

Geopolitical Payoffs*

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Abstract

We estimate and quantify the role of foreign aid in increasing donors' market access. Using newly digitized data on aid flows from countries including the Soviet Union and China during the Cold War period (1962-1989), we find that higher bilateral aid significantly raises exports from the donor to the recipient. This suggests that foreign aid is associated with improved market access for the donor. We quantify the market access benefits of foreign aid using a trade model calibrated to the Cold War period. Welfare gains to the donors from improved market access amount to 27-29% of the cost of disbursement.

Keywords: Foreign aid, market access

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1. INTRODUCTION

The (relatively) rules-based world economic order of the post-Cold-War era is breaking down, replaced by a more unvarnished form of great power rivalries. This new environment brings to the fore the many potentially costly actions taken by governments in their relations with other countries, such as political and economic alliances, foreign aid, sanctions, military buildups and strikes, and trade restrictions, to name a few. These developments are generating renewed interest in studying the intersection between the economic and political spheres in international relationships. While this research program is building at a rapid pace, an important gap in our knowledge is the measurement and quantification of either the costs, or the benefits of these ubiquitous “geopolitical” actions.

This paper uses data on international aid and trade flows to measure and quantify the payoffs from geopolitical actions. We use the Cold War period – the preceding historical era of great power rivalry – as a laboratory to study these questions.¹ We assemble a novel dataset of bilateral aid flows covering 1962–1989, combining newly digitized data on Soviet and Chinese aid flows from CIA intelligence archives and other historical records with the OECD Development Assistance Committee (DAC) data for Western donors. The data span 26 donor and more than 100 recipient countries. We merge these aid data with bilateral trade data from CEPII and the IMF Direction of Trade Statistics, resulting in a panel of bilateral aid and trade flows at an annual frequency.

We begin by estimating the impact of aid on the donor country’s market access in the recipient country. A plausibly exogenous increase in bilateral aid disbursements leads to a statistically significant and economically meaningful increase in exports from the donor country to the recipient. A dollar of disbursed bilateral aid increases contemporaneous exports from the donor to the recipient by 0.46 dollars according to our preferred specification. The effect is persistent: five years after the aid shock, the effect rises to 1.37 dollars. This finding is of course consistent with a body of narrative evidence about the Cold War period, going back to at least [Baldwin \(1966\)](#). The market access motive for aid is also newly relevant. The Trump administration dismantled the United States Agency for International Development (USAID), which served as the primary vehicle for American development assistance since 1961. As a result, approximately 86 percent of US foreign aid disbursements were terminated. Administration officials were explicit that the remaining aid budget should be “geared towards our national interests” ([Rubio, 2025](#)).²

To address endogeneity concerns, we construct a shift-share instrument for bilateral aid flows, building on [Rajan and Subramanian \(2007, 2008, 2011\)](#). The instrument combines predicted bilateral aid shares—estimated from a gravity equation for aid flows that exploits plausibly exogenous variation

¹[Gopinath et al. \(2025\)](#) argue that the current fracturing of the global economy bears a meaningful resemblance to the Cold War era, when the United States, the Soviet Union, and ideologically aligned partner countries competed for economic and political influence over a large set of non-aligned and developing countries, deploying foreign aid, trade preferences, and security commitments as instruments of geopolitical competition.

²This transactional agenda is already being put into practice: the Trump administration has explicitly linked the continuation of HIV aid to Zambia to increased US access to the country’s mineral resources, a concrete example of aid being deployed to secure commercial access in a recipient country ([The New York Times, 2025](#)).

in donor-recipient characteristics including distance, colonial history, income levels, and political ideology—with the total aid budget disbursed by the donor country in a given year. The identifying assumption, following the exogenous-shares interpretation of [Goldsmith-Pinkham, Sorkin, and Swift \(2020\)](#), is that conditional on origin-year, destination-year, and bilateral fixed effects, the predicted shares are as good as randomly assigned. We use a leave-one-out variant of the instrument, which satisfies the exclusion restriction exactly under standard assumptions about measurement error.³

We next establish two additional empirical results. First, the market access gain is also accompanied by a reduction in geopolitical distance between the donor and recipient measured by alignment in UN General Assembly voting, an effect that persists for up to 5 years after the aid shock. Second, there is suggestive evidence that aid reduces market access of countries from the opposite Cold War bloc (Communist vs. Western). Thus, market access gains for the donor are accompanied by reduced market access of geopolitical competitors (beyond the effects operating through multilateral resistance).

The reduced-form empirical findings together paint a consistent picture in which foreign aid serves as a geopolitical instrument that reshapes the pattern of bilateral economic relationships in ways that favor the donor. However, these estimates by themselves cannot be used to quantify the donor’s market access benefits. We next calibrate a quantitative multi-country model to the Cold War period production and trade data for 26 donor countries including the USSR and China, and 101 recipient countries. To this model we add directly measured aid flows, and a market access benefit to the donor (lower bilateral export costs) of disbursing aid. We calibrate the parameter governing the market access effect using our econometric estimates.

Our counterfactual exercises simulate an 86% reduction in the foreign aid budgets of the United States and the Soviet Union – matching the proportion of the recent USAID cuts – and trace the welfare consequences for both donors and recipients. Under our preferred values of the trade elasticity, the trade-weighted trade cost increase experienced by the US with respect to the aid recipient countries is about 12%. The net impact on donor welfare from canceling aid weighs the direct effect of having more resources to consume domestically against the loss of market access.

Our main quantitative finding is that in the 1970s (the middle decade of our sample), canceling aid increases US welfare by 0.15%. This total is composed of a 0.21% direct consumption benefit, and a –0.06% welfare change from deteriorated market access. Thus, aid defrays 27% of its own cost through market access benefits it confers. Part of the reason the market access welfare gains are not larger is that the recipient countries tend to be small in terms of total GDP. The results for the USSR are similar quantitatively. The USSR gains 0.20% from reducing its aid by 86% in the 1970s, decomposed

³The OLS bias is ambiguous: donor countries may start giving more aid to trading partners that are about to become more important (upward bias) or to partners with whom the trade relationship is about to deteriorate (downward bias). In addition, aid flows may be measured with error, especially for the USSR and China (downward attenuation bias). Our IV estimates are larger than the OLS estimates, consistent with downward attenuation bias of OLS from measurement error being most important. We perform extensive robustness checks, including alternative aid measures, and variants that lag the instrument shares by one versus three years.

into the 0.29% higher income and a loss of -0.09% from lower market access. Once again, just under one third of USSR aid paid for itself with market access.

To summarize, improved market access cannot account for the majority of the cost of aid to the superpowers. We next perform a broader search for foreign aid's benefits. First, we extend the analysis to all 26 donor countries. An average donor's market access benefits account for 27% of the cost of its aid, a very similar proportion as the US and the USSR. There are very few donor countries in which aid more or less "pays for itself" with market access: Spain, Portugal, and South Korea. We then examine bilateral aid relationships, in the hopes of finding donor-recipient pairs in which aid pays for itself. In the full cross-section of donor-recipient pairs, 9.8% of pairs, accounting for 1.0% of total global aid, provide market access benefits to the donor that equal or exceed the cost of aid. All in all, it does not appear that significant segments of global aid are demonstrably self-interested, as measured by market access benefits.

We then examine whether aid can have a substantial effect on geopolitical alignment, reflected in the UN vote similarity. To set the stage, we show that in the cross-section of recipients, the cost of aid to the donor and UN vote alignment were essentially uncorrelated. Furthermore, for both the US and the USSR, the costliest countries to disburse aid to had intermediate levels of geopolitical alignment, most prominently India and Turkey. Our empirical exercises provide estimates of how much geopolitical alignment changes with aid. Applying those, we find that observed aid did very little to shift the balance of alignment in the UN. For example, US and Soviet aid never flipped the sign of a recipient's net support for the donor. That is, aid did not lead any country to "switch camps."

In sum, our quantification of the economic and geopolitical benefits of aid finds that while benefits are clearly discernible, they do not appear to fully justify the cost of aid to the Cold War era donors. Thus, further efforts are needed to comprehensively measure possible alternative benefits of costly geopolitical actions.

Related literature. This paper contributes to several research programs. The most directly related is the empirical literature on the effects of foreign aid on trade. There is substantial narrative evidence that donor countries tied aid disbursed to recipient countries to increased market access (Baldwin, 1966; Jepma, 1991; Dannehl, 1995; Bach, 2003), but comparatively less formal econometric evidence. Early work by Wagner (2003) uses a gravity model estimated via OLS and finds each dollar of aid generates over a dollar of exports in return, while Nowak-Lehmann et al. (2009) uses time-series techniques to find an export-enhancing effect of bilateral aid for Germany.⁴ Our empirical contribution is twofold. First, we construct a novel dataset that incorporates Soviet and Chinese aid flows, which were not included in previous work. This is critical for studying the Cold War, an era of some of the largest and most strategically motivated aid programs in history. Second, we tackle endogeneity using a shift-share instrumental variable on bilateral, time-varying data, allowing us to recover causal

⁴More broadly related is the body of empirical work on the growth and welfare consequences of foreign aid, that finds mixed results (see, among others, Burnside and Dollar, 2000; Easterly, Levine, and Roodman, 2004; Rajan and Subramanian, 2007, 2008, 2011; Dreher and Langlotz, 2020).

estimates of the trade cost reduction associated with foreign aid.

Second, we contribute to the research program on the interactions between geopolitics and market access. Seminal work by [Martin, Mayer, and Thoenig \(2008\)](#) examines the impact of trade linkages on military conflict.⁵ [Berger et al. \(2013\)](#) provide empirical evidence that US covert and overt interventions during the Cold War increased bilateral trade with targeted countries. [Dreher and Fuchs \(2015\)](#) find that political considerations shape China's aid allocation in ways broadly comparable to traditional Western donors, suggesting that the use of aid as an instrument of geopolitical and commercial statecraft is a general feature of donor behavior rather than unique to the United States. [Meyer and Wesseler \(2026\)](#) document that US foreign aid increases geopolitical support for the United States, a finding consistent with one of our empirical results. A related theoretical and empirical literature models colonial empires as political structures designed to appropriate the gains from colonial trade, showing that the value of empire and the patterns of imperialism were shaped by the same commercial motives – market access and trade diversion – that we document empirically for Cold War foreign aid (see, e.g. [Bonfatti, 2017](#); [Bonfatti and Coşar, 2022](#); [Bonfatti and Brey, 2024](#)). We explicitly tie foreign aid to trade flows, and quantify the welfare benefit of improved market access to the donor.

Third, this paper connects to the emerging literature on geoeconomics and the fragmentation of the global economy. [Gopinath et al. \(2025\)](#) and [Bonadio et al. \(2025\)](#) document a new “Cold War” in trade patterns following the Russia-Ukraine conflict and escalating US-China tensions, finding that geopolitical blocs are increasingly trading within rather than across ideological lines; while [Kleinman, Liu, and Redding \(2024\)](#) document that countries become more politically aligned when they are more economically aligned. [Fan, Wo, and Xiang \(2025\)](#) develop a method to measure bilateral geopolitical tensions, and quantify their impact on trade. Papers related to great power competition in general equilibrium in the Cold War and the present period include [Mattoo, Ruta, and Staiger \(2024\)](#), [Becko and O'Connor \(2025\)](#), [Becko, Grossman, and Helpman \(2025\)](#), [Clayton et al. \(2025\)](#), [Clayton, Maggiori, and Schreger \(2025, 2026\)](#), and [Meyer and Wesseler \(2026\)](#), among others. In most of this body of work, geopolitical motives or payoffs are exogenously specified features of preferences, rather than endogenously arising within the economic block of the model. Our focus is on empirical measurement and model quantification of these payoffs. We work with the Cold War period to extract lessons relevant to the ongoing era of trade fragmentation and power politics. While the existing literature emphasizes the motives and actions of hegemon, our results are not confined to major powers. We thus show that soft power tools such as foreign aid also allow “middle powers” to expand market access.

