

Geopolitical Payoffs

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Motivation

- New era of geopolitics — trade restrictions, sanctions, foreign aid, changing alliances
 - Reminiscent of Cold War: the last era of explicit great-power competition
- Question: What are the economic payoffs of costly geopolitical actions?
- Hypothesis: Geopolitical actions increase market access
- Measurable cost: aid
 - Trump administration cut aid budget by 86%, dismantled USAID
 - Remaining aid should be “geared towards our national interests” (Rubio, 2025)

This Paper

- New data on bilateral aid

- First Cold War panel including USSR and China: digitized CIA Handbook + OECD DAC
- 26 donors, 133 recipients, annual 1962–1989

- Empirical facts (IV)

- \$1 of aid $\Rightarrow$ \$0.46 donor exports (contemporaneous); \$1.37 at 5 years
- Aid reduces bilateral geopolitical distance; crowds out rival-bloc market access

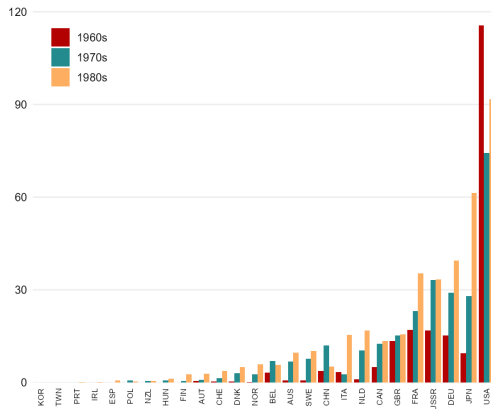
- Quantification

- Multi-country trade model calibrated to Cold War data
- 86% US aid cut: US welfare +0.15%; market access offsets 27% of direct gain
- Alignment effects too small to shift recipients between blocs

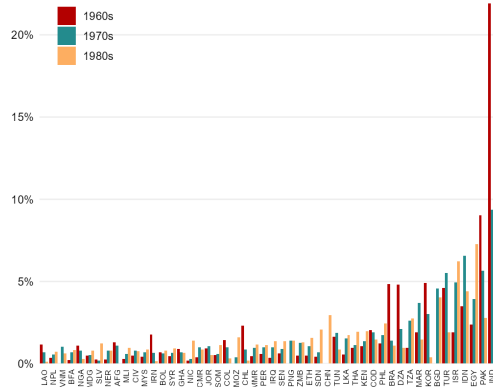
Related Literature

- **Aid and trade:** [Wagner \(2003\)](#), [Nowak-Lehmann et al. \(2009\)](#), [Baldwin \(1966\)](#), [Jepma \(1991\)](#)
 - Contribution: causal IV identification; first panel with Soviet/Chinese flows
- **Geopolitics and market access:** [Berger et al. \(2013\)](#), [Dreher et al. \(2015\)](#), [Meyer & Wesseler \(2026\)](#)
 - Contribution: quantify welfare payoffs of market access
- **Colonial trade and imperialism:** [Bonfatti \(2017\)](#), [Bonfatti & Cosar \(2022\)](#), [Bonfatti & Brey \(2024\)](#)
 - Contribution: same commercial forces operate through Cold War foreign aid
- **Geoeconomics and fragmentation:** [Gopinath \(2025\)](#), [Bonadio et al. \(2025\)](#), [Kleinman et al. \(2024\)](#), [Xiang \(2025\)](#)
 - Contribution: empirical measurement of payoffs from preceding era of bloc competition

Cold War Aid Flows



(A) Aid Disbursed by Donor Country



(B) Aid Received as Share of Total Global Aid

- US largest donor by far: 2–3× next largest (Japan, USSR, Germany, UK, France)
- Top recipients: India, Pakistan, Egypt, Indonesia, Israel, Turkey

Empirical Specification

Local projection:

$$\frac{\text{Trade}_{od,t+h}}{\text{GDP}_{d,t-3}} = \beta^h \left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}} \right) + \gamma \left(\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}} \right) + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}$$

- β^h : impulse response at horizon h ; FE: origin $\times$ year, destination $\times$ year, bilateral

IV (Rajan-Subramanian):

$$\text{IV}_{od,t} = \hat{\lambda}_{od,t-3} \times \frac{\sum_{j \neq d} \text{Aid}_{oj,t}}{\text{GDP}_{d,t-3}}, \quad \hat{\lambda}_{od,t-3} = \frac{\widehat{\text{Aid}}_{od,t-3}}{\sum_d \widehat{\text{Aid}}_{od,t-3}}$$

