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# Appendix for Are Donors Really Responding? Analyzing the Impact of Global Restrictions on NGOs

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## Code

All figures and tables can be replicated using code and data available at `actual-url-here-later` (R Core Team 2018; Stan Development Team 2018b, 2018a; Bürkner

2017, 2018; Wickham 2016). Additionally, a complete computing environment with a snapshot of R 3.5.1, Stan 2.17, and other packages can be installed through Docker at `actual-docker-url-here-later`.

## Data

### Missing data

The bulk of our new dataset has complete data for every variable in each country-year observation, with only a few variables from V-Dem and the World Bank suffering from missing data: Polity IV, the political corruption index, the civil society regulatory index, population, and GDP. These variables are not missing at random—most of the missing data can be attributable to a lack of consistent reporting. While multiple imputation is not inherently less biased than listwise deletion and thus not always necessary when data is not missing at random (Pepinsky 2018), we impute our missing data in order to estimate consistent within and between effects in our models (see below for further explanation). We employ Bayesian multiple imputation using Amelia II (Honaker, King, and Blackwell 2011). We estimate individual regression models across five imputed datasets and then meld and combine the resulting posterior distributions. We varied the number of imputed datasets between 5 and 10 and found only trivial differences in coefficients, as predicted by King et al. (2001). In the interest of computational efficiency and speed, we only use five imputed datasets in our final analysis.

Our imputation model predicts missing values using following variables: year, country ID, the civil society regulatory environment, corruption, GDP (logged), government effectiveness, natural disaster occurrence and severity, Polity IV, population (logged), trade as a percent of GDP, and total ODA. We also include lags and leads (future values) of the civil society regulatory environment, corruption, GDP, trade as a percent of GDP, Polity IV, and population.

### Summary statistics

Table 1: Summary of all variables included in models

| Variable | Source | Mean | Std. Dev. | Median | Min | Max | N |
|---|---|---|---|---|---|---|---|
| Total aid (constant 2011 USD, millions) | OECD and AidData | 1,193 | 2,677 | 427.2 | 0 | 63,233 | 4,620 |
| Proportion of contentious aid | OECD and AidData | 0.06 | 0.1 | 0.02 | 0 | 1 | 4,094 |
| Proportion of aid to domestic NGOs | USAID | 0.04 | 0.13 | 0 | 0 | 1 | 3,839 |
| Proportion of aid to foreign NGOs | USAID | 0.11 | 0.19 | 0 | 0 | 1 | 3,839 |

| Variable | Source | Mean | Std. Dev. | Median | Min | Max | N |
|---|---|---|---|---|---|---|---|
| Total legal barriers | Christensen and Weinstein (2013) | 1.77 | 1.51 | 1 | 0 | 8.5 | 4,620 |
| Barriers to advocacy | Christensen and Weinstein (2013) | 0.17 | 0.39 | 0 | 0 | 2 | 4,620 |
| Barriers to entry | Christensen and Weinstein (2013) | 1.25 | 0.74 | 1 | 0 | 3 | 4,620 |
| Barriers to funding | Christensen and Weinstein (2013) | 0.35 | 0.82 | 0 | 0 | 4.5 | 4,620 |
| Civil society regulatory environment (CSRE) | V-Dem | 0.87 | 2.81 | 0.82 | -6.14 | 6.29 | 4,354 |
| Polity IV (0–10) | V-Dem | 5.02 | 3.08 | 5 | 0 | 10 | 4,554 |
| GDP per capita (constant 2011 USD) | UN and World Bank | 6,008 | 10,672 | 2,524 | 74.4 | 122,422 | 4,327 |
| Trade as % of GDP | UN and World Bank | 0.77 | 0.46 | 0.67 | 0.04 | 4.4 | 4,327 |
| Corruption | V-Dem | 6.03 | 2.47 | 6.38 | 0.12 | 9.77 | 4,301 |
| Internal conflict in last 5 years | UCDP/PRIO | 0.26 | 0.44 | 0 | 0 | 1 | 4,620 |
| Natural disasters | EM-DAT | 1.73 | 3.17 | 1 | 0 | 43 | 4,620 |

## List of countries included

Table 2: All countries included in models (N = 140)

| | | | |
|---|---|---|---|
| Afghanistan | Dominican Republic | Lesotho | Rwanda |
| Albania | Ecuador | Liberia | Saudi Arabia |
| Algeria | Egypt | Lithuania | Senegal |
| Angola | El Salvador | Macedonia | Serbia |
| Argentina | Equatorial Guinea | Madagascar | Sierra Leone |
| Armenia | Eritrea | Malawi | Singapore |
| Azerbaijan | Estonia | Malaysia | Slovakia |
| Bahrain | Ethiopia | Mali | Slovenia |
| Bangladesh | Fiji | Mauritania | Solomon Islands |
| Belarus | Gabon | Mauritius | South Africa |
| Benin | Gambia | Mexico | South Korea |
| Bhutan | Georgia | Moldova | Sri Lanka |
| Bolivia | Ghana | Mongolia | Sudan |
| Bosnia & Herzegovina | Guatemala | Montenegro | Swaziland |
| Botswana | Guinea | Morocco | Syria |
| Brazil | Guinea-Bissau | Mozambique | Taiwan |
| Bulgaria | Guyana | Myanmar (Burma) | Tajikistan |
| Burkina Faso | Haiti | Namibia | Tanzania |
| Burundi | Honduras | Nepal | Thailand |
| Cambodia | Hungary | Nicaragua | Timor-Leste |
| Cameroon | India | Niger | Togo |
| Central African Republic | Indonesia | Nigeria | Trinidad & Tobago |
| Chad | Iran | North Korea | Tunisia |
| Chile | Iraq | Oman | Turkey |
| China | Israel | Pakistan | Turkmenistan |
| Colombia | Jamaica | Panama | Uganda |