The remainder of the paper is organized as follows. Section 2 describes our data, presents summary statistics on Cold War aid flows, and reports the regression estimates. Section 3 lays out the quantitative trade model. Section 4 describes the calibration and presents the counterfactual analysis. Section 5 concludes. Further details on data, estimation, and quantification are collected in

⁵See also [Martin, Mayer, and Thoenig \(2012\)](#), [Rohner, Thoenig, and Zilibotti \(2013\)](#), [Mayer, Méjean, and Thoenig \(2025, 2026\)](#), as well as [Thoenig \(2024\)](#) for a synthesis.

the Appendix.

2. DATA AND ECONOMETRIC ESTIMATES

2.1 Data

For estimating the implications of aid for market access, we require panel data on bilateral aid flows and bilateral trade. During the Cold War the Soviet Union was an important geopolitical player and a major source of foreign aid. Data on Soviet and Chinese aid flows are not available from standard sources. Our primary source of information on Cold War era aid by the Soviet Union and China is the CIA Handbook of Economic Statistics ([Central Intelligence Agency, 1962–1989](#)) and [Carter \(1971\)](#), digitized by us. Obtaining these data is important for studying the link between foreign aid and market access motives during this period.⁶ For all other countries, aid data come from the OECD’s DAC2A database ([OECD, 2025](#)), which provides bilateral official development assistance (ODA) data to developing countries and territories, as well as multilateral agencies for Development Assistance Committee (DAC) member countries and participant countries.⁷ We use the series on overall ODA bilateral disbursements, which contains ODA grant disbursements as well ODA loans disbursed net of interest and loan repayments that have at least a 25 percent grant component. We use this disbursement series because it aligns closely with the OECD’s definition of ODA.⁸ One limitation of this dataset is that bilateral aid disbursements cannot be disaggregated when they are channeled through the multilateral agencies.⁹

Bilateral trade data come from the CEPII Gravity Database ([Conte, Cotterlaz, and Mayer, 2022](#)), which contains bilateral data reported by origin and destination country from UN-Comtrade and the IMF, cleaned to reconcile importer and exporter reports of trade flows. We supplement these trade data with importer and exporter trade flows reported by the IMF’s Direction of Trade Statistics. Appendix A.1 provides further detail on our data construction process. In our empirical analysis, we additionally use real GDP data primarily from CEPII ([Conte, Cotterlaz, and Mayer, 2022](#)), population data from the Maddison Project ([Bolt and Van Zanden, 2023](#)), bilateral geopolitical influence data for the US and the Soviet Union alongside country pairs during the Cold War from [Berger et al. \(2013\)](#), political leader ideology data from [Herre \(2022\)](#), religion data from the World Religion Project ([Maoz and Henderson, 2019](#)), and standard dyadic gravity variables from CEPII ([Mayer and Zignago, 2011](#)).

⁶Historical evidence suggests the Soviet Union often had an explicit market access goals tied to its aid flows, underscoring the importance of including it in the analysis ([Carter, 1971](#); [Dannehl, 1995](#); [Bach, 2003](#)).

⁷The DAC is the primary body within the OECD responsible for coordinating and setting standards for development aid among its 34 member countries. Since 1969, it has been considered the main arbiter of what does and does not count as ODA. For more information, see the [OECD Development Assistance Committee](#).

⁸Despite a change in the definition of ODA by the DAC ([Hynes and Scott, 2013](#)), the benefits of using their definition is that it captures a multitude of channels in which foreign aid flows likely influences bilateral geopolitical relations and trade flows, such as debt forgiveness, rescheduled interest payments, loans with low interest requirements, etc.

⁹This may be relevant for our analysis because often aid projects are administered jointly with the support of multilateral institutions like the World Bank. Therefore, although the funds are disbursed to the World Bank, the aid funds come predominantly from specific country.

Appendix Table A.1 contains our full country sample separated by donor and recipient countries. Note that we include Communist bloc countries Hungary and Poland as donors because data are readily available from the OECD DAC database. Communist bloc countries likely had similar strategic motivations for using foreign aid during the Cold War as the Soviet Union. We drop Qatar, the United Arab Emirates and Kuwait, that generally gave aid to other Muslim countries for ideological purposes, which is outside the scope of our analysis.¹⁰ This leaves us with 26 donor countries in total. On the recipient side, we only include bilateral pairs once the recipient country is fully independent since flows from colonizers to colonies are also outside the scope of the analysis. This leaves us with 133 recipient countries in total.¹¹

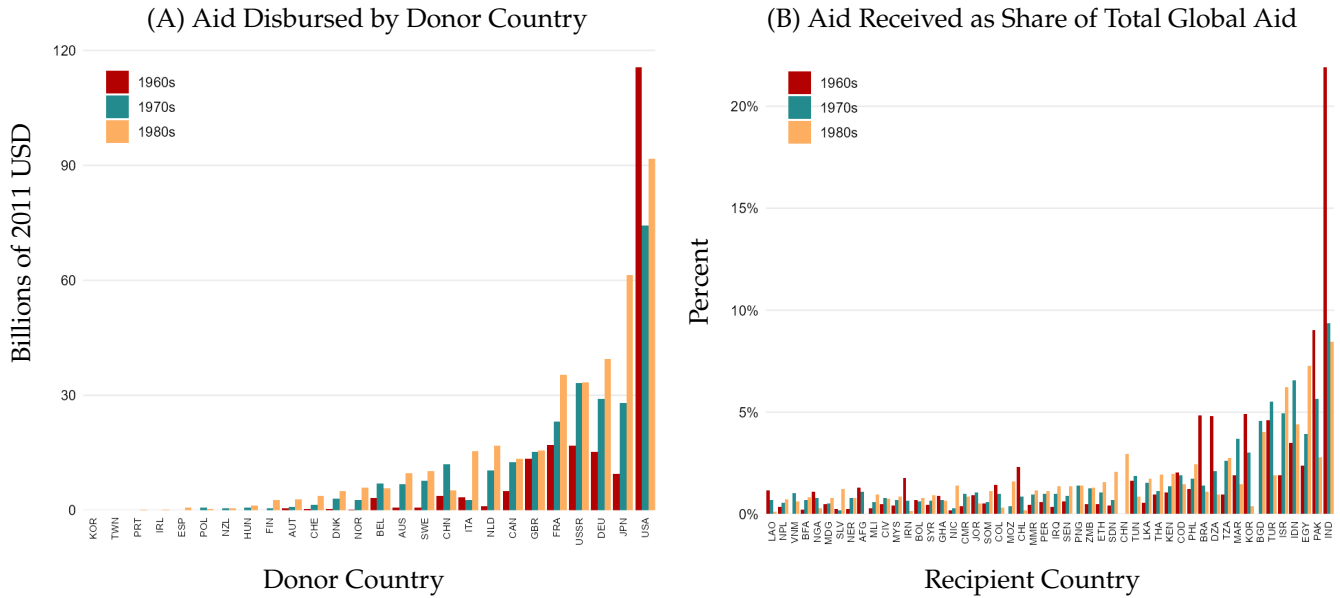
Figure 1 illustrates the patterns in total aid flows during the Cold War. The largest donor by far was the US, with aid flows by decade that were two to three times larger than the next largest donor countries. Japan, the USSR, Germany as well as former colonial powers UK and France were also large donors, with flows by decade of between 15 and 61 billion in 2011 USD. The right panel shows shares of total global aid by recipient country and decade. The largest aid shares went to India, Pakistan, Egypt, Indonesia, Israel and Turkey, though with substantial intra-decade variation.

Figure 2 documents the size of the aid disbursements and receipts relative to the size of the donor and recipient economy, respectively. Overall, aid disbursements relative to donor GDP are orders of magnitude smaller than aid received as a share of recipient GDP. Aid disbursements averaged 0.18% of donor GDP at the decade level, with a standard deviation of 0.12%. On the recipient side, aid receipts averaged 5.09% of the destination countries' GDP at the decade level. The distribution is heavily right-skewed, with a median of 2.32% and a standard deviation of 11.14%. This makes clear there was a small number of highly aid-dependent countries. As Figure 2 shows, aid is relatively more important in poorer and smaller countries. This asymmetry – aid as a very small share of GDP for donors, but economically significant for recipients – is precisely what might make foreign aid an attractive instrument of geopolitical influence: at relatively low fiscal cost, donor countries can attempt to meaningfully shape the economic and political trajectory of recipient nations. Appendix Figure A.1 displays a “heat map” of the aid flows by recipient and donor by total amount, while Appendix Figure A.2 displays it as a share of recipient GDP. In the upper-right corner are countries that receive the most aid from the largest donors. Some countries, such as India, Pakistan, Egypt, and Turkey, received substantial aid from both the United States and the Soviet Union. One can also see that the vectors of Soviet and Chinese aid flows are more sparse than those of the US and other major western donors.

¹⁰Between 1962-1989 Qatar, the United Arab Emirates, and Kuwait cumulatively disbursed 92.2% of aid to countries classified as predominantly Muslim by Maoz and Henderson (2019).

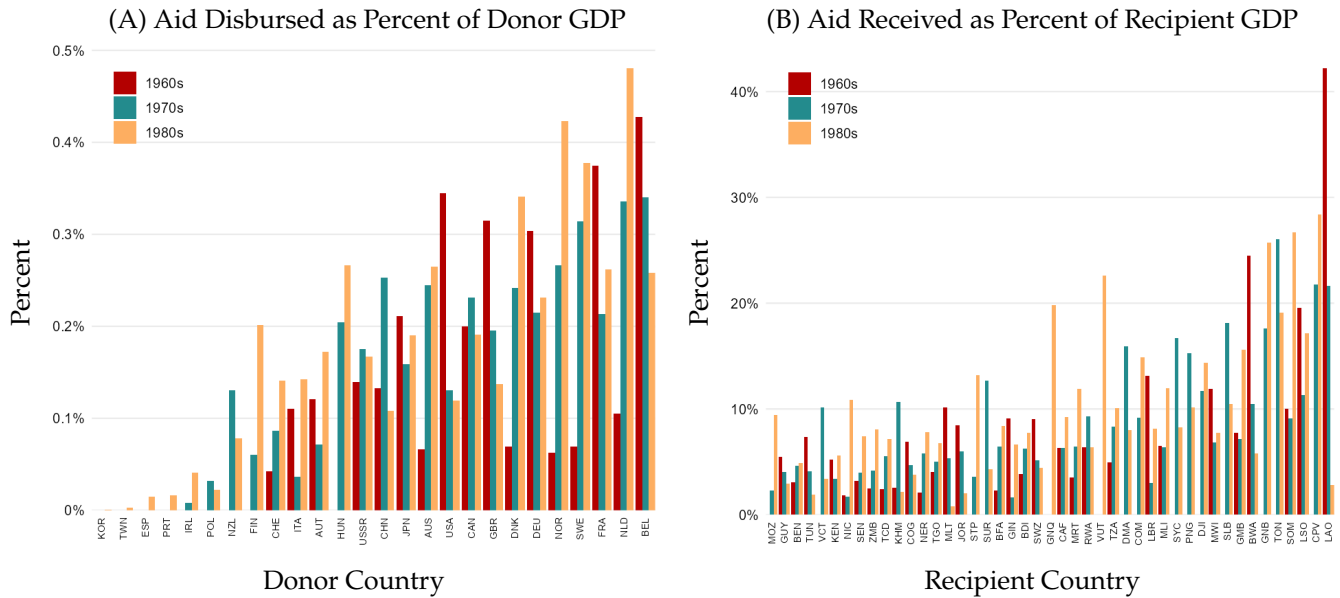
¹¹A small number of countries, such as South Korea, China, and Taiwan, appear as both donors and recipients, and we retain observations in both roles. We drop all observations for Afghanistan between 1979-1989 and Vietnam between 1962-1975, as those were major conflicts that severely disrupted trade, and it is unlikely that donor countries were primarily motivated by international commerce considerations in those years. Finally, we drop bilateral pairs between China and Taiwan due to likely imputation errors where there are positive aid flows between these economies.

Figure 1: Total Aid Flows during the Cold War (1962-1989)



Notes: The left panel shows cumulative aid disbursed by donor country at the decade level. The right panel shows the cumulative aid received by recipient country as a share of total global aid at the decade level for the 50 countries that received the most aid during the Cold War period. Donor countries are organized by total aid disbursed (least to most) and recipient countries are organized by total aid received (least to most).