- $\widehat{\text{Aid}}_{od,t}$: Predicted from PPML gravity (distance, colonial ties, income, Cold War ideology)
- Baseline: shares lagged 3 years; leave-one-out shift

Fact 1: Aid Raises Donor Market Access

	$h = 0: \frac{\text{Trade}_{od,t}}{\text{GDP}_{d,t-3}}$				$h = 5: \frac{\text{Trade}_{od,t+5}}{\text{GDP}_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}}$ (orig. $\times$ yr SE)	0.158 (0.077)	0.130 (0.074)	0.860 (0.119)	0.464 (0.121)	0.026 (0.025)	0.012 (0.025)	1.545 (0.314)	1.367 (0.302)
$\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}}$ (orig. $\times$ yr SE)		0.500 (0.081)		0.574 (0.132)		0.256 (0.080)		0.223 (0.081)
Orig. $\times$ Yr, Dest. $\times$ Yr, Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
KP- F			38.55	37.09			36.53	37.01
AR- p			0.00	0.00			0.00	0.00
AR-CI 90%			(0.70, 1.08)	(0.30, 0.67)			(1.08, 2.06)	(0.92, 1.87)
Obs.	58,565	58,471	51,615	51,534	56,968	56,540	50,224	49,865

► First Stage

Fact 2: Aid Reduces Geopolitical Distance

Outcome: bilateral UN ideal-point distance $|\text{IdealPt}_o - \text{IdealPt}_d|$

	$h = 0$: Geopol. Dist. $_{od,t}$				$h = 5$: Geopol. Dist. $_{od,t+5}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}}$	-1.569	-0.451	-10.842	-5.296	-0.491	-0.372	-5.643	-4.965
(orig. $\times$ yr SE)	(0.354)	(0.128)	(4.448)	(2.589)	(0.188)	(0.220)	(1.789)	(1.995)
Geopol. Dist. $_{od,t-1}$		0.702		0.705		0.065		0.074
(orig. $\times$ yr SE)		(0.027)		(0.027)		(0.022)		(0.023)
Orig. $\times$ Yr, Dest. $\times$ Yr, Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
KP- F			25.87	24.14			43.08	41.11
AR- p			0.00	0.02			0.00	0.01
AR-CI 90%			(-19.59, -4.89)	(-10.38, -1.84)			(-8.59, -3.25)	(-8.26, -2.30)
Obs.	50,112	48,737	44,790	43,535	50,574	47,621	45,362	42,735

Fact 3: Aid Diverts Market Access from Rival Bloc

Outcome: recipient imports from the *opposing* Cold War bloc

	$h = 0: \frac{\text{Trade}_{od,t}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}}$				$h = 5: \frac{\text{Trade}_{od,t+5}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}}$	-0.011	-0.006	-0.135	0.091	0.003	0.003	-2.075	-1.882
(orig. $\times$ yr SE)	(0.027)	(0.024)	(0.281)	(0.278)	(0.012)	(0.012)	(0.625)	(0.582)
$\text{Aid}_{\text{Other-Bloc}}^{\text{Other-Bloc}}, \text{Trade}_{t-1}^{\text{Other-Bloc}}$ control	✓	✓	✓	✓	✓	✓	✓	✓
Orig. $\times$ Yr, Dest. $\times$ Yr, Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
Obs.	58,908	58,880	51,894	51,866	57,141	56,983	50,389	50,231

- $h=0$: no displacement
- $h=5$: \$1 aid $\Rightarrow$ **-\$1.88** rival-bloc imports — aid reshapes competitive landscape within recipient markets

Environment

Setup: N countries, J sectors (Agr., Comm., Mfg., NT); builds on Levchenko & Zhang (2016) and Huo et al. (2025)

Household:

$$\begin{aligned} \max_{\{F_{dj}\}} \mathcal{F}_d &= \prod_{j=1}^J F_{dj}^{\zeta_{dj}} \\ \text{s.t.} \quad \sum_{j=1}^J P_{dj}^f F_{dj} &= \underbrace{W_d L_d}_{\text{wage income}} + \underbrace{\sum_o \text{Aid}_{od}}_{\text{aid received}} - \underbrace{T_d}_{\text{tax}} + D_d \equiv \mathcal{I}_d \end{aligned}$$