Table 2: All countries included in models (N = 140)

| | | | |
|---|---|---|---|
| Comoros | Jordan | Papua New Guinea | Ukraine |
| Congo - Brazzaville | Kazakhstan | Paraguay | United Arab Emirates |
| Congo - Kinshasa | Kenya | Peru | Uruguay |
| Costa Rica | Kosovo | Philippines | Uzbekistan |
| Côte d'Ivoire | Kuwait | Poland | Venezuela |
| Croatia | Kyrgyzstan | Portugal | Vietnam |
| Cuba | Laos | Qatar | Yemen |
| Cyprus | Latvia | Romania | Zambia |
| Czechia | Lebanon | Russia | Zimbabwe |

## Modeling

Crossed random effects multilevel models

Following Bell and Jones (2015) we use crossed random effects for country and year and use a combination of meaned and demeaned versions of each continuous variable to estimate both the within and between effects of each variable. This approach has multiple benefits. The coefficients for the demeaned variables are roughly equivalent to their corresponding coefficients in a fixed effects model, but a fixed effects model assumes that the between effect (captured by the mean variables) is 0, which is not the case. A random effects model specified in this manner is more interpretable, as it clearly separates the within and between effects (within = demeaned, between = mean). Typical time-series-cross-sectional data analysis includes these variables as fixed effects to control out issues of heterogeneity within units. However, Bell and Jones (2015) forcefully (and convincingly) argue that fixed effects models eliminate too much variance and make it impossible to measure the effects of time-invariant (or slowly-variant) variables. Random effects (or multilevel) models, when properly specified, overcome these issues by decomposing the effects of variables to within- and between-effects (or time-variant and time-invariant effects).

Table 3 demonstrates the intuition behind this approach. Model 1 is a basic OLS model with country fixed effects. Model 2 is a basic OLS model with country random effects, but potentially misspecified, since the between and within effects are conflated. Model 3 is a basic OLS model with country random effects specified with between (mean; $\bar{x}_i$) and within (demeaned; $x_{it} - \bar{x}_i$) coefficients. The demeaned/within coefficients in Model 3 are identical to the fixed effects coefficients in Model 1. If rows had been dropped because of listwise deletion (e.g., if there were missing values in one of independent variables), the coefficients would be slightly off, since the demeaned values would have been based on group means that included the values that were dropped (e.g. all 2013 rows are dropped because of lags, but the group means included 2013). We use multiple imputation to avoid this issue—we need the data to be as complete as possible to get the most accurate random effects.

Table 3: Example of crossed random effects multilevel modeling; dependent variable is log of ODA in previous year

|  | (1) | (2) | (3) |
| --- | --- | --- | --- |
| Total legal barriers | **-0.091** | -0.056 | |
|  | **(0.089)** | (0.085) | |
| Polity IV (0–10) | **0.267** | 0.226 | |
|  | **(0.045)** | (0.043) | |
| Total legal barriers$_{between}$ | | | -0.132 |
|  | | | (0.323) |
| Total legal barriers$_{within}$ | | | **-0.091** |

| | (1) | (2) | (3) |
|---|---|---|---|
| | | | **(0.0 89)** |
| Polity IV (0–10)$_{between}$ | | | -0.165 |
| | | | (0.155) |
| Polity IV (0–10)$_{within}$ | | | **0.26 7** |
| | | | **(0.0 45)** |
| Constant | 17.911 | 16.739 | 18.826 |
| | (1.147) | (0.446) | (1.213) |
| Country effects | Fixed | Random | Random |
| N | 4416 | 4416 | 4416 |

### Prior distributions

We use weakly informative prior distributions for each of the coefficient parameters, based on a normal distribution with a mean of zero. We obtain the posterior distribution of each dependent variable with Markov Chain Monte Carlo (MCMC) sampling and simulate values from the joint posterior distribution of the coefficient parameters. We use Stan through R to generate 4 MCMC chains with 2,000 iterations in each chain, 1,000 of which are used for warmup. All chains converge; we assess convergence with visual inspection. We use the medians of the simulated values from the MCMC samples as coefficient estimates and use the 5% and 95% quantiles as lower and upper limits for 90% credible intervals. Following the suggestion of Gelman and Carlin (2014), we rely on 90% credible intervals for computational stability and for better estimation of Type-S errors. Finally, we estimate models on each of the imputed datasets individually and merge the resulting MCMC chains and posterior distributions.

### Full model results

Table 4: The effect of anti-NGO legislation on OECD overseas development assistance (ODA) in the following year ($H_1$), full models. Each cell contains the parameter's posterior median, the 95% credible interval, and the probability that the parameter is greater than zero (in italics).

| | (1) | (2) | (3) |
|---|---|---|---|
| **Fixed part** | | | |
| Total legal barriers$_{within}$ | -0.06 | | |
| | (-0.17, 0.05); *0.15* | | |
| Total legal barriers$_{between}$ | -0.05 | | |
| | (-0.13, 0.02); *0.09* | | |
| Barriers to advocacy$_{within}$ | | -0.43 | |
| | | (-0.92, 0.05); *0.04* | |
| Barriers to advocacy$_{between}$ | | -0.09 | |
| | | (-0.41, 0.22); *0.28* | |
| Barriers to entry$_{within}$ | | 0.10 | |
| | | (-0.13, 0.34); *0.79* | |
| Barriers to entry$_{between}$ | | 0.12 | |
| | | (-0.02, 0.26); *0.96* | |
| Barriers to funding$_{within}$ | | -0.03 | |
| | | (-0.30, 0.25); *0.42* | |

