

KEEPING FRIENDS CLOSE, BUT ENEMIES CLOSER: FOREIGN AID RESPONSES TO NATURAL DISASTERS

Cindy Cheng & Shahryar Minhas
April 7, 2018

puzzle

How do we explain foreign aid disbursements in the wake of natural disasters with the existing literature which finds that aid is given for strategic purposes?

motivating example



argument

Natural disasters can drastically shift the social context of a dyadic relationship toward emphasizing its altruistic or humanitarian dimensions. This shift is greater depending on the severity of the natural disaster and the extent to which the baseline dyadic relationship can be characterized as contentious.

causal logic

1. Natural disasters shift the social norms of interstate relations

causal logic

1. Natural disasters shift the social norms of interstate relations
2. Countries take advantage of natural disasters to strategically ingratiate themselves with strategic opponents

extant approaches to modeling strategic interest

Within this literature strategic interest takes on a variety of operationalizations, most commonly:

Alliances (e.g., Schraeder et al. 1998)

UN Voting Scores (e.g., Dreher and Fuchs 2015)

Common IGO Membership (e.g., Bermeo 2008)

extant approaches to modeling strategic interest

Within this literature strategic interest takes on a variety of operationalizations, most commonly:

Alliances (e.g., Schraeder et al. 1998)

UN Voting Scores (e.g., Dreher and Fuchs 2015)

Common IGO Membership (e.g., Bermeo 2008)

Alesina and Dollar (2000):

unfortunately the measurement of what a “strategic interest” is varies from study to study and is occasionally tautological

a new measure of strategic relationships

Knowing something about the relationship between i and j as well as between i and k may reveal something about the relationship between i and k

data for strategic interest variable

Political Strategic Interest

COW Alliances (Gibler 2009)

UN Voting Data (Strezhnev 2012)

IGOs (Pevehouse 2004)

latent space analysis

$$\theta_{i,j} = a_i + b_j + \gamma_{i,j} + z_i' z_j$$

where $\theta_{i,j}$ is the dyadic variable of interest

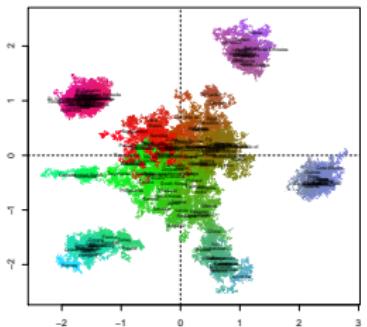
a_i estimates sender effects

b_j estimates receiver effects

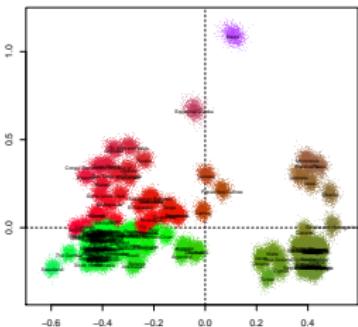
$z_i' z_j$ is the bilinear effect which estimates the latent space

We estimate the model via Gibbs sampling using the full conditionals of the parameters

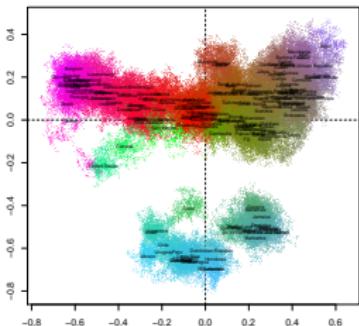
latent space of political strategic interest measure: 2005



Alliances



UN voting



dimension reduction

Next we estimate the euclidean distance between the posterior positions of every country for every year

dimension reduction

Next we estimate the euclidean distance between the posterior positions of every country for every year

We estimate a PCA for each year separately and use the first principal component for each year as our measure of strategic interest

dependent variable & sample

Data for foreign aid flows taken from the AidData project (Tierny et al. 2001).