- Sectoral consumption shares ζ_{dj}
- Price index: $P_d = \prod_j \left(P_{dj}^f / \zeta_{dj} \right)^{\zeta_{dj}}$
- Government balances budget: $T_o = \sum_d \text{Aid}_{od}$

Production & Trade

Armington aggregators (substitution elasticity ε):

$$Y_{dj}^f = \left[\sum_o \mu_{o,dj}^{1/\varepsilon} (Y_{o,dj})^{(\varepsilon-1)/\varepsilon} \right]^{\varepsilon/(\varepsilon-1)}, \quad P_{dj}^f = \left[\sum_o \mu_{o,dj} (\tau_{o,dj} P_{oj})^{1-\varepsilon} \right]^{1/(1-\varepsilon)}$$

- Trade shares: $\pi_{o,dj} = \mu_{o,dj} (\tau_{o,dj} P_{oj})^{1-\varepsilon} / \sum_{\ell} \mu_{\ell,dj} (\tau_{\ell,dj} P_{\ell j})^{1-\varepsilon}$

Production:

$$Y_{dj} = Z_{dj} L_{dj}^{\eta_j} \left(\prod_k X_{k,dj}^{\gamma_{k,dj}} \right)^{1-\eta_j}, \quad P_{dj} \propto Z_{dj}^{-1} W_d^{\eta_j} \prod_k (P_{dk}^f)^{\gamma_{k,dj} (1-\eta_j)}$$

Aid and Bilateral Trade Costs

Baseline: aid lowers bilateral iceberg costs:

$$\tau_{od} = \tilde{\tau}_{od} \times \text{Aid}_{od}^{-\chi_{od}}$$

$$\chi_{od} = \frac{\hat{\beta}^{CUM,5}}{\varepsilon - 1} \times \frac{\text{Aid}_{od}}{\text{Trade}_{od}}$$

- US χ_{od} : mean 0.31, median 0.17 USSR χ_{od} : mean 0.59, median 0.71

Extended (adds Fact 3 trade diversion):

$$\tau_{od} = \tilde{\tau}_{od} \times \text{Aid}_{od}^{-\chi_{od}} \times \left(\sum_{k \neq o} \text{Aid}_{kd} \right)^v$$

- $v = 0.06$ calibrated to IHS aid / log competing-bloc trade estimates

Counterfactual: 86% Reduction in US Aid Budget

	US		Recipients, Mean (N=96)		USSR
	Real Income	Real Wage	Real Income	Import Share	Real Income
$\chi = \chi_{od}$	0.150%	-0.005%	-1.95%	-36.90%	
$\chi = 0$	0.205%	0.050%	-1.22%	-2.86%	
$\chi = \chi_{od}, \nu = 0.06$	0.150%	-0.005%	-1.93%	-36.92%	0.0053%
NB: SS US Aid/US Income: 0.180%					

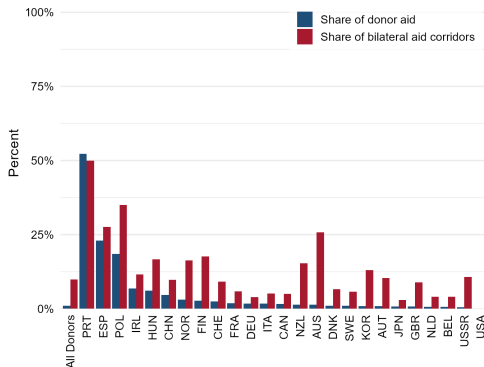
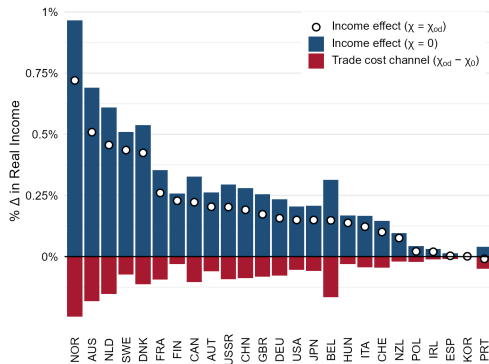
- Market access offsets 27% of direct gain: $\Delta \text{welfare} = 0.150\%$ vs. 0.205% under $\chi=0$
- Recipient losses amplified by higher trade costs on top of lost transfer

Counterfactual: 86% Reduction in USSR Aid Budget

	USSR		Recipients, Mean (N=56)		US
	Real Income	Real Wage	Real Income	Import Share	Real Income
$\chi = \chi_{od}$	0.203%	-0.024%	-0.67%	-58.46%	
$\chi = 0$	0.294%	0.066%	-0.37%	-4.92%	
$\chi = \chi_{od}, \nu = 0.06$	0.205%	-0.021%	0.12%	-59.17%	0.0131%
NB: SS USSR Aid/USSR Income: 0.26%					