|  | (1) | (2) | (3) |
|---|---|---|---|
| Barriers to funding$_{between}$ |  | -0.17 |  |
|  |  | (-0.31, -0.03); *0.01* |  |
| Civil society reg. env. (CSRE)$_{within}$ |  |  | -0.02 |
|  |  |  | (-0.09, 0.06); *0.33* |
| Civil society reg. env. (CSRE)$_{between}$ |  |  | 0.06 |
|  |  |  | (-0.01, 0.13); *0.95* |
| Polity IV (0–10)$_{within}$ | -0.06 | -0.06 | -0.04 |
|  | (-0.11, -0.00); *0.02* | (-0.12, -0.00); *0.02* | (-0.11, 0.03); *0.14* |
| Polity IV (0–10)$_{between}$ | 0.01 | 0.01 | -0.02 |
|  | (-0.03, 0.05); *0.69* | (-0.04, 0.05); *0.60* | (-0.08, 0.04); *0.27* |
| GDP per capita (log)$_{within}$ | -0.41 | -0.42 | -0.42 |
|  | (-0.75, -0.14); *0.01* | (-0.75, -0.16); *0.01* | (-0.76, -0.15); *0.01* |
| GDP per capita (log)$_{between}$ | -0.18 | -0.17 | -0.18 |
|  | (-0.26, -0.10); *0.00* | (-0.25, -0.09); *0.00* | (-0.26, -0.10); *0.00* |
| Trade as % of GDP$_{within}$ | -0.00 | -0.00 | -0.00 |
|  | (-0.01, 0.00); *0.04* | (-0.01, 0.00); *0.04* | (-0.01, 0.00); *0.04* |
| Trade as % of GDP$_{between}$ | -0.00 | -0.00 | -0.00 |
|  | (-0.00, 0.00); *0.05* | (-0.00, 0.00); *0.05* | (-0.00, 0.00); *0.08* |
| Corruption$_{within}$ | 0.05 | 0.05 | 0.05 |
|  | (-0.04, 0.14); *0.88* | (-0.04, 0.14); *0.89* | (-0.04, 0.14); *0.89* |
| Corruption$_{between}$ | 0.05 | 0.05 | 0.05 |
|  | (0.00, 0.10); *0.98* | (0.00, 0.09); *0.98* | (0.01, 0.10); *0.99* |
| Total aid in present year (log) | 0.87 | 0.86 | 0.87 |
|  | (0.85, 0.88); *1.00* | (0.85, 0.88); *1.00* | (0.85, 0.88); *1.00* |
| Internal conflict in last 5 years | 0.08 | 0.07 | 0.11 |
|  | (-0.12, 0.28); *0.78* | (-0.13, 0.27); *0.75* | (-0.09, 0.31); *0.86* |
| Natural disasters | 0.04 | 0.03 | 0.03 |
|  | (0.01, 0.06); *0.99* | (0.01, 0.06); *0.99* | (0.01, 0.06); *0.99* |
| After 1989 | 0.58 | 0.60 | 0.56 |
|  | (0.26, 0.88); *1.00* | (0.30, 0.90); *1.00* | (0.23, 0.86); *1.00* |
| Constant | 3.17 | 3.07 | 3.15 |
|  | (2.26, 4.07); *1.00* | (2.18, 3.95); *1.00* | (2.26, 4.03); *1.00* |
| **Random part** |  |  |  |
| Within-country variability | 0.09 | 0.09 | 0.08 |
| Within-year variability | 0.26 | 0.26 | 0.28 |
| Residual random error | 2.69 | 2.69 | 2.69 |
| **Model details** |  |  |  |
| Imputed datasets (*m*) | 5 | 5 | 5 |
| N | 4480 | 4480 | 4480 |
| Posterior sample size | 4000 | 4000 | 4000 |
| **Notes** |  |  |  |
| Dependent variable log transformed. |  |  |  |

Table 5: The effect of anti-NGO legislation on the proportion of OECD overseas development assistance (ODA) committed to contentious purposes in the following year ($H_2$), full models. Each cell contains the parameter's posterior median, the 95% credible interval, and the probability that the parameter is greater than one (in italics).