Figure 2: Aid as a Percent of GDP during the Cold War (1962-1989)



Notes: The left panel shows cumulative bilateral aid disbursed by donor countries at the decade level as a share of the donor countries' cumulative GDP at the decade level. The share is then multiplied by 100 to get final values into a percent. The right panel shows the cumulative bilateral aid received by recipient countries at the decade level as a share cumulative GDP of the destination country at the decade level for the 45 countries that received the most aid during the Cold War period. The largest five countries are constrained from the graph since they are small island countries (WSM, KIR, TUV, BTN, MDV, WSM) with outlier aid/GDP shares that skew the graph. Donor countries are organized by share of aid disbursed (least to most) and recipient countries are organized by aid shares received (least to most).

2.2 Empirical Specification

To estimate the impact that foreign aid flows have on market access between bilateral partners, we estimate the following regression across time horizons $h = t, \dots, t + h$:

$$\frac{\text{Trade}_{od,t+h}}{\text{GDP}_{d,t-3}} = \beta^h \left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}} \right) + \gamma \left(\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}} \right) + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}, \quad (2.1)$$

where o denotes the origin (donor) country, d denotes the destination (recipient) country, and t denotes the year. The dependent variable in equation (2.1) is bilateral trade from origin country o to destination country d at horizon $t + h$, normalized by a three-year moving average of destination-country GDP lagged three years. Specifically, GDP is averaged over years $t - 2$, $t - 3$, and $t - 4$. Following [Ramey and Zubairy \(2018\)](#), we apply the same normalization to the aid regressor and to the lagged trade control. Our coefficient of interest, β^h , therefore captures the impulse response of bilateral aid disbursed in year t to bilateral trade at horizon $t + h$. Normalizing all variables by lagged average destination-country GDP helps ensure that the estimates are not driven by idiosyncratic fluctuations in contemporaneous GDP and places the dependent variable, the aid regressor, and the lagged trade control in comparable units. As a result, β^h can be interpreted as the change in bilateral exports associated with one additional dollar of bilateral aid. The dynamic estimation of β_h is an important feature of our empirical strategy because it allows us to analyze the evolving role of aid. Bilateral aid flows may mechanically increase trade through contractual obligations that are often attached to official development assistance in the short-run, colloquially known as “tied-aid” ([Jepma, 1991](#)). However, aid may also act as a lubricant to improve trade relations with donor countries by extracting trade concessions from recipient country governments, similar to coercive measures governments used during the Cold War ([Berger et al., 2013](#)). Both types of market access improvement are interesting and relevant for our purposes.

All specifications include origin-year, destination-year, and origin-destination fixed effects to control for time-varying origin and destination shocks as well as time-invariant bilateral characteristics that may be correlated with bilateral trade flows and bilateral aid disbursements. Following [Jordà and Taylor \(2025\)](#), we also include a lag of the dependent variable to control for any positive autocorrelation of trade flows between country pairs. An additional advantage of this specification is that we capture all zero entries for aid and trade, which is important because a large fraction of bilateral pairs have zero aid flows (see [Figure A.1](#)). In [Appendix Table A.6](#) we alternatively use inverse hyperbolic sine (IHS) transformation for our aid variable, which includes zero aid entries in our sample while approximating logs for non-zero values of our aid variable ([Burbidge, Magee, and Robb, 1988](#)). In this alternative specification, we log trade flows since most of the country pairs in our sample have annual bilateral trade flow data in a given year.

OLS estimates of (2.1) may be biased even conditional on the saturated fixed effects, as aid disbursement between bilateral partners might be correlated with time-varying bilateral unobservables

or suffer from reverse causality. Donor countries may give more aid to countries with whom they expect to trade heavily, biasing $\hat{\beta}^h$ upward. Alternatively, donors may disburse more aid to bilateral partners with whom trade relationships are about to deteriorate for omitted reasons, leading $Cov(\text{Aid}_{od,t}, \varepsilon_{od,t+h}) < 0$ and biasing $\hat{\beta}^h$ downward. OLS estimates might also be (downward) biased due to classical measurement error in aid data, which may occur in this context because bilateral aid flows, particularly historical ones, are challenging to accurately measure. Appendix A.2.2 discusses how classical measurement error could bias our OLS estimate $\hat{\beta}^h$ towards zero.

2.3 Instrumental Variable

To recover a causal estimate of β^h , we first use a plausibly exogenous set of bilateral aid predictors during the Cold War era to construct predicted bilateral aid shares for each country pair. We then multiply these bilateral shares by the total amount of aid disbursed by the origin country in a given year (leaving out the disbursement to the recipient country). This procedure constructs the predicted amount of aid given by origin country o to destination country d in year t . We use these predicted flows as instruments for actual aid flows in our empirical estimation.

We obtain our estimated bilateral aid shares by first predicting bilateral aid flows in a manner similar to gravity-based approaches used to estimate bilateral trade flows (Rajan and Subramanian, 2007, 2008, 2011). We run the following regression:

$$\text{Aid}_{od,t} = \exp\left(\gamma^o \mathbf{X}_{o,t} + \gamma^d \mathbf{X}_{d,t} + \beta^g \mathbf{X}_{od}^g + \beta^p \mathbf{X}_{od}^p + \beta^{hist} \mathbf{X}_{od}^{hist}\right) + v_{od,t}, \quad (2.2)$$

where $\mathbf{X}_{o,t}$ is a vector of time-varying donor-specific predictors that include (log) GDP per capita and origin population, $\mathbf{X}_{d,t}$ is a vector of time-varying recipient-specific predictors including its (log) GDP per capita and its population. These predictors aim to capture patterns such as the tendency of richer countries to donate more aid to all recipients, and countries with lower per capita income being more likely to receive aid from all donors. The vector \mathbf{X}_{od}^g contains standard time-invariant bilateral gravity controls including distance, a common language dummy, and a contiguity dummy. Drawing on Rajan and Subramanian (2008, 2011) and Berger et al. (2013), we also include broader political forces in the prediction equation, \mathbf{X}_{od}^p , that are especially relevant during the Cold War era. Geopolitical variables include dummy variables aggregated to the decade level denoting whether the destination country had a CIA or KGB intervention within a given decade using data from Berger et al. (2013), as well as the proportion of leaders that were considered left- or right-leaning at the decade level using political leader ideology data from Herre (2022). Finally, we also include donor-specific indicator variables for whether the recipient-donor pair were ever in a colonial relationship, \mathbf{X}_{od}^{hist} , to account for variation across colonial powers in propensity to give aid to former colonies (see Appendix Table A.2 for the exact specification and prediction regression results).

We then use estimates from equation (2.2) to predict bilateral aid between pairs of countries and construct predicted aid shares at the donor-time level across aid recipient countries. The baseline

instrument is created by taking the predicted aid share lagged by three years and multiplying by the log of total aid that the donor country disburses in a given year to all countries, leaving out the bilateral aid between donor and recipient pair. This yields a shift-share instrument that varies at the bilateral-year level:

$$IV_{od,t} = \hat{\lambda}_{od,t-3} \times \frac{\sum_{j \neq d} \text{Aid}_{oj,t}}{\text{GDP}_{d,t-3}}, \quad \hat{\lambda}_{od,t-3} = \frac{\widehat{\text{Aid}}_{od,t-3}}{\sum_d \widehat{\text{Aid}}_{od,t-3}}. \quad (2.3)$$

The goal is to predict bilateral aid flows that arise from standard features such as gravity or income shocks, that are plausibly exogenous to *bilateral and time-varying* market access motives for aid flows (since all second-stage specifications control for country-pair, destination-year and origin-year fixed effects). As these prediction variables are either time-invariant or measured with less error (e.g. log GDP and population), the predicted aid flows likely also suffer from less measurement error than the baseline bilateral aid flows data. Note that the aid prediction equation does not include actual total aid flows by donors to recipient countries as predictors. Since the prediction equation (2.2) requires an extensive set of covariates for a relatively distant historical period, some aid destination countries drop out from the sample, leaving a total of 106 recipient countries for the IV estimates. Our final prediction sample covers 95.5% of all aid disbursed during the Cold War era since most of the dropped countries are small islands (see Appendix A.1).

To summarize, the “zero-th” stage predicts aid shares based on estimating (2.2). We use these predicted shares to construct predicted aid from each donor to each recipient in each year. The first stage regresses actual realized bilateral aid flows on our predicted aid flow instrument, including all the fixed effects in equation (2.1). The results are in Appendix Table A.4. The second stage estimates the impact of aid on trade as in (2.1) using this instrument.

A benefit of our deconstructed shift-share instrument relative to standard shift-share designs is that our identifying variation is at the bilateral-year level rather than at the destination-year level. Standard shift-share instruments would sum the products of the shifts and the shares across all origin countries to obtain an instrument for total aid received that varies at the destination-year level. Because our aid flow data varies at the bilateral-year level, we can also include the saturated set of fixed effects from equation (2.1). This is important as instrument exogeneity is conditional on controls, and the fixed effects control for origin-year and destination-year shocks that are correlated with predicted bilateral aid flows. The fixed effects also control for time-invariant bilateral effects that might be correlated with predicted bilateral aid flows (such as geographic proximity, for example). In that sense, our approach has more in common with the “interaction diff-in-diffs” pioneered by [Rajan and Zingales \(1998\)](#) than with textbook shift-share designs.

Recent advancements in the shift-share literature stress that standard shift-share designs may be biased if the origin-year shift is correlated with the bilateral shares of the instrument ([Borusyak, Hull, and Jaravel, 2021](#)). By controlling for the entire set of fixed effects, we ensure that our instrument is not correlated with the error term due to destination- or origin-year shocks, or time-invariant bilateral

effects. Since we take an exogenous-share interpretation of our instrument (Goldsmith-Pinkham, Sorkin, and Swift, 2020), our main identifying assumption is that conditional on our time-invariant bilateral fixed effects and origin/destination-time fixed effects, our bilateral shares are as good as randomly assigned. In other words, conditional on the fixed effects, destination countries with high bilateral predicted shares and destination countries with low bilateral shares would follow similar paths and thus have similar trade flows had they not been treated with aid. Our instrument likely satisfies this assumption because we do not use actual aid flow data to construct the shares, but rather we use the coefficients from our aid prediction equation (2.2) to construct predicted shares.

To satisfy the exogenous-share interpretation of our instrument, Borusyak, Hull, and Jaravel (2025) stress that the instrument must be “tailored” towards the shock, which our instrument likely satisfies since our predicted bilateral aid shares are applied to the total outflow of aid from the origin country (leaving one out). We also follow the authors’ advice and lag the predicted aid shares to reduce the likelihood that the predicted aid shares are contemporaneously correlated with bilateral-time varying unobservables, strengthening the exogenous shares interpretation of our instrument. But the authors also acknowledge that the downside of lagging shares is that it reduces the covariance with the treatment, making the first stage weaker and increasing the standard errors. Our main specification is conservative and uses predicted aid shares lagged by three years, but Appendix Table A.7 reports our regression results for equation (2.1) only lagging the shares by one year. Moreover, Appendix Table A.3 provides summary statistics on our predicted weights for the Cold War sample. With a median of 0.05% and the 99th percentile weight being less than 10%, the vast majority of predicted aid shares are small. This is sensible with more than 100 potential recipient countries. We also conduct robustness checks by throwing out weights at the 1st-99th percentile to ensure outliers are not driving our results (see Appendix Table A.8). Since the identifying assumption is that our weights are i.i.d., our results should be robust to these sample restrictions. Appendix Table A.5 further restricts the sample by dropping the great powers of the era (the US, the USSR, and China) from our main specification to ensure they are not driving the results.

Although our main identifying assumption does not require that the shock component of the shift-share be uncorrelated with the structural error term, this likely holds in practice. Most donor countries disburse aid to many recipients within a given year and therefore it is unlikely that the total aid budget is responding to changing unobservable conditions within a single recipient country. Our instrument also follows the “leave-one-out” approach to ensure that origin country’s aid budget used for aid prediction is not mechanically responding to the changing circumstances in the recipient country. This ensures the our estimates are not driven by the endogenous response of donor aid budgets to changing bilateral conditions. Appendix A.2 contains further details on identification.