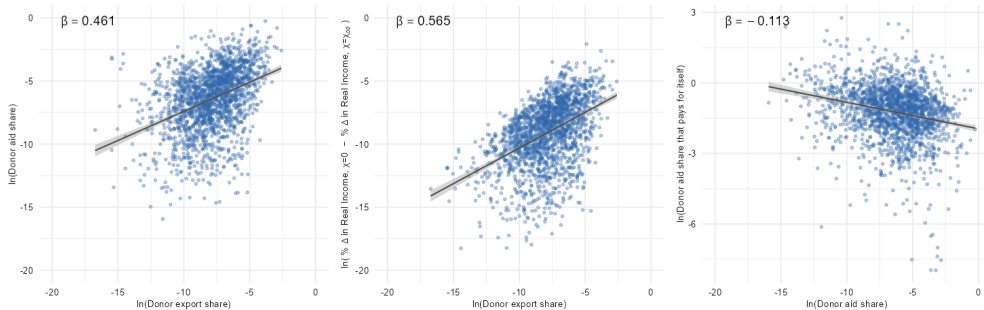
- **Market access offsets 31%:** 0.203% vs. 0.294% under $\chi=0$
- Soviet recipients less integrated: USSR import share 0.48% of gross output vs. 2.1% for US recipients
- With diversion ($\nu=0.06$): avg Soviet recipient welfare **turns positive** — Western-bloc imports cheapen more than transfer lost

Market Access Channel Across All Donors



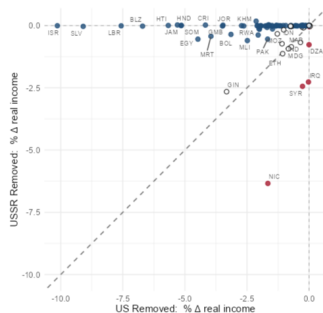
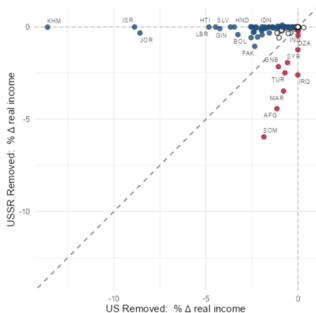
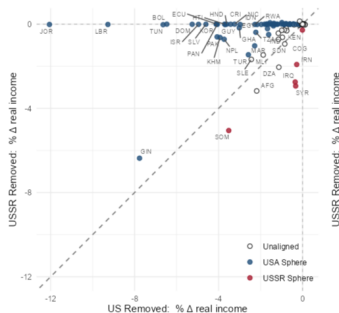
- Median donor defrays $\approx 27\%$ of aid cost; Belgium 53%; Portugal, Korea, Spain: near 100% (smallest donors)
- 9.8% of donor-recipient pairs self-financing; only 1.0% of total aid dollars

Aid Volumes vs. Market Access Gains



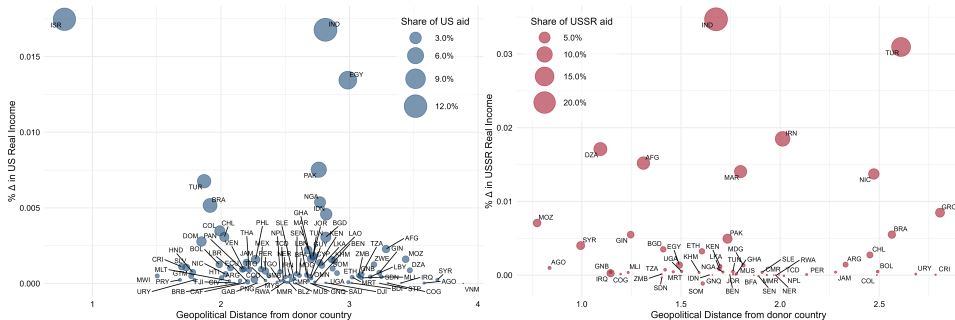
- Aid goes to more important trade partners ...
- ... but the share of aid that pays for itself if anything falls with aid volume