We use the country level aggregated version of this database to create a directed-dyadic dataset of total aid dollars committed

We focus on the 18 most active senders and 167 receivers of aid flows from 1975 to 2006

measuring humanitarian interest

Life expectancy at birth (Banks 2013)

measuring humanitarian interest

Life expectancy at birth (Banks 2013)

Number of Natural Disasters (EM-DAT 2009):

measuring humanitarian interest

Life expectancy at birth (Banks 2013)

Number of Natural Disasters (EM-DAT 2009):

- Ten or more people reported killed

- A hundred or more people reported affected

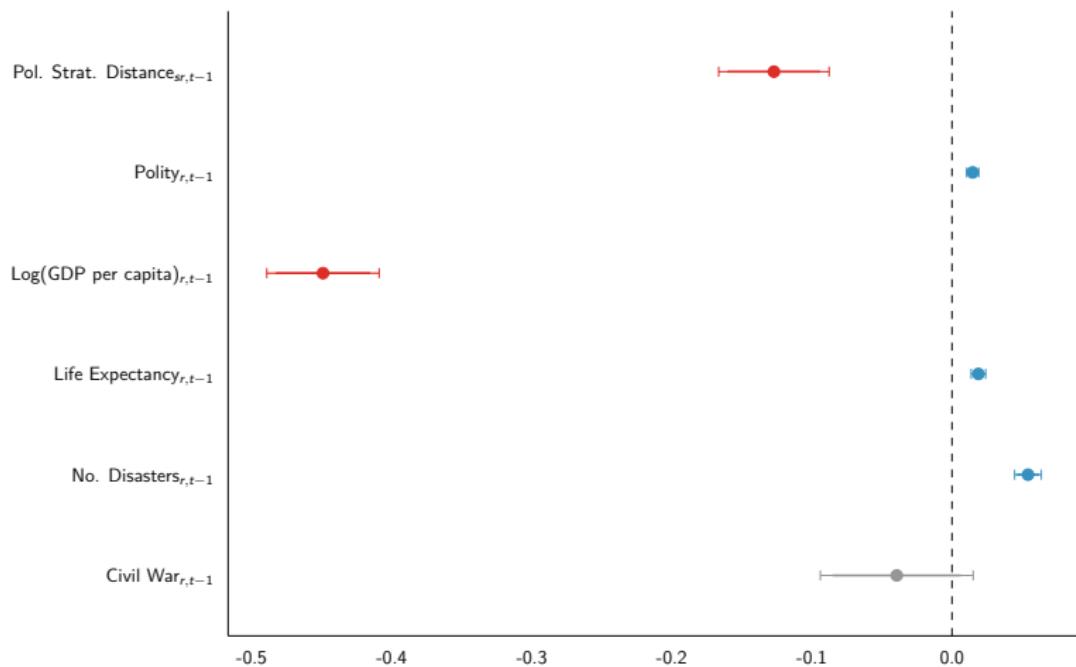
- Declaration of a state of emergency

- Call for international assistance

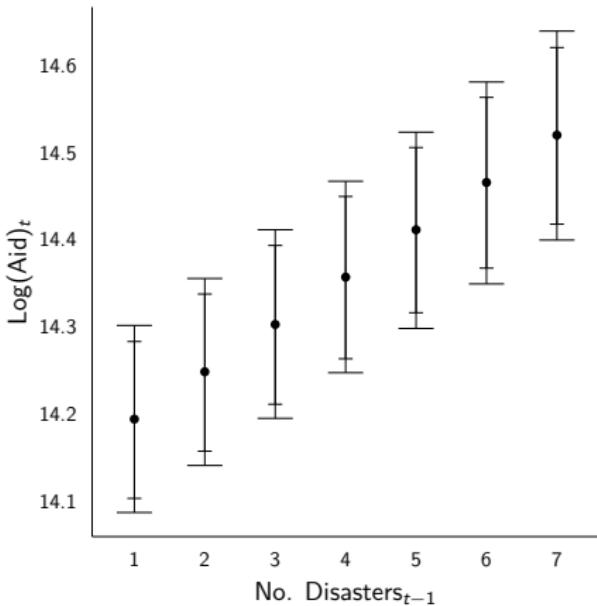
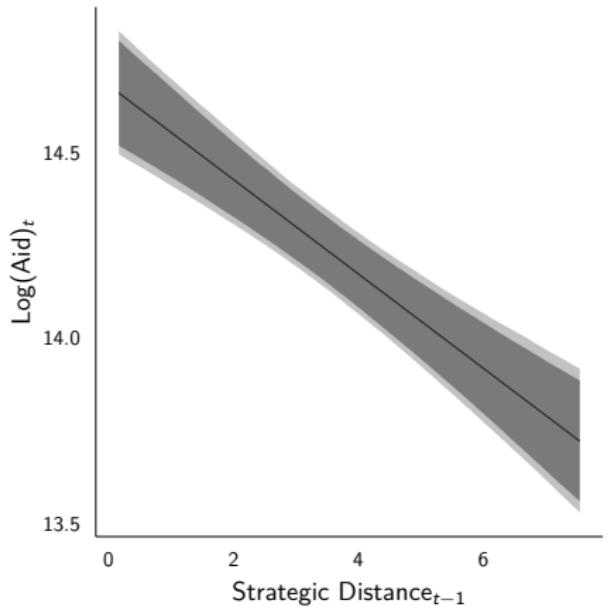
aid model specification (1)