2.4 Empirical Results

Fact 1: Aid increases market access for the donor country

Table 1 reports results of estimating (2.1). Columns (1)–(4) present contemporaneous effects ($h = 0$), while columns (5)–(8) report effects five years ahead ($h = 5$). For each horizon we present both the OLS and IV results. We present two sets of standard errors: clustered at the origin-year level (in parentheses) and clustered two-way, by origin-year and country-pair [in brackets]. [Borusyak, Hull, and Jaravel \(2025\)](#) suggests clustering at the shock-level to account for unobserved correlations in error terms across shocks, since all destination countries exposed to the same origin country receive the same shock. But to be fully transparent, we also report our standard errors clustered two-way because there may be serial correlation of the errors within country pairs.

We also present Kleibergen-Paap (KP) F -statistics, Anderson-Rubin (AR) p -values, as well as Anderson-Rubin 90% confidence intervals developed by [Andrews \(2018\)](#) for both sets of standard errors. Generally speaking, KP- F statistics smaller than 10 indicate a weak instrument. When we cluster at the origin-year level as suggested by [Borusyak, Hull, and Jaravel \(2025\)](#), our first stage is always larger than 10 at the $h = 0$ and $h = 5$ horizons, but when we in addition cluster at the country-pair we have a weak instrument problem. Therefore, we follow the recommendation of [Andrews, Stock, and Sun \(2019\)](#) and report weak-instrument adjusted p -values and 90% confidence intervals.

Overall, our results show that bilateral aid flows have a significant and economically meaningful impact on bilateral trade flows in the short and medium run. According to our preferred specification at the $h = 0$ horizon (column 4), a one dollar increase in bilateral aid increases trade flows by 0.464 dollars. This result is statistically significant at the less than 1% level under origin-year clustering and at the less than 10% level under two-way clustering. Moreover, this result also holds according to our weak-instrument adjusted metrics; the AR- p values are at around the 1% level and we can safely reject the null that the coefficient is zero using the 90% AR-CI's for both sets of standard errors.

Turning to the medium-run effects, the results at the $h = 5$ horizon indicate that aid has a persistent effect on trade flows. In our preferred specification (column 8), a one dollar increase in bilateral aid increases trade flows by 1.367 dollars five years on. The estimate is statistically significant at the less than 1% level under origin-year clustering and at the less than 5% level under two-way clustering. The coefficient also has AR p -values below the 1% level and the 90% AR confidence intervals exclude zero for both sets of standard errors. Interestingly, across all specifications the IV estimates are significantly larger than the OLS estimates, suggesting that the OLS estimates are downward-biased, likely due to attenuation described in [Appendix A.2.2](#).

We highlight that our results are not driven by foreign aid from the great powers – United States, Soviet Union, and China – but also hold for smaller donors. [Appendix Table A.5](#) runs the same specification as (2.1) but drops the great powers. The impact at $h = 0$ is relatively larger in comparison to our main results (0.611 vs. 0.464), and both the first stage and AR- p values are much stronger in this specification for both sets of standard errors. For instance, the KP- F under two-way clustering at

Table 1: Impact of Aid on Trade Flows

	$h = 0: \frac{\text{Trade}_{od,t}}{\text{GDP}_{d,t-3}}$				$h = 5: \frac{\text{Trade}_{od,t+5}}{\text{GDP}_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}}\right)$	0.158 (0.077) [0.099]	0.130 (0.074) [0.092]	0.860 (0.119) [0.392]	0.464 (0.121) [0.241]	0.026 (0.025) [0.035]	0.012 (0.025) [0.031]	1.545 (0.314) [0.678]	1.367 (0.302) [0.602]
$\left(\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}}\right)$		0.500 (0.081) [0.070]		0.574 (0.132) [0.119]		0.256 (0.080) [0.089]		0.223 (0.081) [0.089]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			38.55	37.09			36.53	37.01
AR- p			0.00	0.00			0.00	0.00
AR-CI 90%			(0.700, 1.075)	(0.301, 0.665)			(1.076, 2.063)	(0.916, 1.866)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			3.87	3.72			3.71	3.67
AR- p			0.01	0.01			0.00	0.00
AR-CI 90%			[0.447, 3.496]	[0.210, 2.164]			[0.941, ...]	[0.831, ...]
Observations	58,565	58,471	51,615	51,534	56,968	56,540	50,224	49,865

Notes: Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. Trade as a share of GDP is also denominated in 2011 USD divided by destination GDP lagged by three years. The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a leave-one-out shift-share that takes the total aid disbursed by the origin country (excluding the bilateral pair) divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR- p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. AR-CI's are computed by first demeaning all variables by the fixed effects. The constant is suppressed. The upper bounds of the two-way clustered AR-CIs for columns (7) and (8) are unbounded.

the $h = 0$ horizon is 23.15 and the aid coefficient is statistically significant at the less than 1% level. Moreover, the magnitude of the aid coefficient also grows by $h = 5$: a one dollar increase in foreign aid leads to a 1.819 dollar increase in bilateral trade five years out, which is statistically significant at the less than 1% level for both sets of standard errors and has AR p -values significant at the less than 1% level. The instrument continues to have a strong first stage at $h = 5$ with KP-F of 74.99 and 23.03 for origin-year and two-way clustering, respectively. The results are likely tighter without the great powers in part because we are dropping the donors (USSR and China) for which aid data come from the noisier archival data sources. While our empirical results are consistent with Berger et al. (2013), who find that coercive CIA and KGB interventions during the Cold War also increased bilateral trade, the estimates dropping the US, the USSR, and China suggest that soft power tools such as foreign aid

offer a broader set of countries – beyond the Cold War superpowers – a mechanism to expand market access abroad.

Taken together, the short- and medium-run results from our main empirical specification highlight that bilateral aid generates persistent and economically significant increases in bilateral trade up to five years later and the results are not driven by a small subsample of donors.

Robustness and additional exercises. Appendix Table A.6 shows the results when using alternative aid and trade variables, namely log trade and inverse hyperbolic sine (IHS) aid. This specification allows us to approximate an aid-to-trade elasticity from a log-log specification without dropping the zero aid observations. In this specification at the $h = 0$ horizon, a 100% increase in aid flows leads to a $\ln(2) \cdot 0.099 = 6.86\%$ increase in trade flows. The AR- p values are significant around the 1% level and the AR 90% confidence intervals exclude zero for both sets of standard errors. At the $h = 5$ horizon, a 100% increase in aid increases bilateral trade by $\ln(2) \cdot 0.055 = 3.81\%$ five years out. Although the AR- p value is significant around the 1% level and the 90% AR confidence interval excludes zero under origin-year clustering, the result is not robust to two-way clustering.

Appendix Table A.7 reports results when we lag the shares in our shift-share IV by 1 year rather than 3 years. At the $h = 0$ horizon, a dollar increase in bilateral aid increases trade flows by 0.478 dollars. The coefficient has AR- p values significant around the 1% level and AR 90% confidence intervals that safely exclude zero for both sets of standard errors. At the $h = 5$ horizon, a one dollar increase in bilateral aid increases bilateral trade by 1.314 dollars. This result has AR- p values significant at the less than 1% level and AR 90% confidence intervals excluding zero for both sets of standard errors.

Appendix Table A.8 reports the results when trimming our sample to only include bilateral observations that have predicted bilateral aid-share weights between the 1st and 99th percentiles. According to our preferred specification, the coefficient magnitude under the trimmed sample is similar to our baseline specification at the $h = 0$ horizon (0.473 vs. 0.463) and has AR- p values significant at the less than 1% level for both sets of standard errors. At the $h = 5$ horizon, the coefficient for the trimmed sample continues to be similar (1.382 vs. 1.367) and has AR- p values significant at the less than 1% level for both sets of standard errors. Overall, the trimmed sample results show that the coefficients are not driven by sample outliers.

Appendix Table A.9 reports results when using the entire aid disbursed by the origin country as the shock for our instrument (rather than the leave-one-out approach). At the $h = 0$ horizon, a one dollar increase in bilateral aid increases trade flows by 0.44 dollars, with the AR- p values being significant around the 1% level and we can safely reject the null that the coefficient is zero using AR-CI's at the 90% level for both sets of standard errors. In the medium run at the $h = 5$ horizon, a one dollar increase in bilateral aid increases trade flows by 1.3 dollars, with the AR- p value significant at the less than 1% level and we can safely reject the null that the coefficient is zero using AR-CI's at the 90% level for both sets of standard errors.

Appendix A.5 examines whether bilateral aid improves donor-country access to imports originating from recipient countries. In the baseline aid share-of-GDP specification, the point estimates are positive and somewhat larger at the medium-run horizon (see Appendix Table A.15): a one dollar increase in bilateral aid raises donor imports by 0.427 dollars contemporaneously and by 1.75 dollars five years later. However, these results are not robust across all clustering schemes. At the $h = 0$ horizon, the estimate is significant under origin-year clustering, but under two-way clustering the AR- p value rises to 0.13 and the 90% AR confidence interval includes zero. At the $h = 5$ horizon, the estimate is somewhat stronger, with a two-way clustered AR- p value of 0.08, but the result weakens once we move to the alternative IHS-aid log-import specification, where the $h = 5$ coefficient has AR- p values of 0.09 under origin-year clustering and 0.38 under two-way clustering (see Appendix Table A.16). Unlike the export-side market access channel, the evidence that aid systematically increased donor-country imports from recipients is ambiguous.

Finally, Appendix A.6 examines whether aid promotes market access in the post-Cold War period (1990–2019). We begin by rerunning the “zero-th” stage aid prediction equation on data for 1990–2019. We drop the geopolitical variables related to the Cold War, but otherwise the aid prediction equation is unchanged (see Appendix Table A.18 for the estimating equation). The pseudo R^2 from the prediction equation is still quite high at 0.466, indicating that the shares are still relevant and tailored towards the shock. The OLS coefficients for the post-Cold War period are much smaller compared to the Cold War, suggesting that aid is less correlated with bilateral trade flows in the post-Cold War period. Turning to the IV estimates, the result is not significant at the 10% level at either horizon under either clustering scheme. Similarly, the AR- p values are all larger than 0.10 at either horizon under either clustering scheme.

Our results thus suggest that the market-access motive for foreign aid was relevant in the Cold War period, an era in which strategic competition between superpowers dominated geopolitics and donors pursued commercial self-interest through aid, largely unrestrained by multilateral norms. Our failure to reject null effects during the post-Cold War period align with the timing of specific policies OECD DAC countries adopted to coordinate an institutional push toward untying aid. The OECD/DAC’s 2001 Recommendation on Untying Official Development Assistance formalized commitments to remove procurement restrictions on bilateral aid disbursements (OECD DAC, 2001) and the share of tied aid fell from roughly 48% in 1987 to 15% by 2011 (Kim and Kim, 2016).¹² As aid became progressively untied during the contemporary period, one potential channel through which donors used aid to secure market access for its exporters weakened. Yet as the rules-based international order comes under stress and multilateral commitments to untying erode, the conditions that suppressed the market-access motive during the post-Cold War period may themselves unravel. Our Cold War era findings may be more relevant for today’s world than the patterns in the 1990–2019 period.

¹²For more details on the OECD DAC untying-aid initiatives and current untying statistics, see [here](#).

Fact 2: Aid increases geopolitical alignment

To investigate another potential mechanism through which aid increases market access during the Cold War era, we examine the effect aid has on bilateral geopolitical distance by means of the following specification:

$$\text{Geopol. Dist.}_{od,t+h} = \beta_{gp}^h \left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}} \right) + \gamma \text{Geopol. Dist.}_{od,t-1} + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}. \quad (2.4)$$

where $\text{Geopol. Dist.}_{od,t} = |\text{Ideal Point}_{o,t} - \text{Ideal Point}_{d,t}|$. Our data on geopolitical distance are from [Bailey, Strezhnev, and Voeten \(2017\)](#). The ideal point metric, $\text{Ideal Point}_{o,t}$, is a dynamic measurement of how ideologically aligned a country is with the US-led world order. Positive values mean more alignment with the United States while negative values mean more alignment with the Soviet Union during the Cold war era. The ideal point measure is estimated using a dynamic ordinal spatial item response theory (IRT) model applied to UN General Assembly votes, where each country may vote yes, no, or abstain on each resolution.¹³ Although the metric constructs monadic ideal point for each country-year, we follow the authors and use the absolute value of the difference of the ideal point measurements between each two countries to obtain a dyadic measure of geopolitical distance. We also include lagged geopolitical distance within the specification to control for its autocorrelation within bilateral pairs and control for the same fixed effects as in equation (2.1).