| | (1) | (2) | (3) |
|---|---|---|---|
| **Fixed part (odds ratios)** | | | |
| Total legal barriers$_{within}$ | 1.04 | | |
| | (0.98, 1.10); *0.90* | | |
| Total legal barriers$_{between}$ | 0.98 | | |
| | (0.90, 1.08); *0.36* | | |
| Barriers to advocacy$_{within}$ | | 0.80 | |
| | | (0.62, 1.02); *0.04* | |
| Barriers to advocacy$_{between}$ | | 0.93 | |
| | | (0.65, 1.32); *0.34* | |
| Barriers to entry$_{within}$ | | 1.09 | |
| | | (0.96, 1.24); *0.90* | |
| Barriers to entry$_{between}$ | | 1.09 | |
| | | (0.92, 1.29); *0.85* | |
| Barriers to funding$_{within}$ | | 1.13 | |
| | | (0.98, 1.30); *0.95* | |
| Barriers to funding$_{between}$ | | 0.91 | |
| | | (0.75, 1.09); *0.14* | |
| Civil society reg. env. (CSRE)$_{within}$ | | | 1.08 |
| | | | (1.03, 1.13); *1.00* |
| Civil society reg. env. (CSRE)$_{between}$ | | | 1.05 |
| | | | (0.96, 1.14); *0.85* |
| Polity IV (0–10)$_{within}$ | 1.03 | 1.03 | 0.99 |
| | (1.00, 1.06); *0.97* | (1.00, 1.06); *0.97* | (0.95, 1.03); *0.25* |
| Polity IV (0–10)$_{between}$ | 1.09 | 1.08 | 1.06 |
| | (1.04, 1.14); *1.00* | (1.03, 1.13); *1.00* | (0.98, 1.14); *0.92* |
| GDP per capita (log)$_{within}$ | 0.97 | 0.96 | 0.99 |
| | (0.81, 1.16); *0.36* | (0.80, 1.15); *0.34* | (0.82, 1.18); *0.45* |
| GDP per capita (log)$_{between}$ | 0.71 | 0.71 | 0.71 |
| | (0.64, 0.77); *0.00* | (0.65, 0.78); *0.00* | (0.64, 0.77); *0.00* |
| Trade as % of GDP$_{within}$ | 1.00 | 1.00 | 1.00 |
| | (1.00, 1.00); *0.04* | (1.00, 1.00); *0.05* | (1.00, 1.00); *0.03* |
| Trade as % of GDP$_{between}$ | 1.00 | 1.00 | 1.00 |
| | (1.00, 1.00); *0.95* | (1.00, 1.00); *0.95* | (1.00, 1.00); *0.95* |
| Corruption$_{within}$ | 1.05 | 1.05 | 1.06 |
| | (1.00, 1.10); *0.98* | (1.00, 1.11); *0.98* | (1.01, 1.11); *0.99* |
| Corruption$_{between}$ | 1.07 | 1.06 | 1.07 |
| | (1.01, 1.13); *0.99* | (1.01, 1.12); *0.99* | (1.02, 1.13); *1.00* |
| Proportion of contentious aid in present year (logit) | 1.28 | 1.28 | 1.27 |
| | (1.24, 1.32); *1.00* | (1.24, 1.32); *1.00* | (1.23, 1.31); *1.00* |
| Internal conflict in last 5 years | 1.07 | 1.06 | 1.09 |
| | (0.94, 1.21); *0.84* | (0.93, 1.20); *0.80* | (0.96, 1.24); *0.91* |
| Natural disasters | 0.99 | 0.99 | 0.99 |
| | (0.97, 1.01); *0.22* | (0.97, 1.01); *0.22* | (0.97, 1.01); *0.16* |
| After 1989 | 4.61 | 4.69 | 4.34 |
| | (3.02, 7.05); *1.00* | (3.08, 7.22); *1.00* | (2.87, 6.72); *1.00* |
| Constant | 0.09 | 0.08 | 0.10 |
| | (0.03, 0.25); *0.00* | (0.03, 0.23); *0.00* | (0.04, 0.27); *0.00* |
| **Random part (original coefficients)** | | | |
| Within-country variability | 0.50 | 0.50 | 0.50 |
| Within-year variability | 0.52 | 0.52 | 0.52 |
| Residual random error | 1.33 | 1.33 | 1.33 |

|  | (1) | (2) | (3) |
|---|---|---|---|
| **Model details** | | | |
| Imputed datasets ($m$) | 5 | 5 | 5 |
| N | 3922 | 3922 | 3922 |
| Posterior sample size | 4000 | 4000 | 4000 |
| **Notes** | | | |
| Logit-linear models. Percent change odds ratios reported. | | | |

Table 6: The effect of anti-NGO legislation on the proportion of US aid channeled through *domestic* NGOs in the following year ($H_3$), full models. Each cell contains the parameter's posterior median, the 95% credible interval, and the probability that the parameter is greater than one (in italics)

| | (1) | (2) | (3) |
|---|---|---|---|
| **Fixed part (odds ratios)** | | | |
| Total legal barriers$_{within}$ | 1.15 | | |
| | (1.03, 1.29); *0.99* | | |
| Total legal barriers$_{between}$ | 1.04 | | |
| | (0.93, 1.16); *0.75* | | |
| Barriers to advocacy$_{within}$ | | 0.99 | |
| | | (0.56, 1.76); *0.49* | |
| Barriers to advocacy$_{between}$ | | 1.10 | |
| | | (0.73, 1.67); *0.68* | |
| Barriers to entry$_{within}$ | | 1.01 | |
| | | (0.75, 1.35); *0.53* | |
| Barriers to entry$_{between}$ | | 1.14 | |
| | | (0.94, 1.39); *0.91* | |
| Barriers to funding$_{within}$ | | 1.34 | |
| | | (1.01, 1.78); *0.98* | |
| Barriers to funding$_{between}$ | | 0.92 | |
| | | (0.73, 1.16); *0.24* | |
| Civil society reg. env. (CSRE)$_{within}$ | | | 0.92 |
| | | | (0.80, 1.07); *0.14* |
| Civil society reg. env. (CSRE)$_{between}$ | | | 1.04 |
| | | | (0.92, 1.18); *0.74* |
| Polity IV (0–10)$_{within}$ | 0.88 | 0.88 | 0.91 |
| | (0.79, 0.98); *0.01* | (0.80, 0.98); *0.01* | (0.80, 1.02); *0.06* |
| Polity IV (0–10)$_{between}$ | 1.01 | 1.00 | 0.96 |
| | (0.94, 1.08); *0.58* | (0.94, 1.07); *0.53* | (0.86, 1.07); *0.25* |
| GDP per capita (log)$_{within}$ | 1.89 | 1.93 | 2.01 |
| | (1.06, 3.27); *0.98* | (1.08, 3.35); *0.99* | (1.12, 3.49); *0.99* |
| GDP per capita (log)$_{between}$ | 1.04 | 1.05 | 1.05 |
| | (0.91, 1.20); *0.74* | (0.91, 1.20); *0.75* | (0.92, 1.21); *0.77* |
| Trade as % of GDP$_{within}$ | 1.00 | 1.00 | 1.00 |
| | (0.99, 1.01); *0.55* | (0.99, 1.01); *0.55* | (0.99, 1.01); *0.48* |
| Trade as % of GDP$_{between}$ | 1.00 | 1.00 | 0.99 |
| | (0.99, 1.00); *0.00* | (0.99, 1.00); *0.01* | (0.99, 1.00); *0.00* |
| Corruption$_{within}$ | 1.19 | 1.20 | 1.18 |
| | (1.04, 1.41); *0.98* | (1.05, 1.42); *0.99* | (1.03, 1.39); *0.97* |
| Corruption$_{between}$ | 1.15 | 1.14 | 1.14 |
| | (1.06, 1.24); *1.00* | (1.05, 1.23); *1.00* | (1.06, 1.23); *1.00* |
| Proportion of aid to domestic NGOs in present year (logit) | 1.39 | 1.38 | 1.39 |
| | (1.32, 1.46); *1.00* | (1.31, 1.45); *1.00* | (1.32, 1.46); *1.00* |
| Internal conflict in last 5 years | 1.23 | 1.24 | 1.22 |
| | (0.94, 1.59); *0.94* | (0.95, 1.62); *0.95* | (0.94, 1.59); *0.93* |
| Natural disasters | 0.99 | 0.99 | 0.99 |
| | (0.96, 1.02); *0.24* | (0.96, 1.02); *0.21* | (0.96, 1.02); *0.29* |
| Constant | 0.02 | 0.02 | 0.02 |
| | (0.00, 0.09); *0.00* | (0.00, 0.08); *0.00* | (0.01, 0.11); *0.00* |
| **Random part (original coefficients)** | | | |
| Within-country variability | 0.72 | 0.73 | 0.71 |
| Within-year variability | 0.18 | 0.18 | 0.19 |
| Residual random error | 1.55 | 1.55 | 1.55 |
| **Model details** | | | |
| Imputed datasets (*m*) | 5 | 5 | 5 |