Spheres of Influence: US vs. USSR



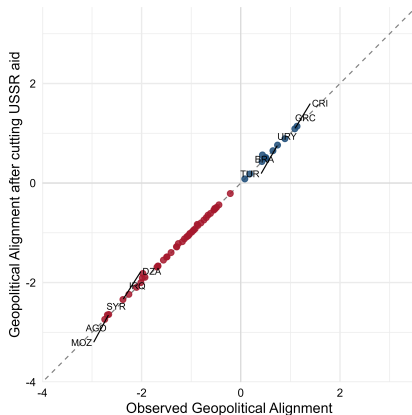
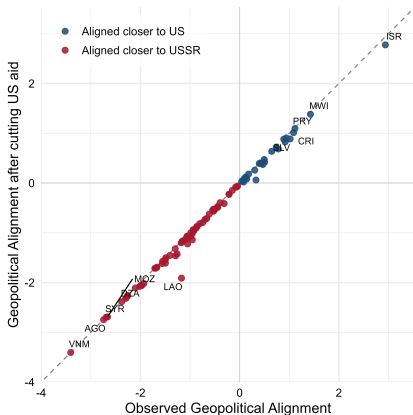
- US sphere dominant: 63 total vs. 6 for USSR; Soviet sphere peaks in 1970s (10), collapses to 5 in 1980s
- India, Turkey receive large aid from both — remain unaligned

Costliest Aid: Middle-Geopolitical-Distance Recipients



- Costliest recipients (large bubbles) cluster at *intermediate* geopolitical distance
- Consistent with aid-as-policy-purchase: returns highest for contested swing-state recipients

Did Aid Meaningfully Shift UN Alignment?



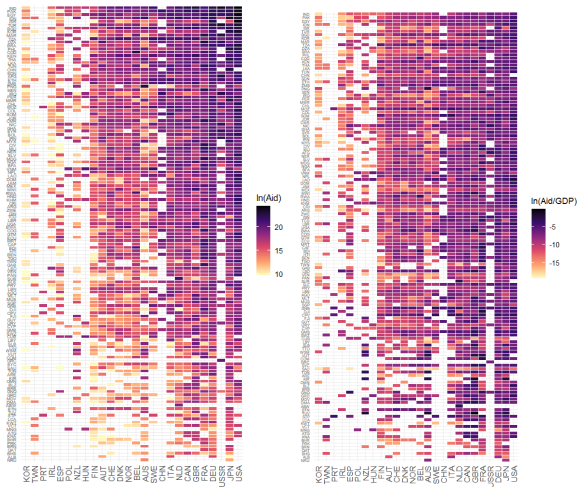
- Implied shift = 8.6% of baseline distance on average ($\hat{\beta}_{gp} = -5.296$)
- No recipient switched camps for either superpower — aid insufficient to flip geopolitical alignment

Conclusion

- Market access motive for foreign aid: Cold War panel, 26 donors, 133 recipients
- **Empirically:** \$1 aid $\Rightarrow$ \$0.46 exports (contemporaneous), \$1.37 at 5 years; reduces geopolitical distance; crowds out rival-bloc trade
- **Quantitatively:** Market access offsets $\approx 27\text{--}31\%$ of aid cost for US and USSR; virtually no aid fully self-financing
- **Geopolitical payoffs:** Aid moved UN alignment toward donors, but insufficient to flip any recipient across blocs
- Market access benefits real and meaningful, but account for minority of aid's cost — measuring the remaining two-thirds: fruitful avenue for future work