The coefficient on aid as a share of GDP, β_{gp}^h , measures how foreign aid flows impact geopolitical distance between bilateral pairs over time. Our preferred specifications (column 4 and 8) imply that a one standard deviation increase in aid reduces geopolitical distance by 0.068 standard deviations at both the 1- and 5-year horizons.¹⁴ The AR p -values at both $h = 0$ and $h = 5$ are significant at the less than 5% level and the 90% AR confidence intervals exclude zero for both sets of standard errors.

Our findings remain robust when we instrument using the total aid disbursed by the origin country as the shock on our shift-share (rather than the leave-one-out approach). At the $h = 0$ horizon, column 4 of Appendix Table A.10 shows that a one standard deviation increase in aid reduces geopolitical distance by $|-4.798| \cdot 0.010/0.784 = 0.061$ standard deviations, and the result is robust to both weak instrument tests for both sets of standard errors. At $h = 5$, a one standard deviation increase in aid reduces geopolitical distance by $|-4.582| \cdot 0.010/0.732 = 0.063$ standard deviations. The AR- p

¹³The authors use a dynamic ordinal spatial IRT model because it accommodates three vote choices (yea, abstain, nay) rather than a binary probit. The ordinal structure is important because abstentions carry distinct information — they are treated as intermediate signals of disagreement, weaker than a nay vote. Another key feature of the authors' approach is that they identify pairs of identically worded resolutions voted on across multiple sessions and constrain those resolutions to have the same parameters across time, allowing the model to separate genuine shifts in foreign policy preferences from changes driven by the evolving composition of the UN's agenda. The direction of the ideal point dimension is anchored to the United States by initializing the polarity of each resolution using the US vote as a reference point, so that countries which systematically vote in alignment with the United States receive higher ideal points while those that oppose US positions receive lower values. All ideal points are normalized to mean zero and standard deviation one. For our specification, we use the voting metric constructed using votes only for formal UN resolutions.

¹⁴Geopolitical alignment has a standard deviation of 0.784 at the $h = 0$ horizon and 0.732 at the $h = 5$ (because the sample sizes are slightly different). The aid-to-GDP ratio has a standard deviation = 0.010. At $h = 0$ a one standard deviation increase in aid reduces the geopolitical distance by $|-5.296| \cdot 0.010/0.784 = 0.068$ standard deviations. At $h = 5$: $|-4.965| \cdot 0.010/0.732 = 0.068$.

Table 2: Impact of Aid on Geopolitical Distance (Equation 2.4)

	$h = 0$: Geopol. Dist. $_{od,t}$				$h = 5$: Geopol. Dist. $_{od,t+5}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}}\right)$	-1.569 (0.354) [.]	-0.451 (0.128) [0.153]	-10.842 (4.448) [6.723]	-5.296 (2.589) [3.319]	-0.491 (0.188) [0.236]	-0.372 (0.220) [.]	-5.643 (1.789) [3.201]	-4.965 (1.995) [3.000]
Geopol. Dist. $_{od,t-1}$		0.702 (0.027) [0.027]		0.705 (0.027) [0.027]		0.065 (0.022) [.]		0.074 (0.023) [0.032]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			25.87	24.14			43.08	41.11
AR- p			0.00	0.02			0.00	0.01
AR-CI 90%			(-19.590, -4.894)	(-10.383, -1.837)			(-8.593, -3.254)	(-8.255, -2.302)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			3.72	3.95			4.37	4.76
AR- p			0.03	0.04			0.01	0.03
AR-CI 90%			[-58.128, -3.777]	[-24.887, -1.270]			[-23.492, -2.280]	[-18.293, -1.815]
Observations	50,112	48,737	44,790	43,535	50,574	47,621	45,362	42,735

Notes: Geopolitical Distance (Geopol. Dist.) is the absolute value difference in ideal point UN-Voting estimates between origin and destination countries as constructed from Bailey et al. 2017. Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a leave-one-out shift-share that takes the total aid disbursed by the origin country (excluding the bilateral pair) divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR- p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. Standard errors reported as [·] indicate that the two-way clustered variance-covariance matrix was non-positive semi-definite, and valid standard errors could not be computed despite applying the Cameron, Gelbach Miller (2011) eigenvalue adjustment. The constant is suppressed.

value is 0.01 under origin-year clustering with a 90% AR confidence interval excluding zero, and under two-way clustering the AR- p value is 0.04 with AR 90% confidence intervals that continue to exclude zero. Finally, we also run an alternative version of equation (2.4) where we instead use IHS aid and log geopolitical distance to obtain an elasticity measure. At the $h = 0$ horizon, column 4 of Appendix Table A.11 shows that a 100% increase in bilateral aid reduces geopolitical distance by $\ln(2) \cdot |-0.103| = 7.14\%$. The AR- p values are significant around the 1% level and the AR 90% confidence intervals exclude zero for both sets of standard errors. At the $h = 5$ horizon, column 8 of Appendix Table A.11 shows that a 100% increase in bilateral aid reduces geopolitical distance by $\ln(2) \cdot |-0.047| = 3.26\%$. The AR- p values are significant at the less than 10% level and the AR 90% confidence intervals exclude zero for both sets of standard errors.

There is a growing literature on the role of geopolitics in trade flows, that uses different measures of geopolitical distance (Gopinath et al., 2025; Airaudo et al., 2025; Fan, Wo, and Xiang, 2025). Moreover, Meyer and Wesseler (2026) empirically show US foreign aid increases geopolitical support for the

United States. We build on both strands of this literature by testing whether foreign aid shifts bilateral geopolitical alignment. These results could be interpreted as a channel through which aid reduces bilateral trade costs between countries. By shifting geopolitical alignment, aid disbursements may have reduced the bilateral trade frictions that govern market access in future periods. Alternatively, geopolitical alignment could confer other – yet to be quantified – benefits, beyond market access. In this case, aid can be viewed as a lever to shift this alignment and reap those benefits.

Fact 3: Aid reduces market access for countries in the opposing bloc

Having established that foreign aid increases bilateral trade and shifts geopolitical alignment, we now ask whether the market access gains accruing to countries come at the expense of countries from the opposing bloc. If foreign aid draws recipient countries more tightly into the donor’s geopolitical orbit, it may not only expand trade within that bloc but also raise trade costs with rival geopolitical partners. Equation (2.5) directly tests whether aid serves as a market-access-diversion tool across competing blocs. The dependent variable is the recipient country’s total imports from the geopolitical bloc opposite that of donor o : when o is a Communist donor, the outcome is imports originating from Western donors, and when o is a Western donor, the outcome is imports originating from Communist donors:¹⁵

$$\frac{\text{Trade}_{od,t+h}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}} = \beta_{oth}^h \left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}} \right) + \phi \left(\frac{\text{Aid}_{od,t}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}} \right) + \gamma \left(\frac{\text{Trade}_{od,t-1}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}} \right) + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}. \quad (2.5)$$

The main coefficient of interest, β_{oth}^h , captures whether bilateral aid from donor o affects the recipient’s imports from rival-bloc suppliers at horizon h . To isolate this effect, the specification also controls for total aid received from the other bloc, $\text{Aid}_{od,t}^{\text{Other-Bloc}}$, which is constructed similarly to the outcome variable, as well as lagged imports from the rival bloc. All variables continue to be normalized by lagged GDP, which places the aid and trade flows in comparable units and fixes the denominator prior to the shock. Our specification also includes all of the same fixed effects and controls as in equation (2.1) and we also follow the same IV strategy highlighted in equation (2.3). It is important to note that bilateral trade cost reductions implied by estimates of equation (2.1) can generate general equilibrium effects that operate through multilateral resistance terms, as documented in the context of border effects (Anderson and van Wincoop, 2003) and tariff reductions (Romalis, 2007). Our specification includes destination-year fixed effects, which absorb all time-varying multilateral resistance forces and thus account for general equilibrium effects of changes in donor-recipient trade costs. Thus, the coefficient on aid in equation (2.5) picks up any effect of aid on countries’ trade from the competing bloc over and above the general equilibrium effects. Thus, a negative coefficient on β_{oth}^h would suggest that aid reallocates market access away from exporters from the other bloc.

¹⁵We define a Communist donor as: USSR, CHN, HUN, POL and Western donors as: KOR, TWN, PRT, IRL, ESP, NZL, FIN, AUT, CHE, DNK, NOR, BEL, AUS, SWE, ITA, NLD, CAN, GBR, FRA, DEU, JPN, USA.

Table 3: Impact of Aid on Competing Bloc Trade Flows

	$h = 0: \frac{\text{Trade}_{od,t}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}}$				$h = 5: \frac{\text{Trade}_{od,t+5}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}}\right)$	-0.011 (0.027) [0.033]	-0.006 (0.024) [0.026]	-0.135 (0.281) [0.255]	0.091 (0.278) [0.185]	0.003 (0.012) [.]	0.003 (0.012) [0.009]	-2.075 (0.625) [1.250]	-1.882 (0.582) [1.148]
$\left(\frac{\text{Aid}_{od,t}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}}\right)$	0.069 (0.023) [0.023]	-0.002 (0.022) [0.014]	0.520 (0.046) [0.066]	0.212 (0.044) [0.051]	0.140 (0.032) [.]	0.118 (0.031) [0.035]	0.166 (0.106) [0.157]	0.065 (0.104) [0.143]
$\left(\frac{\text{Trade}_{od,t-1}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}}\right)$		0.732 (0.023) [0.039]		0.763 (0.028) [0.053]		0.202 (0.065) [0.106]		0.334 (0.069) [0.126]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SEs clustered at the origin \times year level</i>								
KP-F			30.55	30.77			30.33	31.24
AR-p			0.63	0.74			0.00	0.00
AR-CI 90%			(-0.555, 0.285)	(-0.326, 0.551)			(-3.207, -1.239)	(-2.936, -1.103)
<i>SEs clustered two-way (origin \times year and bilateral)</i>								
KP-F			3.28	3.30			3.24	3.32
AR-p			0.59	0.61			0.00	0.01
AR-CI 90%			[-1.354, 0.464]	[-0.284, 1.127]			[..., -0.963]	[..., -0.860]
Observations	58,908	58,880	51,894	51,866	57,141	56,983	50,389	50,231

Notes: Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. Trade as a share of GDP is also denominated in 2011 USD divided by destination GDP lagged by three years. Other-bloc aid is defined based off of the origin country bloc. For instance, if the origin country is a Communist country (USSR, CHN, HUN, POL) then other-bloc aid comprises of all the bilateral aid flows disbursed to the destination country by Western countries (all other countries within the donor sample). The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a leave-one-out shift-share that takes the total aid disbursed by the origin country (excluding the bilateral pair) divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. AR-CI's are computed by first demeaning all variables by the fixed effects. The constant is suppressed.

At the contemporaneous horizon, our preferred specification (column 4) in Table 3 implies that bilateral aid has no effect on reducing imports from the competing bloc. The coefficient equals 0.091 at the $h = 0$ horizon with AR-p values of 0.74 and 0.61 under origin-year and two-way clustering, respectively. But turning to the medium-run results at the $h = 5$ horizon, evidence of displacement emerges. In our preferred specification (column 8) of Table 3, the coefficient on bilateral aid equals -1.882, implying that an additional dollar of bilateral aid reduces imports from the competing bloc by roughly 1.88 dollars five years later. The estimate is highly significant under origin-year clustering,

with an AR- p value of 0.00 and a 90% AR confidence interval that comfortably excludes zero. The result also remains statistically significant under two-way clustering, with an AR- p value of 0.01 and a 90% AR confidence interval also excluding zero. These estimates suggest that while aid does not contemporaneously reduce imports from rival-bloc exporters, displacement emerges gradually over time. This delayed response is consistent with the idea that aid induces persistent shifts in geopolitical alignment that take time to divert market access away from rival-bloc exporters. These findings are also robust to using the full-shock shift-share IV rather than the leave-one-out specification, with similar magnitudes and inference across both horizons (see Appendix Table A.13).¹⁶ Moreover, in Appendix Table A.14 we construct an alternative specification where we use log trade from the other bloc as the dependent variable and IHS aid as the regressor and find that aid reduces trade from the competing bloc at both the $h = 0$ and $h = 5$ horizon.