|  | (1) | (2) | (3) |
| --- | --- | --- | --- |
| N | 1751 | 1751 | 1751 |
| Posterior sample size | 4000 | 4000 | 4000 |
| **Notes** | | | |
| Logit-linear models. Percent change odds ratios reported. | | | |

Table 7: The effect of anti-NGO legislation on the proportion of US aid channeled through *US-based and international* NGOs in the following year ($H_3$), full models. Each cell contains the parameter's posterior median, the 95% credible interval, and the probability that the parameter is greater than one (in italics)

| | (1) | (2) | (3) |
|---|---|---|---|
| **Fixed part (odds ratios)** | | | |
| Total legal barriers$_{within}$ | 0.95 | | |
| | (0.83, 1.08); *0.20* | | |
| Total legal barriers$_{between}$ | 1.02 | | |
| | (0.89, 1.16); *0.60* | | |
| Barriers to advocacy$_{within}$ | | 1.04 | |
| | | (0.53, 1.99); *0.54* | |
| Barriers to advocacy$_{between}$ | | 0.96 | |
| | | (0.59, 1.54); *0.44* | |
| Barriers to entry$_{within}$ | | 1.36 | |
| | | (0.98, 1.90); *0.97* | |
| Barriers to entry$_{between}$ | | 1.07 | |
| | | (0.84, 1.35); *0.71* | |
| Barriers to funding$_{within}$ | | 0.71 | |
| | | (0.52, 0.97); *0.01* | |
| Barriers to funding$_{between}$ | | 0.99 | |
| | | (0.76, 1.30); *0.48* | |
| Civil society reg. env. (CSRE)$_{within}$ | | | 1.11 |
| | | | (0.95, 1.30); *0.89* |
| Civil society reg. env. (CSRE)$_{between}$ | | | 1.03 |
| | | | (0.89, 1.19); *0.66* |
| Polity IV (0–10)$_{within}$ | 1.04 | 1.04 | 1.00 |
| | (0.93, 1.18); *0.75* | (0.93, 1.18); *0.74* | (0.87, 1.14); *0.52* |
| Polity IV (0–10)$_{between}$ | 0.98 | 0.98 | 0.95 |
| | (0.91, 1.06); *0.32* | (0.90, 1.06); *0.30* | (0.84, 1.08); *0.23* |
| GDP per capita (log)$_{within}$ | 0.29 | 0.28 | 0.28 |
| | (0.17, 0.48); *0.00* | (0.16, 0.47); *0.00* | (0.16, 0.46); *0.00* |
| GDP per capita (log)$_{between}$ | 0.72 | 0.72 | 0.73 |
| | (0.62, 0.85); *0.00* | (0.62, 0.85); *0.00* | (0.62, 0.85); *0.00* |
| Trade as % of GDP$_{within}$ | 1.00 | 1.00 | 1.00 |
| | (0.99, 1.00); *0.15* | (0.99, 1.00); *0.14* | (0.99, 1.00); *0.17* |
| Trade as % of GDP$_{between}$ | 1.00 | 1.00 | 1.00 |
| | (0.99, 1.00); *0.36* | (0.99, 1.00); *0.39* | (0.99, 1.00); *0.36* |
| Corruption$_{within}$ | 1.13 | 1.12 | 1.16 |
| | (0.96, 1.31); *0.93* | (0.94, 1.31); *0.91* | (0.97, 1.36); *0.95* |
| Corruption$_{between}$ | 1.30 | 1.29 | 1.30 |
| | (1.19, 1.42); *1.00* | (1.18, 1.42); *1.00* | (1.18, 1.42); *1.00* |
| Proportion of aid to foreign NGOs in present year (logit) | 1.39 | 1.38 | 1.39 |
| | (1.33, 1.45); *1.00* | (1.32, 1.45); *1.00* | (1.33, 1.45); *1.00* |
| Internal conflict in last 5 years | 1.18 | 1.18 | 1.20 |
| | (0.88, 1.58); *0.86* | (0.88, 1.60); *0.87* | (0.90, 1.62); *0.89* |
| Natural disasters | 1.03 | 1.03 | 1.03 |
| | (1.00, 1.07); *0.97* | (1.00, 1.07); *0.97* | (1.00, 1.07); *0.97* |
| Constant | 0.56 | 0.52 | 0.62 |
| | (0.09, 3.33); *0.26* | (0.09, 3.31); *0.24* | (0.11, 3.38); *0.29* |
| **Random part (original coefficients)** | | | |
| Within-country variability | 0.86 | 0.87 | 0.86 |
| Within-year variability | 0.11 | 0.11 | 0.11 |
| Residual random error | 1.70 | 1.70 | 1.70 |
| **Model details** | | | |
| Imputed datasets (*m*) | 5 | 5 | 5 |