$$\begin{aligned} \text{Log}(Aid)_{sr,t} = & \beta_1(\text{Pol. Strat. Distance}_{sr,t-1}) \\ & + \beta_2(\text{Colony}_{sr,t-1}) + \beta_3(\text{Polity}_{r,t-1}) \\ & + \beta_4 \text{Log}(\text{GDP per capita}_{r,t-1}) + \beta_5(\text{Life Expect}_{r,t-1}) \\ & + \beta_6(\text{No. Disasters}_{r,t-1}) + \beta_7(\text{Civil War}_{r,t-1}) \end{aligned}$$

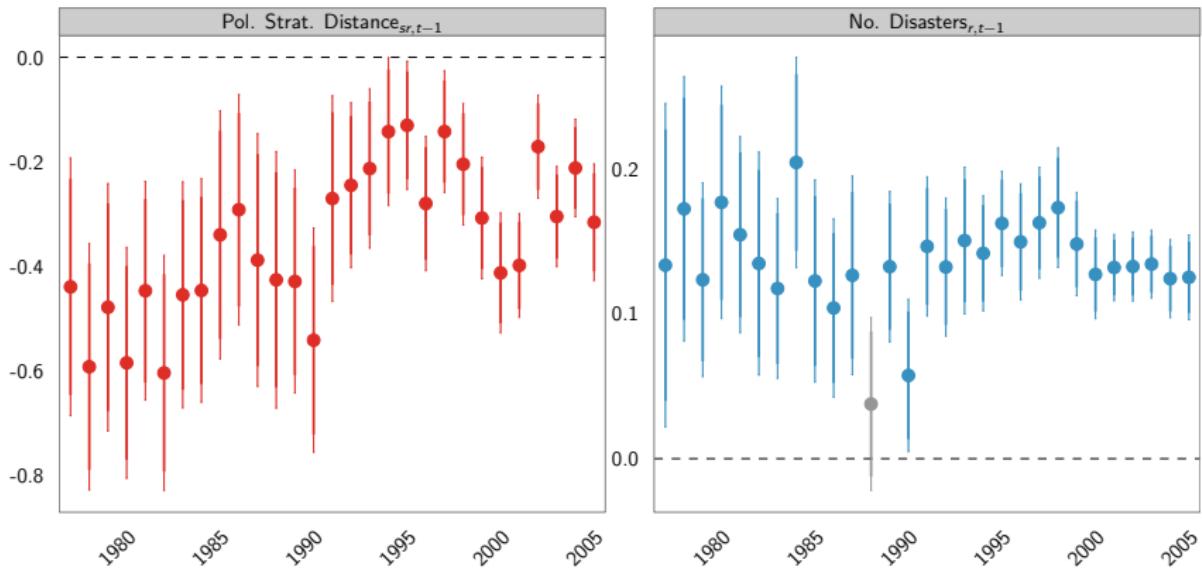
aid model results



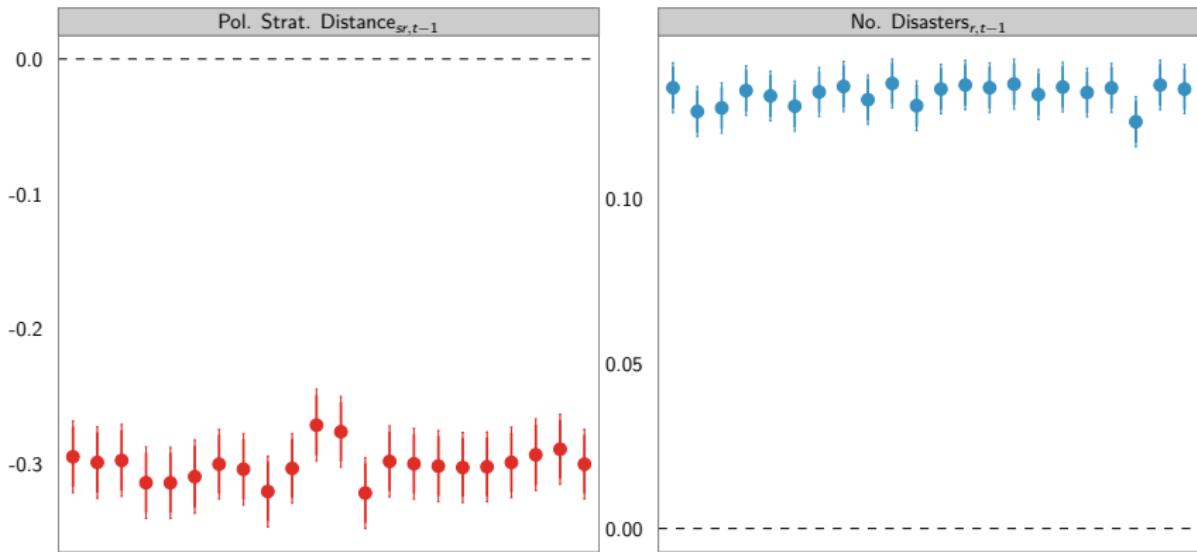
substantive effects



temporal contingencies?



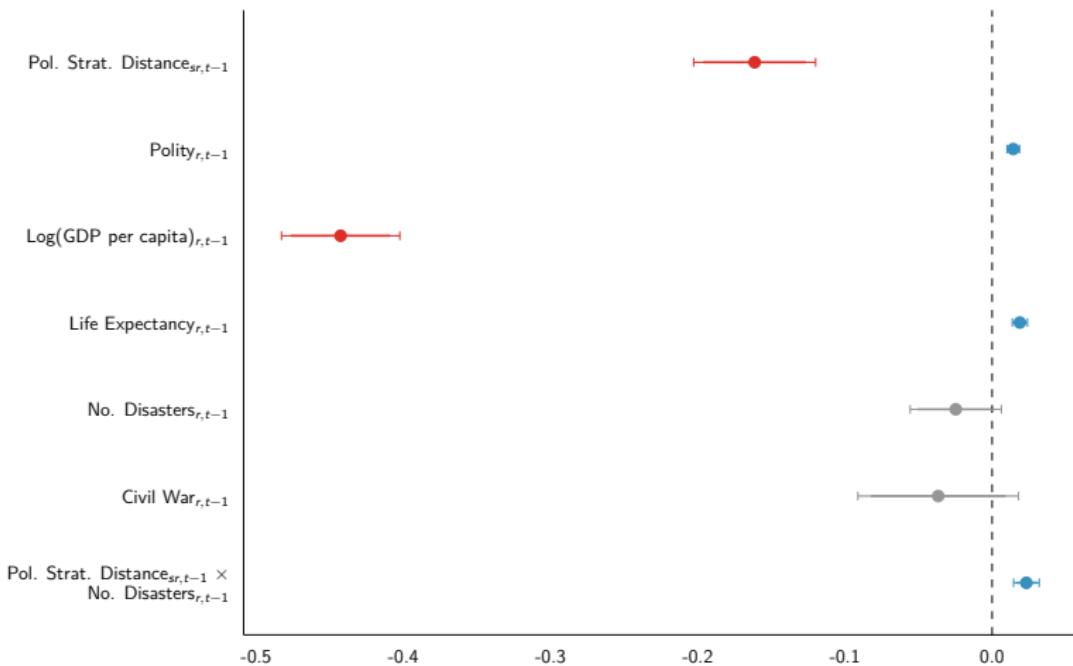
donor country contingencies?