Taken together, these results are consistent with aid functioning as a tool of bilateral market capture. The trade costs for donor countries in the opposing bloc appear to increase as aid recipients become closer aligned to the donor. These results adds nuance to the market access gains documented in Fact 1, as the market access gains are not purely additive: foreign aid reshapes the competitive landscape within recipient markets, persistently redirecting import demand toward the donor and away from the opposing bloc.

3. THEORETICAL FRAMEWORK

This section introduces a multi-country, multi-sector model of trade and foreign aid. Together with the econometric estimates, the model is then used to quantify the welfare impact of aid in donor and recipient countries during the Cold War period. The model builds on [Levchenko and Zhang \(2016\)](#) and [Huo, Levchenko, and Pandalai-Nayar \(2025\)](#). The world economy consists of N countries indexed by o, d and ℓ and J sectors indexed by j and k . Each country d is endowed with L_d workers who supply labor inelastically and a government that taxes households to pay for foreign aid disbursements.

Households. The representative household in country d maximizes utility:

$$\max_{\{F_{dj}\}} \mathcal{F}_d = \prod_{j=1}^J F_{dj}^{\zeta_{dj}} \quad (3.1)$$

subject to

$$\sum_{j=1}^J P_{dj}^f F_{dj} = W_d L_d + \sum_o Aid_{od} - T_d + D_d = I_d, \quad (3.2)$$

¹⁶Appendix Table A.12 implements equation (2.1), adding a control for all aid coming from the country within the competing bloc. The estimated coefficient on the donor aid is robust, and if anything higher than in the baseline. This suggests that competing bloc aid does not undermine the marginal impact of the donor's aid on donor's own market access.

where F_{dj} is the sector j final consumption, P_{dj}^f is its price, W_d is the wage, T_d is a lump-sum tax, $\sum_o Aid_{od}$ are aid payments received from donor countries $o \in N$, and D_d is the remaining trade deficit. In the outer nest, the consumption bundle \mathcal{F}_n is Cobb-Douglas in $j \in J$, with ζ_{dj} governing sectoral expenditure shares in final consumption. The corresponding consumption price index is:

$$P_d = \prod_{j=1}^J \left(\frac{P_{dj}^f}{\zeta_{dj}} \right)^{\zeta_{dj}}.$$

Production. Sectoral output in each sector j and country d is an Armington aggregate of sectoral varieties coming from all countries, with a substitution elasticity ε . The sectoral aggregate and the corresponding sectoral price index are given by:

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

where $\mu_{o,dj}$ is a taste shifter, $\tau_{o,dj}$ is the iceberg trade cost of shipping good j variety from o to d , and P_{oj} is the factory-gate price of sector j variety produced in country o . The non-tradable sector J only aggregates the domestically-produced variety, and thus $Y_{dJ}^f = Y_{d,dJ}$ and $P_{dJ}^f = P_{dJ}$. In tradable sectors the expenditure share on the country o good in country d sector j is:

$$\pi_{o,dj} = \frac{\mu_{o,dj} (\tau_{o,dj} P_{oj})^{1-\varepsilon}}{\sum_\ell \mu_{\ell,dj} (\tau_{\ell,dj} P_{\ell j})^{1-\varepsilon}}.$$

Sectoral varieties are produced with labor L_{dj} and intermediate inputs $\{X_{k,dj}\}$:

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

where Z_{dj} is TFP, η_j is the share of value added in gross output, and $\gamma_{k,dj}$ is the share of intermediate inputs from sector k in sector j 's total intermediate expenditure in country d . The optimal labor and input usage are:

$$W_d L_{dj} = \eta_j P_{dj} Y_{dj}, \quad P_{dk}^f X_{k,dj} = (1 - \eta_j) \gamma_{k,dj} P_{dj} Y_{dj}. \quad (3.3)$$

Government. The government takes bilateral aid across country-pairs as given, $Aid_{od} \forall d$, and collects lump-sum taxes to balance its budget:

$$T_o = \sum_d Aid_{od}. \quad (3.4)$$

Market clearing. To close the model, we additionally need market clearing conditions in the goods and labor markets. For tradable sectors:

$$P_{dj} Y_{dj} = \sum_o \tau_{d,oj} \left(\zeta_{oj} P_o \mathcal{F}_o + \sum_{k=1}^J (1 - \eta_k) \gamma_{j,ok} P_{ok} Y_{ok} \right). \quad (3.5)$$

For non-tradable sectors, the market clearing condition is

$$P_{dJ} Y_{dJ} = \zeta_{dJ} P_d \mathcal{F}_d + \sum_{k=1}^J (1 - \eta_k) \gamma_{J,dk} P_{dk} Y_{dk}. \quad (3.6)$$

Finally, trade is balanced (up to the deficit) as in (3.2), governments balance their budgets as in (3.4) and labor markets clear in each country:

$$\sum_{j=1}^J L_{dj} = L_d. \quad (3.7)$$

Equilibrium. Given $\{Aid_{od}, D_d, L_d, Z_{dj}, \tau_{od}\}$, an equilibrium consists of a set of goods and factor prices $\{P_{dj}, W_d\}$, factor allocations $\{L_{dj}\}$, lump sum taxes $\{T_d\}$, and goods allocations $\{Y_{dj}, F_{dj}\}$ such that households maximize utility (3.1), firms maximize profits (3.3), the goods market clears (3.5) and (3.6), the labor market clears (3.7), income equals expenditure (3.2), and governments balance their budgets (3.4). Country trade is balanced up to a vector of trade deficits, D_d , and international trade is balanced at a global level $\sum_n D_n = 0$.

Bilateral aid and iceberg costs. Our empirical analysis highlighted that bilateral aid disbursements during the Cold War increased market access, resulting in more imports from the donor by the recipient country. We model this relationship as a link between bilateral aid and bilateral iceberg trade costs:

$$\tau_{od} = \frac{\tilde{\tau}_{od}}{Aid_{od}^\chi}, \quad (3.8)$$

where $\tilde{\tau}_{od}$ are any trade costs not related to aid. The elasticity χ that governs this relationship will be disciplined with the econometric estimates. In alternative exercises to additionally capture the competing market access channel in Fact 3, we use the specification:

$$\tau_{od} = \frac{\tilde{\tau}_{od} (\sum_{k \neq o} Aid_{kd})^v}{(Aid_{od})^\chi}, \quad (3.9)$$

where the bilateral trade cost is now also a function of the aid flows from countries that belong to the opposing Cold War bloc.

4. QUANTIFICATION

4.1 Calibration

The elasticity of trade costs to aid. The central parameter of interest is the aid-to-trade elasticity χ . Appendix B.1 shows that given a value for ε , χ can be inferred from the gravity coefficient in which log trade is on the left-hand side and log aid is the regressor. In particular, in a static gravity setting, $\chi = \beta/(\varepsilon - 1)$, where β is the coefficient on the regressor in our IHS-aid log trade specification in equation (A.3). We will report quantitative results for χ implied by the $h = 0$ coefficients in Table A.6.

However, our main results in Table 1 show that the impact of aid persists for up to 5 years following disbursement. In order to obtain a more complete picture of the steady state impact of an increase in aid on trade flows, we must estimate the cumulative effects of a one-time increase in foreign aid on cumulative trade flows from period t to $t + h$. We thus follow the approach of Ramey and Zubairy (2018) and estimate the following equation:

$$\sum_{j=0}^h \frac{\text{Trade}_{od,t+j}}{\text{GDP}_{d,t-3}} = \beta^{CUM,h} \left(\sum_{j=0}^h \frac{\text{Aid}_{od,t+j}}{\text{GDP}_{d,t-3}} \right) + \gamma \left(\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}} \right) + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}. \quad (4.1)$$

Both the independent and dependent variables are cumulated across the time horizon $j = 0, \dots, h$. The reasoning behind this approach is that both aid and trade flows may autocorrelated. For instance, increases in aid flows in period $h = 0$ may predict higher aid disbursements in subsequent periods. Specification (4.1) estimates the impact of a cumulative amount of aid on the cumulative change in trade, better approximating the total dynamic impact of aid on trade. The coefficient $\beta^{CUM,h}$ directly recovers the cumulative impulse response function — that is, the total effect on trade at time $t + h$ from a given increase in aid disbursed at t , properly accounting for the fact that aid shocks may themselves trigger subsequent aid flows or reversions. Also following Ramey and Zubairy (2018), we normalize both the LHS and the RHS variables by a 3-year moving average total GDP lagged 3 years (i.e., averaging $\text{GDP}_{d,t-2}$, $\text{GDP}_{d,t-3}$, and $\text{GDP}_{d,t-4}$), rather than estimating in logs.¹⁷ This is because it is not sensible to additively cumulate log values. The coefficient of interest in effect then captures the effect of each dollar of additional aid on the dollar value of trade. The instrument for the aid regressor is constructed in parallel following similar steps, but for predicted aid rather than actual. The instrument for the cumulated regressor in (4.1) is the $h = 0$ predicted aid shock.

Appendix Table A.21 reports the cumulative impulse responses of trade flows at the $h = 3$ horizon and at the $h = 5$ horizon. We find that aid flows increase trade flows by approximately one-to-one in the medium run. Columns 3, 4, 7, and 8 report our results using our standard shift-share instrument.

¹⁷We explored alternative normalizations, including contemporaneous GDP and shorter lags, but prefer this formulation because it smooths high-frequency fluctuations in GDP while ensuring that the lagged predicted aid shares are not mechanically correlated with year-to-year changes in the denominator. Ramey and Zubairy (2018) divide by a measure of potential (trend) GDP, but given the number of countries used in our analysis, we use a lagged moving average measure instead.

Columns 1, 2, 5, and 6 report results using a “Naive” IV where we use the bilateral aid flows at time t as the instrument to the cumulative aid flows at horizon $h = 3$ and $h = 5$, which essentially acts as the impulse response in order to make the coefficients comparable to the IV estimates. In our preferred specifications (Columns 4 and 8), a one percentage point of GDP increase in bilateral aid flows cumulatively increases bilateral trade by 0.736 percentage points of GDP in 3 years and 0.963 percentage points in five years. Both sets of results have AR- p values significant at the less than 5% level for both sets of standard errors as well as AR 90% confidence intervals that exclude zero.¹⁸

We use the 5-year horizon to compute χ . Because $\beta^{CUM,5}$ is not an elasticity, we recover the elasticity χ by multiplying $\beta^{CUM,5}$ by the average bilateral aid to trade ratio during the Cold War era (1962-1989):

$$\chi_{od} = \beta^{CUM,5} \times \frac{\text{Aid}_{od}}{\text{Trade}_{od}}. \quad (4.2)$$

An additional motivation for calibrating the elasticity from our cumulative impulse response estimates is that it allows us to move beyond estimating a single pooled elasticity χ and instead recover bilateral elasticities χ_{od} that vary across country pairs. Appendix B.2 documents substantial variation in the ratios of aid-to-trade of the countries receiving aid from the United States during the Cold War; the median ratio is 0.18 and the standard deviation is 1.28. Therefore, it is unlikely that aid reduces trade costs with the same elasticity regardless of the pre-existing trading relationship between donor and recipient. Aid would plausibly have its largest trade-cost reducing effects precisely when formal economic relationships — trade, finance, and diplomatic ties — are thin or absent. On the other hand, when two countries already trade extensively, an increase in aid is unlikely to completely transform the preexisting trade relationships. Using a single χ would then overstate the trade-cost effects of aid for major commercial partners and understate them for countries with thin pre-existing ties. Allowing χ_{od} to vary bilaterally as in (4.2) enables us to capture the heterogeneity that aid has in increasing market access across bilateral partners. However, the results remain similar when we use a single χ for all country pairs.