| | (1) | (2) | (3) |
|---|---|---|---|
| N | 1751 | 1751 | 1751 |
| Posterior sample size | 4000 | 4000 | 4000 |
| **Notes** | | | |

Logit-linear models. Percent change odds ratios reported.

## Zero-one-inflated beta regression

To avoid making logit transformations of our proportion outcomes in $H_2$ and $H_3$, we run zero-one-inflated beta regression models as an additional robustness check. While the functional form of this model fits our data better (i.e. there are many country-year observations that received either no contentious aid or 100% contentious aid), we cannot make a perfect one-to-one translation of the coefficients in our primary logit-transformed models and these zero-one-inflated models. These models are run in multiple steps. The first step models the presence or absence of the dependent variable at 0%, followed by a model that explains the present or absence of a 100% outcome, followed by a model that explains variation for the range of outcomes between 1–99%. The coefficients apply to the final stage of the model and only describe the effects of our explanatory variables on the level of contentious or NGO-channeled aid, not whether or not it exists at 0% or 100%. As such, the effects of these coefficients are dampened from what we see in the main paper. However, the coefficients tend to move in the same direction in each model, showing that the effects are similar across functional forms.

Table 8: The effect of anti-NGO legislation on the proportion of OECD overseas development assistance (ODA) committed to contentious purposes in the following year ($H_2$), full models. Each cell contains the parameter's posterior median, the 95% credible interval, and the probability that the parameter is greater than one (in italics).

| | (1) | (2) | (3) |
|---|---|---|---|
| **Fixed part (odds ratios)** | | | |
| Total legal barriers$_{within}$ | 1.01 (0.97, 1.05); *0.74* | | |
| Total legal barriers$_{between}$ | 1.00 (0.94, 1.07); *0.54* | | |
| Barriers to advocacy$_{within}$ | | 0.96 (0.80, 1.15); *0.33* | |
| Barriers to advocacy$_{between}$ | | 0.94 (0.72, 1.21); *0.32* | |
| Barriers to entry$_{within}$ | | 1.03 (0.94, 1.12); *0.73* | |
| Barriers to entry$_{between}$ | | 1.07 (0.95, 1.20); *0.85* | |
| Barriers to funding$_{within}$ | | 1.02 (0.93, 1.12); *0.68* | |
| Barriers to funding$_{between}$ | | 0.97 (0.85, 1.11); *0.32* | |
| | 0.18 (0.17, 0.20); *0.00* | 0.18 (0.17, 0.20); *0.00* | 0.18 (0.17, 0.20); *0.00* |
| | 0.03 (0.02, 0.04); *0.00* | 0.03 (0.02, 0.04); *0.00* | 0.03 (0.02, 0.04); *0.00* |
| Civil society reg. env. (CSRE)$_{within}$ | | | 1.06 (1.02, 1.09); *1.00* |
| Civil society reg. env. (CSRE)$_{between}$ | | | 1.02 (0.97, 1.08); *0.78* |
| Polity IV (0–10)$_{within}$ | 1.03 (1.00, 1.05); *0.99* | 1.03 (1.00, 1.05); *0.98* | 0.99 (0.96, 1.02); *0.34* |

| | (1) | (2) | (3) |
|---|---|---|---|
| Polity IV (0–10)$_{between}$ | 1.04 | 1.04 | 1.02 |
| | (1.01, 1.08); *0.99* | (1.00, 1.07); *0.98* | (0.97, 1.08); *0.79* |
| GDP per capita (log)$_{within}$ | 0.90 | 0.89 | 0.90 |
| | (0.78, 1.02); *0.05* | (0.78, 1.02); *0.05* | (0.78, 1.03); *0.06* |
| GDP per capita (log)$_{between}$ | 0.84 | 0.84 | 0.84 |
| | (0.78, 0.89); *0.00* | (0.78, 0.90); *0.00* | (0.79, 0.89); *0.00* |
| Trade as % of GDP$_{within}$ | 1.00 | 1.00 | 1.00 |
| | (1.00, 1.00); *0.11* | (1.00, 1.00); *0.11* | (1.00, 1.00); *0.10* |
| Trade as % of GDP$_{between}$ | 1.00 | 1.00 | 1.00 |
| | (1.00, 1.00); *0.99* | (1.00, 1.00); *0.99* | (1.00, 1.00); *0.99* |
| Corruption$_{within}$ | 1.00 | 1.00 | 1.01 |
| | (0.97, 1.04); *0.57* | (0.97, 1.04); *0.56* | (0.97, 1.05); *0.69* |
| Corruption$_{between}$ | 1.04 | 1.04 | 1.04 |
| | (1.00, 1.08); *0.97* | (1.00, 1.07); *0.96* | (1.00, 1.08); *0.98* |
| Proportion of contentious aid | 4.83 | 4.78 | 4.80 |
| | (3.61, 6.43); *1.00* | (3.55, 6.38); *1.00* | (3.56, 6.40); *1.00* |
| Internal conflict in last 5 years | 1.01 | 1.01 | 1.03 |
| | (0.93, 1.10); *0.61* | (0.93, 1.10); *0.59* | (0.94, 1.12); *0.71* |
| Natural disasters | 0.99 | 0.99 | 0.99 |
| | (0.98, 1.01); *0.19* | (0.98, 1.01); *0.20* | (0.98, 1.01); *0.12* |
| After 1989 | 2.35 | 2.36 | 2.21 |
| | (1.75, 3.18); *1.00* | (1.75, 3.18); *1.00* | (1.64, 2.94); *1.00* |
| Constant | 0.06 | 0.06 | 0.07 |
| | (0.03, 0.13); *0.00* | (0.03, 0.12); *0.00* | (0.03, 0.13); *0.00* |
| **Random part (original coefficients)** | | | |
| Within-country variability | 0.35 | 0.36 | 0.35 |
| Within-year variability | 0.35 | 0.36 | 0.35 |
| **Model details** | | | |
| Imputed datasets (*m*) | 5 | 5 | 5 |
| N | 3922 | 3922 | 3922 |
| Posterior sample size | 4000 | 4000 | 4000 |
| **Notes** | | | |
| Zero-one-inflated beta models. Odds ratios reported. | | | |