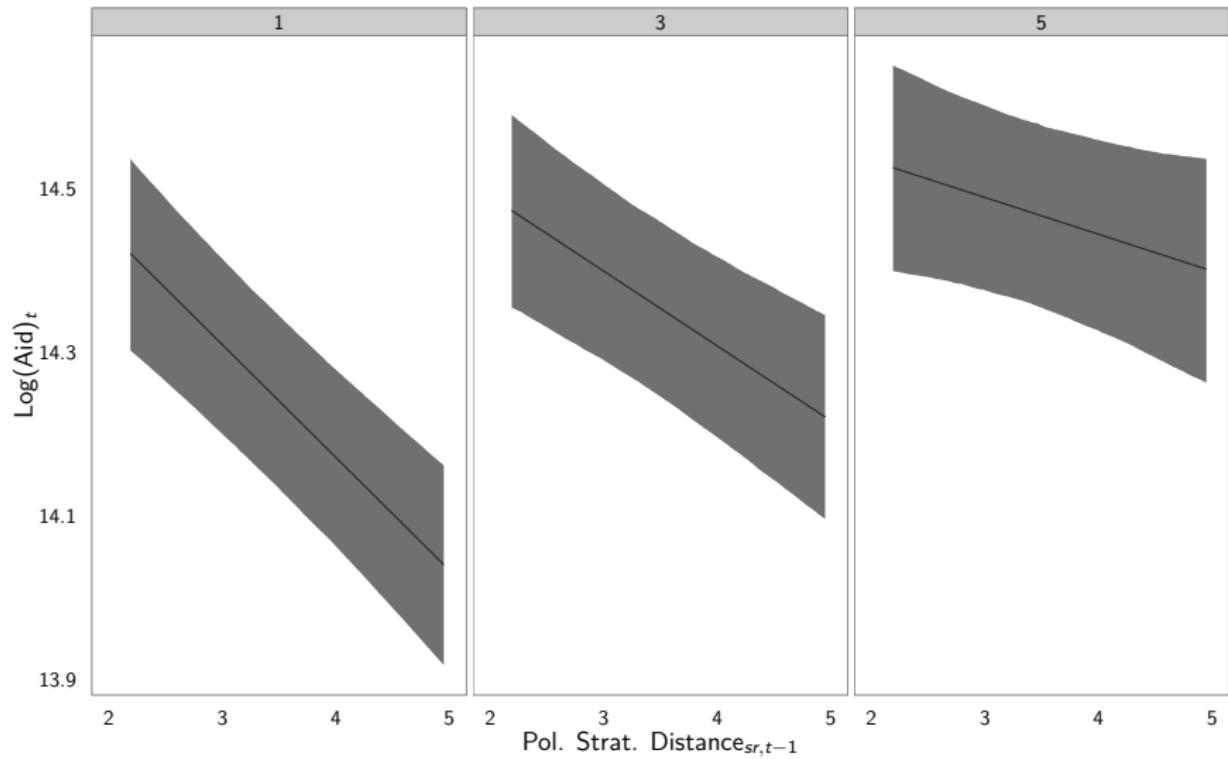
aid model specification (2)

$$\begin{aligned} \text{Log}(Aid)_{sr,t} = & \beta_1(\text{Pol. Strat. Distance}_{sr,t-1}) \\ & + \beta_2(\text{Colony}_{sr,t-1}) + \beta_3(\text{Polity}_{r,t-1}) \\ & + \beta_4 \text{Log}(\text{GDP per capita}_{r,t-1}) + \beta_5(\text{Life Expect}_{r,t-1}) \\ & + \beta_6(\text{No. Disasters}_{r,t-1}) + \beta_7(\text{Civil War}_{r,t-1}) \\ & + \beta_8(\text{Pol. Strat. Interest}_{sr,t-1} \times \text{No. Disasters}_{r,t-1}) \end{aligned}$$

incorporate interaction



interactive effects



contribution

A novel measure of strategic interest that better captures the decision making process behind foreign aid

A more nuanced picture of how countries disperse aid allocations

NEXT STEPS?