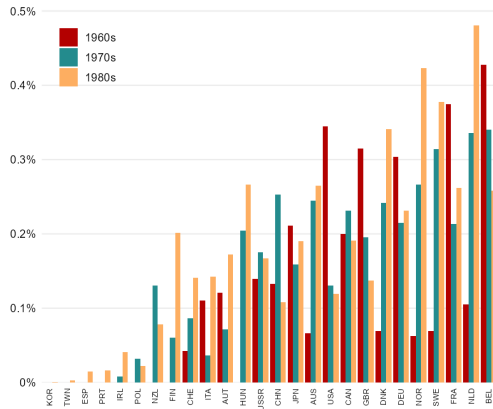
Backup Slides

Donor-Recipient Aid Matrix: Cumulative Aid and Aid as a Share of Recipient GDP

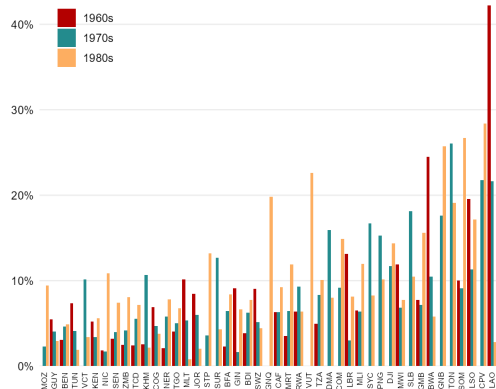


- Soviet and Chinese aid vectors notably sparser than US and Western donors

Coldwar Aid Flows as a Share of GDP



(A) Aid Disbursed as Percent of Donor GDP



(B) Aid Received as Percent of Recipient GDP

Aid Prediction

$$\text{Aid}_{od,t} = \exp\left(\gamma^o \mathbf{X}_{o,t} + \gamma^d \mathbf{X}_{d,t} + \beta^g \mathbf{X}_{od}^g + \beta^p \mathbf{X}_{odt}^p + \beta^{hist} \mathbf{X}_{od}^{hist}\right) + \nu_{od,t}$$

	Aid			Aid	
	Coef.	SE		Coef.	SE
<i>Geography</i>			<i>Political Ideology</i>		
ln(Distance)	-0.433	(0.061)	Prop. Left (Decade)	0.425	(0.141)
Common Language	0.824	(0.071)	Prop. Right (Decade)	-0.230	(0.373)
Contiguity	-0.422	(0.298)	Right × US	1.095	(0.410)
Ever Colony	0.269	(0.140)	Right × Western	0.885	(0.383)
<i>Economic Fundamentals</i>			Left × USSR	0.545	(0.233)
ln(GDP p.c.) Origin	0.646	(0.087)	<i>Religion</i>		
ln(Population) Origin	0.920	(0.035)	Protestant	0.230	(0.253)
ln(GDP p.c.) Dest.	-0.102	(0.029)	Catholic	-0.692	(0.095)
ln(Population) Dest.	0.537	(0.020)	<i>Colonial Relationships</i>		
<i>Geopolitical Influence</i>			PRT Colony × PRT	-0.647	(0.964)
US Influence (Decade)	-0.162	(0.104)	GBR Colony × GBR	0.194	(0.191)
USSR Influence (Decade)	-0.006	(0.097)	USA Colony × USA	-0.543	(0.261)
US Influence × US	0.144	(0.074)	ESP Colony × ESP	-1.330	(0.543)
US Inf. × Western	0.052	(0.068)	NLD Colony × NLD	2.159	(0.193)
USSR Inf. × USSR	0.395	(0.205)	FRA Colony × FRA	1.049	(0.158)
			BEL Colony × BEL	2.934	(0.189)
			ITA Colony × ITA	-0.266	(0.301)
			JPN Colony × JPN	0.023	(0.353)
Observations: 63,378			Pseudo R ² : 0.515		

Notes. PPML regression of real bilateral aid flows on gravity and political controls before 1989. SE's clustered at the iso-year level.

First Stage

	$h = 0: \frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}}$		$h = 5: \frac{\text{Aid}_{od,t+5}}{\text{GDP}_{d,t-3}}$	
	(1)	(2)	(3)	(4)
$\hat{\lambda}_{od,t-3} \times \frac{\sum_{j \neq d} \text{Aid}_{oj,t}}{\text{GDP}_{d,t-3}}$	0.285 (0.046)	0.269 (0.044)	0.287 (0.048)	0.280 (0.046)
$\left(\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}} \right)$		0.086 (0.020)		0.079 (0.019)
Origin $\times$ Year FE	✓	✓	✓	✓
Destination $\times$ Year FE	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓
<i>SE's clustered at origin $\times$ year level</i>				
N of Clusters	556	554	551	539
Adj. R^2	0.495	0.504	0.519	0.529
Observations	51,615	51,534	50,224	49,865

Notes: Standard errors clustered at the origin-year level are reported in parentheses ($\cdot$). The constant is suppressed.

Calibration Details

- **Bilateral** χ_{od} : $\beta^{CUM,5} \times \text{Aid}_{od}/\text{Trade}_{od}$
 - US: range 0–0.171, mean/median 0.07
 - USSR: range 0.01–0.684, mean 0.24, median 0.19 — higher due to thinner trade ties
- **IO shares**: Long-Run WIOD + historical UNIDO tables for 25 developing countries (≈ 1970 –75); regional averages for rest
- **Alternative** $\varepsilon=5$: donor gains and recipient losses attenuated, qualitative conclusions unchanged

▶ Back