Table 9: The effect of anti-NGO legislation on the proportion of US aid channeled through *domestic* NGOs in the following year ($H_3$), full models. Each cell contains the parameter's posterior median, the 95% credible interval, and the probability that the parameter is greater than one (in italics)

| | (1) | (2) | (3) |
|---|---|---|---|
| **Fixed part (odds ratios)** | | | |
| Total legal barriers$_{within}$ | 1.08 | | |
| | (0.99, 1.17); *0.96* | | |
| Total legal barriers$_{between}$ | 1.06 | | |
| | (0.97, 1.16); *0.90* | | |
| Barriers to advocacy$_{within}$ | | 1.01 | |
| | | (0.70, 1.45); *0.53* | |
| Barriers to advocacy$_{between}$ | | 1.35 | |
| | | (0.97, 1.86); *0.96* | |
| Barriers to entry$_{within}$ | | 0.85 | |
| | | (0.71, 1.02); *0.04* | |
| Barriers to entry$_{between}$ | | 1.11 | |
| | | (0.95, 1.30); *0.91* | |

|  | (1) | (2) | (3) |
|---|---|---|---|
| Barriers to funding$_{within}$ |  | 1.34 |  |
|  |  | (1.11, 1.61); *1.00* |  |
| Barriers to funding$_{between}$ |  | 0.91 |  |
|  |  | (0.76, 1.09); *0.15* |  |
|  | 0.38 | 0.39 | 0.39 |
|  | (0.35, 0.43); *0.00* | (0.35, 0.43); *0.00* | (0.35, 0.43); *0.00* |
|  | 0.05 | 0.05 | 0.05 |
|  | (0.03, 0.07); *0.00* | (0.03, 0.07); *0.00* | (0.03, 0.07); *0.00* |
| Civil society reg. env. (CSRE)$_{within}$ |  |  | 0.94 |
|  |  |  | (0.87, 1.04); *0.11* |
| Civil society reg. env. (CSRE)$_{between}$ |  |  | 0.98 |
|  |  |  | (0.89, 1.08); *0.36* |
| Polity IV (0–10)$_{within}$ | 0.94 | 0.94 | 0.96 |
|  | (0.88, 1.01); *0.05* | (0.88, 1.02); *0.06* | (0.88, 1.04); *0.15* |
| Polity IV (0–10)$_{between}$ | 1.01 | 1.01 | 1.00 |
|  | (0.95, 1.07); *0.62* | (0.95, 1.07); *0.58* | (0.92, 1.09); *0.52* |
| GDP per capita (log)$_{within}$ | 1.57 | 1.55 | 1.72 |
|  | (1.02, 2.28); *0.98* | (1.01, 2.28); *0.98* | (1.10, 2.50); *0.99* |
| GDP per capita (log)$_{between}$ | 1.17 | 1.17 | 1.17 |
|  | (1.05, 1.29); *1.00* | (1.05, 1.30); *1.00* | (1.05, 1.30); *1.00* |
| Trade as % of GDP$_{within}$ | 1.00 | 1.00 | 1.00 |
|  | (1.00, 1.01); *0.70* | (1.00, 1.00); *0.69* | (1.00, 1.01); *0.71* |
| Trade as % of GDP$_{between}$ | 1.00 | 1.00 | 1.00 |
|  | (0.99, 1.00); *0.06* | (0.99, 1.00); *0.03* | (0.99, 1.00); *0.04* |
| Corruption$_{within}$ | 1.05 | 1.06 | 1.03 |
|  | (0.97, 1.14); *0.88* | (0.98, 1.16); *0.92* | (0.95, 1.12); *0.76* |
| Corruption$_{between}$ | 1.02 | 1.02 | 1.02 |
|  | (0.96, 1.09); *0.75* | (0.95, 1.09); *0.69* | (0.95, 1.08); *0.69* |
| Proportion of aid to domestic NGOs | 4.79 | 4.51 | 4.58 |
|  | (3.34, 6.90); *1.00* | (3.12, 6.47); *1.00* | (3.15, 6.61); *1.00* |
| Internal conflict in last 5 years | 1.03 | 1.03 | 1.02 |
|  | (0.87, 1.22); *0.63* | (0.87, 1.23); *0.64* | (0.86, 1.22); *0.60* |
| Natural disasters | 0.98 | 0.98 | 0.98 |
|  | (0.96, 1.00); *0.05* | (0.96, 1.00); *0.02* | (0.96, 1.00); *0.06* |
| Constant | 0.01 | 0.01 | 0.01 |
|  | (0.00, 0.04); *0.00* | (0.00, 0.04); *0.00* | (0.00, 0.05); *0.00* |
| **Random part (original coefficients)** |  |  |  |
| Within-country variability | 0.59 | 0.59 | 0.60 |
| Within-year variability | 0.10 | 0.10 | 0.10 |
| **Model details** |  |  |  |
| Imputed datasets (*m*) | 5 | 5 | 5 |
| N | 1751 | 1751 | 1751 |
| Posterior sample size | 4000 | 4000 | 4000 |
| **Notes** |  |  |  |
| Zero-one-inflated beta models. Odds ratios reported. |  |  |  |