Appendix B.2 reports the final bilateral elasticities χ_{od} between the United States and the USSR and partner countries. For the US they range from near zero to 0.171 with a mean and median of 0.07. For the Soviet Union and its partner countries, the elasticity ranges from 0.01 to 0.684, with a mean of 0.24 and median of 0.19, considerably higher than for the US, reflecting the weaker trade ties between

¹⁸Our results remain robust to using total aid disbursed as the shock rather than the leave-one-out (see Appendix Table A.22) and continue to be stronger when excluding the United States, Soviet Union, and China (see Appendix Table A.23). According to preferred specifications when we drop the great powers, we get more than a one-to-one increase in trade flows; a one percentage point of GDP increase in bilateral aid flows cumulatively increases bilateral trade by 0.894 percentage points of GDP in 3 years and 1.228 percentage points of GDP in five years. These results are all highly significant and have strong first stage KP- F 's of over 15. For all specifications, the AR- p values are significant at the less than 1% level and all the AR 90% CI's exclude zero for each set of standard errors. Moreover, our cumulative impulse response results also remain robust to trimming outlier predicted shares (see Appendix Table A.24), with impulse response coefficients ranging from 0.736 – 0.962 at the $h = 3$ and $h = 5$ horizon, respectively, when we trim at the 1st and 99th percentile, with both coefficients having AR- p values significant at the less than 5% level and AR-90% confidence intervals excluding zero. The magnitude and persistence of the one-to-one effect of aid on trade flows at medium horizons provides empirical support for using our cumulative impulse response estimates to recover the aid-to-trade-cost elasticity.

the Soviet Union and other countries: since recipients imported relatively little from the USSR, even modest aid flows would be expected to translate into larger elasticities.

Our approach to recovering bilateral aid-to-trade-cost elasticities χ_{od} has a parallel to heterogeneous trade elasticities literature (e.g. [Novy, 2013](#); [Chen and Novy, 2022](#); [Piveteau and Smagghue, 2023](#); [Head and Mayer, 2026](#)). [Novy \(2013\)](#) shows that replacing the standard CES demand assumption in gravity models with a translog expenditure function generates a variable trade cost elasticity that depends on bilateral import shares – thin bilateral relationships with small import shares are predicted to be significantly more sensitive to trade cost changes than thick relationships with large pre-existing trade volumes. Finally, to incorporate the trade diversion channel documented in Fact 3, we calibrate the trade diversion elasticity, $\nu = 0.06$, to match our estimates from the IHS-aid log-competing bloc trade specification (A.5) at the $h = 0$ horizon in Table A.14. Because trade diversion is a second-order channel, we calibrate a single pooled elasticity rather than separate bilateral trade diversion elasticities.

Other parameters and shares. Table 4 summarizes our model calibration. Aside from χ and ν , the model requires only one more structural parameter, the Armington elasticity. We set $\varepsilon = 2$ following the long-run value estimated by [Boehm, Levchenko, and Pandalai-Nayar \(2023\)](#).

We solve the model in changes starting from the pre-shock equilibrium following [Dekle, Eaton, and Kortum \(2008\)](#). Appendix B.3 states the equilibrium equations in changes. This approach requires several data shares that reflect the pre-shock equilibrium. Appendix B.4 describes in detail our approach to constructing the shares, that we summarize more briefly here. We calibrate our production and expenditure data objects to the years 1970-75 for 26 donor and 101 recipient countries across four sectors (Agriculture, Commodities, Manufacturing, and Nontradables). Although our entire country sample of destination country includes 133 aid recipients during the Cold War, we ultimately exclude 32 countries that do not have consistent sectoral trade flow data. We begin by calibrating sectoral input-output (IO) shares, value-added shares, and final consumption shares from the Long Run WIOD ([Woltjer, Gouma, and Timmer, 2021](#)), which contains IO data for 25 countries between 1965-2000. We further supplement the IO data with digitized historical input-output tables from [Bartelme and Gorodnichenko \(2015\)](#) for a broad sample of developing countries during the Cold War period. These tables were initially constructed by the United Nations Industrial Development Organization (UNIDO). We prioritize using historical IO tables around the years 1970-1975 and only use IO tables that pass basic quality checks. After the quality checks, we are left with a geographically representative sample of 25 developing countries. For countries for which we do not have IO data, we use regional aggregates constructed by averaging sectoral input-output shares, value-added shares, and final consumption shares across available countries within each region, normalizing the shares so they sum to one, and imputing accordingly. The regions on which we construct average IO tables are Asia, Eastern Europe, Latin America, Sub-Saharan Africa, the Middle East, and Rest of World.

To construct our final bilateral trade shares across country-sector pairs, we take annual sectoral

Table 4: Calibration

Param.	Value	Description	Moment/Source
<i>Elasticities</i>			
ε	2	Elasticities of subst. varieties	Boehm, Levchenko, and Pandalai-Nayar (2023)
χ_{od}	$\beta^{CUM,5} \cdot \frac{Aid_{od}}{Trade_{od}}$	Aid-trade elasticity	Impulse Response Estimates (4.2)
ν	0.06	Trade diversion elasticity	IHS Aid-Log Comp. Bloc Trade Estimates (A.5)
<i>Production</i>			
$\gamma_{k,dj}$		Sectoral IO Shares	Long Run WIOD & Historical IO tables
η_k		VA Share of Gross Output	Long Run WIOD & Historical IO tables
$P_{dj}Y_{dj}$		Sectoral Gross Output	Match Labor Income
<i>Expenditure</i>			
$\{\zeta^{dj}\}$		Final consumption shares	Long Run WIOD & Historical IO tables
$\{\pi_{od,j}\}$		Bilateral Trade Shares	UN-COMTRADE
$\{Aid_{od}\}$		Bilateral Aid flows	OECD, CIA Handbook, & Carter 1971
$\{W_dL_d\}$		Labor Income	UN-SNA
$\{T_d\}$		Taxes	Match Aid Disbursements
$\{I_d\}$		Income	Matches VA net of Aid and Taxes

Notes. The table summarizes the calibrated values used for the quantitative analysis.

trade flow data from UN COMTRADE, aggregate up to our three tradable sectors, deflate all of the series and average across the years 1970-1975. Baseline labor income data comes the United Nations System of National Accounts (United Nations Statistics Division, 2026). Baseline aid flows are constructed from the same real aid series used in our empirical analysis — drawing on OECD DAC data, CIA archival sources, and Carter (1971) — summed over the full Cold War period (1962–1989), and then annualized to capture the full distribution of bilateral aid disbursements across the time horizon. Since all countries run balanced budgets in our model, lump-sum taxes are constructed by matching the total aid disbursed by donor countries. Similarly, since we model aid as a transfer that appears in the country’s trade balance condition, income data then match our value-added/labor income data net of aid and taxes. The final data object we must calibrate is baseline sectoral gross output. Accurate historical gross output data are challenging to find for the broad set of countries in our model, so we instead use all of the available data objects to obtain the model-implied value of sectoral output. Specifically, we take the goods market clearing condition, use the calibrated expenditure, trade, and IO shares as well as the value added data, and then take the Leontief inverse of the goods market clearing conditions to obtain the implied values of sectoral gross output that completely eliminate sectoral wedges. But this strategy does not guarantee that the labor market clearing condition holds, so we are left with aggregate deficits within the model. To obtain the final data objects, we then solve the model without any shocks to eliminate aggregate deficits and update the equilibrium values, namely labor income, sectoral gross output, and bilateral trade shares to obtain the final steady state model objects.

4.2 Counterfactuals

The counterfactual exercises first implement the Trump administration’s percentage reduction in the United States’ foreign aid budget. We apply this contemporary shock to the Cold War period because it provides a setting in which the market access motives of donors were explicit and trade networks were split along geopolitical lines, allowing us to estimate the market access consequences of these aid shocks. We then perform the same exercise to the Soviet Union, reducing their aid budget by 86%. Finally, we perform the same exercise for all other donor countries.

To better understand the role of the market access mechanism, we run the counterfactuals under different calibrations of our aid-to-trade elasticity: (i) χ_{od} to match the impulse response from equation (4.1); (ii) shutting down the market access channel by setting $\chi = 0$; (iii) calibrated χ_{od} augmented with the cross-bloc trade diversion channel estimated in Fact 3, calibrated as a uniform $\nu = 0.06$ from equation (A.5).¹⁹ After quantifying the effects of market access changes, our final exercise evaluates the geopolitical influence of foreign aid: combining the model with our reduced-form estimates, we map each great power’s sphere of influence and ask whether aid, at the scale actually disbursed during the Cold War, was large enough to move a recipient from one alignment camp to the other.

Counterfactual: 86% reduction in US foreign aid budget. Table 5 reports the welfare effects of an 86% reduction in the US foreign aid budget across the four parameterizations of the aid-to-trade elasticity. The first 2 lines of the table report the aid to total income ratios of both recipient countries and of the US. In the United States aid only comprises 0.18% of income, while US aid is 0.88% of recipient country income at the mean, and 0.46% at the median. The top panel reports the results under our baseline calibration. The US gains 0.15% from canceling aid. Virtually the entire effect comes from consuming the resources that were used for aid: the real wage marginally falls by -0.005%.

To better understand these results, we compare them to those without the market access effect ($\chi = 0$) in the middle panel. Here, the US welfare increases by 0.205%. The difference between the two panels, -0.055%, is due to the increased trade costs faced by the US in the baseline scenario when aid is canceled. Thus, 27% (0.055/0.205) of the direct real income cost of aid pays for itself with increased market access.

Although US real income change remains positive at 0.15% when incorporating the aid-to-trade channel, the 27% reduction relative to $\chi = 0$ implies that governments receive meaningful economic returns from using aid to improve market access. Moreover, policymakers concerned with supporting workers’ wages may view aid as a tool for stimulating export demand, and the sign reversal in the US real wage change — from negative with the market access channel to positive under $\chi = 0$ — is suggestive of this channel, though the absolute magnitudes are small.

The table also reports the summary statistics for the impacts on recipient countries. In our preferred calibration (top panel), recipient country real income falls by 1.95% at the mean and 1.17%

¹⁹In the Appendix, we also report results from calibrating a uniform $\chi = 0.099$ to match the constant elasticity estimates from equation (A.3).

at the median. This fall is accompanied by large reductions in import shares of the US, nearly 37% at the mean, and increases in import shares of other source countries. Notably, when there is no trade-promoting impact of aid (the $\chi = 0$ panel), recipient countries lose less from aid cancellation (1.22% at the mean, 0.70% at the median). In this case, the only effect is the reduction in transfer income, with consumer market access to US imports remaining the same. When aid lowers trade costs, real consumption in recipient countries falls by more than just the lost transfer when aid is withdrawn. Moreover, trade costs with the US are especially important because during the Cold War, the United States was often the largest trading partner for many countries receiving US aid, with US import shares averaging 2.1% of sectoral gross output.

The top panel of Figure 3 illustrates the cross-sectional heterogeneity in recipient country welfare losses. It plots the percent change in real income against the log ratio of US aid to imports from the US (left), and the log ratio of US aid to destination real income (right). In both cases, the distribution of welfare losses is heavily right-skewed: the vast majority of recipient countries cluster near zero, experiencing only modest losses that are largely driven by the pure income transfer effect, while a small subset of highly aid-dependent economies suffer losses that are an order of magnitude larger.

Countries such as Israel (ISR), Cambodia (KHM), Belize (BLZ), Jordan (JOR), and El Salvador (SLV) are consistently among the most adversely affected, with real income losses that dwarf those of the typical recipient. These countries share two features that make them particularly vulnerable: they receive large amounts of US aid relative to both their bilateral trade with the US and their overall income, and they trade a great deal with the US, meaning that the rise in bilateral trade costs when aid is withdrawn affects them to a greater extent. At the other end of the distribution, large emerging economies that receive little US aid relative to their size, and that do not trade much with the US experience losses close to zero, highlighting that the welfare consequences of cutting US aid are highly concentrated among a small number of aid-dependent economies. Taken together, these results demonstrate that the welfare consequences of cutting US foreign aid extend beyond the direct loss of income transfers. The market access channel — operating through higher bilateral trade costs for both final and intermediate goods — meaningfully amplifies recipient losses and erodes the income gains for the donor itself.

