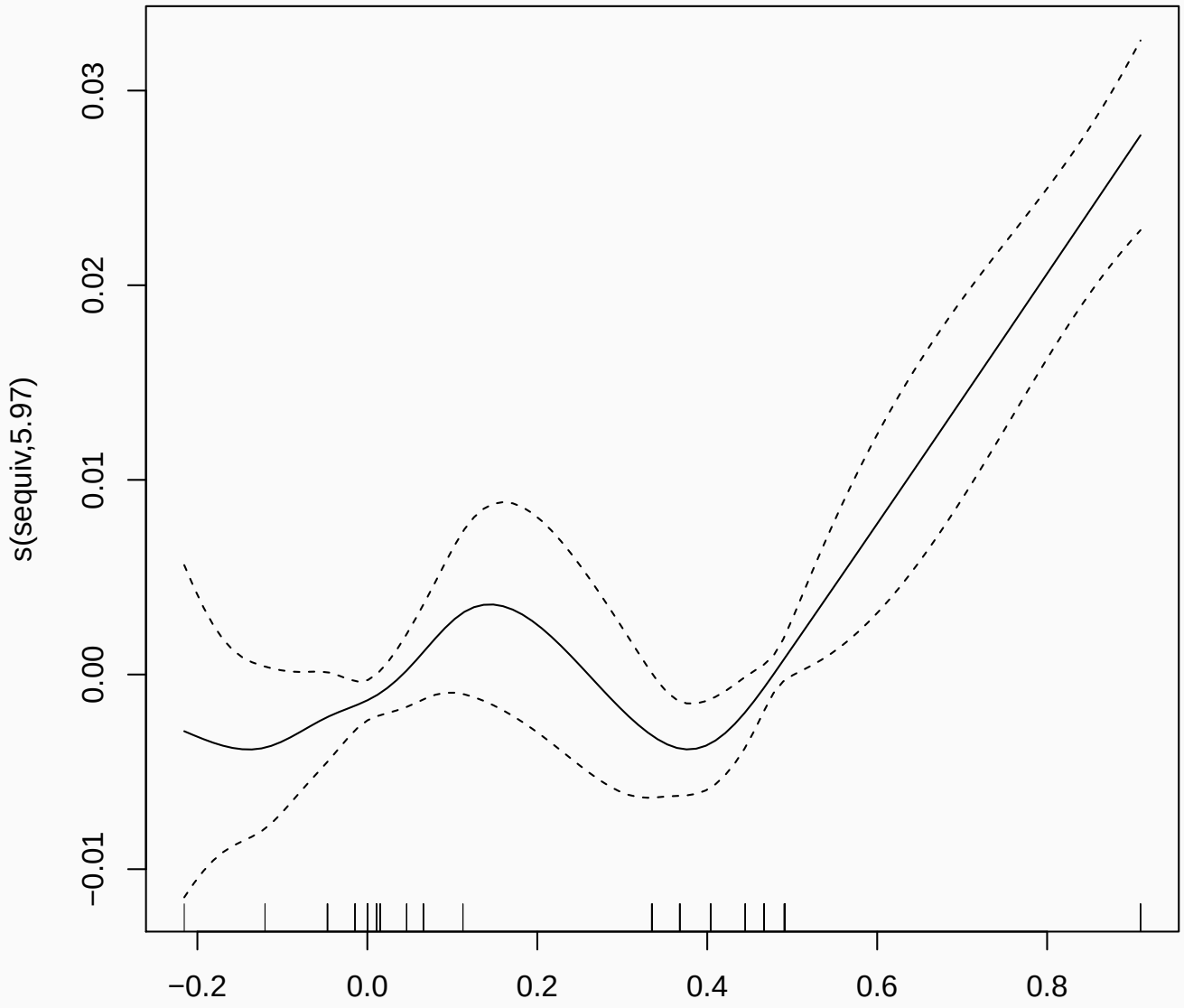
- This is a bit tricky, because we are testing a non-linear hypothesis.
- Polynomial terms force a certain shape. We instead estimate a generalized additive model (GAM):

$$y_i = \alpha + f_1(x_1) + f_2(x_2) + ... + f_n(x_n) + \varepsilon_i$$

GAM – No Canada



GAM – With Canada



Recognized by Over-Contributor

"...good opportunity for the New Zealand Defense Force to test its interoperability with contributing NATO nations. This deployment is an example of New Zealand's *commitment to playing our part in supporting NATO in areas of common interest*." - Jonathan Coleman, New Zealand Defense Minister (2014)

Recognized by the US

"In the Libya operation, Norway and Denmark, have provided 12 percent of allied strike aircraft yet have struck about one third of the targets...These countries have, *with their constrained resources*, found ways to do the training, buy the equipment, and field the platforms necessary to make a *credible military contribution*." - US Defense Secretary Robert Gates (2011)

Conclusion and Next Steps

- Most reliable allies are those with potential to gain stronger ties, not those already closely aligned.
- Once final model is settled upon for Afghanistan, estimate the exact same model with Iraq data to see if the captured trend holds.
- Concerns:
  - Structural equivalence – Netherlands and Luxembourg have the same score as the UK.
  - Canada as an outlier – changing measure of tightness won't solve this. Just treat as unique and explain?
  - GAM vs Polynomial
  - Just control for casualties?