Table 10: The effect of anti-NGO legislation on the proportion of US aid channeled through *US-based and international* NGOs in the following year (H$_3$), full models. Each cell contains the parameter's posterior median, the 95% credible interval, and the probability that the parameter is greater than one (in italics)

|  | (1) | (2) | (3) |
|---|---|---|---|

**Fixed part (odds ratios)**

|  | (1) | (2) | (3) |
|---|---|---|---|
| Total legal barriers$_{within}$ | 0.99<br>(0.93, 1.06); *0.41* |  |  |
| Total legal barriers$_{between}$ | 1.02<br>(0.94, 1.11); *0.71* |  |  |
| Barriers to advocacy$_{within}$ |  | 0.91<br>(0.65, 1.28); *0.31* |  |
| Barriers to advocacy$_{between}$ |  | 1.07<br>(0.81, 1.42); *0.68* |  |
| Barriers to entry$_{within}$ |  | 1.10<br>(0.95, 1.27); *0.89* |  |
| Barriers to entry$_{between}$ |  | 1.00<br>(0.86, 1.16); *0.51* |  |
| Barriers to funding$_{within}$ |  | 0.94<br>(0.80, 1.10); *0.22* |  |
| Barriers to funding$_{between}$ |  | 1.03<br>(0.87, 1.21); *0.64* |  |
|  | 0.27<br>(0.24, 0.30); *0.00*<br>0.06<br>(0.04, 0.09); *0.00* | 0.27<br>(0.24, 0.30); *0.00*<br>0.06<br>(0.04, 0.09); *0.00* | 0.27<br>(0.24, 0.30); *0.00*<br>0.06<br>(0.04, 0.09); *0.00* |
| Civil society reg. env. (CSRE)$_{within}$ |  |  | 1.02<br>(0.94, 1.10); *0.69* |
| Civil society reg. env. (CSRE)$_{between}$ |  |  | 0.99<br>(0.91, 1.08); *0.41* |
| Polity IV (0–10)$_{within}$ | 0.92<br>(0.87, 0.97); *0.00* | 0.91<br>(0.86, 0.97); *0.00* | 0.91<br>(0.86, 0.97); *0.00* |
| Polity IV (0–10)$_{between}$ | 0.94<br>(0.89, 0.99); *0.01* | 0.94<br>(0.89, 0.99); *0.01* | 0.94<br>(0.87, 1.02); *0.06* |
| GDP per capita (log)$_{within}$ | 0.56<br>(0.44, 0.73); *0.00* | 0.56<br>(0.44, 0.71); *0.00* | 0.56<br>(0.44, 0.71); *0.00* |
| GDP per capita (log)$_{between}$ | 0.91<br>(0.83, 1.01); *0.03* | 0.91<br>(0.83, 1.00); *0.03* | 0.91<br>(0.83, 1.00); *0.03* |
| Trade as % of GDP$_{within}$ | 1.00<br>(0.99, 1.00); *0.05* | 1.00<br>(0.99, 1.00); *0.05* | 1.00<br>(0.99, 1.00); *0.05* |
| Trade as % of GDP$_{between}$ | 1.00<br>(1.00, 1.00); *0.84* | 1.00<br>(1.00, 1.01); *0.83* | 1.00<br>(1.00, 1.00); *0.82* |
| Corruption$_{within}$ | 1.06<br>(0.98, 1.15); *0.93* | 1.06<br>(0.98, 1.15); *0.91* | 1.07<br>(0.99, 1.16); *0.94* |
| Corruption$_{between}$ | 1.06<br>(1.00, 1.12); *0.97* | 1.06<br>(1.00, 1.13); *0.97* | 1.05<br>(1.00, 1.12); *0.96* |
| Proportion of aid to foreign NGOs | 3.61<br>(2.78, 4.67); *1.00* | 3.57<br>(2.75, 4.64); *1.00* | 3.62<br>(2.80, 4.71); *1.00* |
| Internal conflict in last 5 years | 1.09<br>(0.95, 1.26); *0.88* | 1.09<br>(0.95, 1.26); *0.89* | 1.09<br>(0.95, 1.25); *0.87* |
| Natural disasters | 1.01<br>(0.99, 1.02); *0.79* | 1.01<br>(0.99, 1.02); *0.78* | 1.01<br>(0.99, 1.02); *0.80* |
| Constant | 0.37<br>(0.12, 1.08); *0.03* | 0.37<br>(0.12, 1.10); *0.04* | 0.41<br>(0.15, 1.10); *0.04* |
| **Random part (original coefficients)** |  |  |  |
| Within-country variability | 0.53 | 0.54 | 0.53 |
| Within-year variability | 0.04 | 0.04 | 0.04 |
| **Model details** |  |  |  |
| Imputed datasets (*m*) | 5 | 5 | 5 |
| N | 1751 | 1751 | 1751 |
| Posterior sample size | 4000 | 4000 | 4000 |

|  | (1) | (2) | (3) |
|---|---|---|---|
| **Notes** | | | |
| Zero-one-inflated beta models. Odds ratios reported. | | | |

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