Counterfactual: 86% reduction in USSR foreign aid budget. Table 6 reports the welfare effects of an 86% reduction in the USSR foreign aid budget. The results mirror the patterns from the US counterfactual but with several notable differences that reflect the distinct nature of Soviet aid relationships. The USSR was a smaller donor on the global scale, with Soviet aid only 0.35% of recipient income. The Soviet aid was a larger fraction of its own income at 0.26% (vs. 0.18% for the US). In the baseline calibration (top panel), the USSR gains 0.203% from the aid reduction. Without the market access effect, the gain is 0.294% ($\chi = 0$ panel). Thus, the improved market access defrays 31% ($0.091/0.294$) of the direct income loss of aid.

The consequences for recipient countries, while following the same qualitative pattern as the US

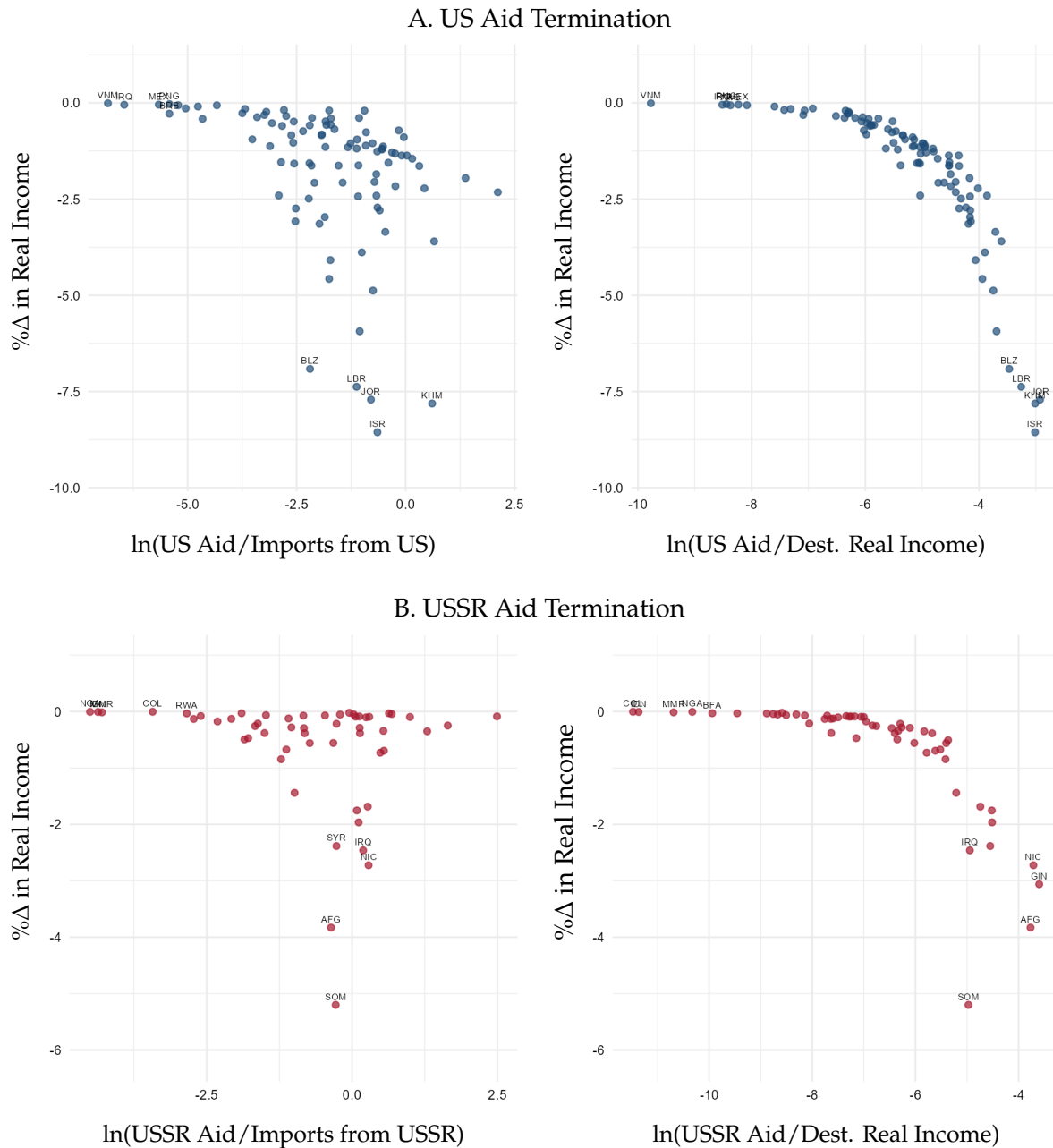
Table 5: Welfare Effects — 86% Reduction in US Foreign Aid Budget

Measure	Mean	Median	Std. Dev.	Min.	Max.
Steady State US AID/Rec. Income (%):	0.88%	0.46%	1.39%	0.00	11.42%
Steady State Total US AID/US Income (%): 0.180%					
$\chi = \chi_{od}$					
<i>Donor</i>					
% change in US real income: 0.150%					
% change in US real wage: -0.005%					
% change in USSR real income: 0.0009%					
<i>Recipients</i>					
% change in real income:	-1.95%	-1.17%	2.95%	-24.32%	0.02%
% change in real wage:	-1.09%	-0.63%	1.74%	-14.70%	0.02%
% change in import share from US:	-36.90%	-27.93%	28.50%	-88.15%	0.01%
% change in import share from ROW:	0.86%	0.64%	2.30%	-21.08%	9.54%
% change in dom. absorption share:	0.94%	0.37%	1.87%	-0.46%	18.43%
$\chi = 0$					
<i>Donor</i>					
% change in US real income: 0.205%					
% change in US real wage: 0.050%					
% change in USSR real income: -0.0036%					
<i>Recipients</i>					
% change in real income:	-1.22%	-0.70%	2.32%	-20.62%	0.01%
% change in real wage:	-0.41%	-0.19%	1.17%	-11.18%	0.13%
% change in import share from US:	-2.86%	-2.14%	2.54%	-25.82%	-0.59%
% change in import share from ROW:	-0.02%	0.73%	2.64%	-23.79%	2.38%
% change in dom. absorption share:	0.37%	0.10%	1.30%	-0.46%	16.64%
$\chi = \chi_{od}, \nu = 0.06$					
<i>Donor</i>					
% change in US real income: 0.150%					
% change in US real wage: -0.005%					
% change in USSR real income: 0.0053%					
<i>Recipients</i>					
% change in real income:	-1.93%	-1.16%	2.94%	-24.30%	0.03%
% change in real wage:	-1.07%	-0.60%	1.74%	-14.68%	0.03%
% change in import share from US:	-36.92%	-27.94%	28.50%	-88.15%	-0.01%
% change in import share from ROW:	0.91%	0.68%	2.34%	-20.95%	9.58%
% change in dom. absorption share:	0.92%	0.35%	1.87%	-0.49%	18.40%
Num. of Recipients			96		

Notes: This table reports the welfare effects in response to a 86% reduction in the US foreign aid budget for the United States and 96 recipient countries in which the US disbursed aid to under different aid-to-trade elasticities. Trade share summary statistics are constructed across sectors. The bilateral trade elasticity is used in accordance with the table in Appendix B.2.

counterfactual, are considerably smaller in magnitude, reflecting the lower aid dependence of Soviet recipients. Real income falls by 0.67% at the mean and 0.25% at the median in the recipient countries in our baseline calibration, and by 0.37%/0.09% (mean/median) without the market access benefit. The market access effect appears to have a large impact on Soviet trade, with Soviet market shares falling by 60-70% on average in recipient countries when aid is canceled. The mechanism for the recipient welfare effect of market access is the same as in the US case, but the magnitude is smaller because Soviet aid recipients were less deeply integrated with the USSR through trade than US recipients

Figure 3: Welfare Effects of an 86% Reduction in US and USSR Foreign Aid Budget



Note: Figure 3 plots the percent change in real income from steady state in response to an 86% reduction in the US (top row) and USSR (bottom row) aid budget for countries that received foreign aid from the great powers during the Coldwar era, using our calibrated bilateral elasticities ($\chi = \chi_{od}$). The left panels' x-axes are constructed by taking the log of US (USSR) aid disbursed to the destination country divided by the total bilateral imports of the destination country from the US (USSR) during the Coldwar era. The right panels' x-axes are constructed by taking the log of the US (USSR) aid disbursed by the US (USSR) during the Coldwar era and dividing by the steady state real income of the destination country. Saudi Arabia (SAU) and Laos (LAO) are removed from the US figures since they are outliers and skew the presentation of our results. Guinea (GIN) and Mozambique (MOZ) are dropped from the bottom left chart because there is no reported imports flows between these recipient countries and the USSR during the Cold War period.

were with the US. The USSR aid recipient countries' trade shares with the USSR averaged 0.48% of sectoral gross output, compared to US shares of 2.1% for US aid recipients.

The bottom panel of Figure 3 illustrates cross-sectional heterogeneity in welfare losses. As with the US, the distribution is heavily right-skewed: the vast majority of Soviet aid recipients cluster near zero while a small tail of highly aid-dependent economies suffer disproportionately large losses. Countries such as Somalia (SOM), Afghanistan (AFG), Nicaragua (NIC), and Guinea (GIN) are consistently among the most adversely affected, reflecting their deep dependence on Soviet aid relative to both their bilateral trade with the USSR and their overall income. At the other end of the distribution, large economies that received little Soviet aid relative to their size experience losses close to zero.

The impact of opposing bloc trade diversion. The bottom panels of Tables 5 and 6 report the counterfactual results of canceling US and Soviet aid while also accounting for the trade diversion channel documented in Fact 3 in Section 2. This counterfactual thus allows the bilateral trade cost τ_{od} to also respond to the rival bloc's aid disbursements to recipient d . We calibrate $\nu = 0.06$ to match column 4 of Table A.14. Thus, in the US aid cancellation counterfactual, Soviet bloc countries' trade costs to the recipient countries decrease, and vice versa.

For both the US and USSR as donors, this additional channel leaves the results unchanged. US real income still rises by 0.150% and the real wage falls by 0.005%, indistinguishable from the baseline bilateral calibration, and similarly for the USSR. The big difference comes in the impact on recipient countries.

Adding trade diversion to the US exercise barely affects recipients' average real income change (−1.93% with vs. −1.95% without). By contrast, in the USSR exercise average recipient real income changes sign, from −0.67% without diversion to +0.12% with it at the mean (and from −0.25% to +0.08% at the median). Thus, the typical Soviet recipient is actually made better off when the USSR cuts its aid. This asymmetry comes from the baseline trade network and the relative size of bloc coalitions. When the USSR withdraws aid from recipient d , d 's iceberg cost vis-à-vis the USSR rises, but d 's costs of importing from the rival Western bloc fall. Soviet recipients traded far more with the West than with the USSR, in part because the Western coalition comprised of many more countries with far larger economies than the Soviet bloc. The typical Soviet recipient is therefore better off when the USSR withdraws its aid: the cheaper imports from the West outweigh both the lost transfer and the now-costlier trade with the USSR. Finally, the tables report the welfare change to the opposing superpower in this scenario. The impact is quite minor in both directions, on the order of hundredths of a percentage point. Thus, the impact of aid on the opposing bloc market access is trivial when measured in welfare terms.

Counterfactual: 86% reduction in other donor budgets. Panel A of Figure 4 generalizes the exercise to every donor in the sample, cutting each donor's bilateral aid budget by 86% one donor at a time. The white dot depicts the net real income change. The blue bar shows the direct income effect with the market access channel shut off, while the red bar shows the incremental market-access loss when

Table 6: Welfare Effects — 86% Reduction in USSR Foreign Aid Budget

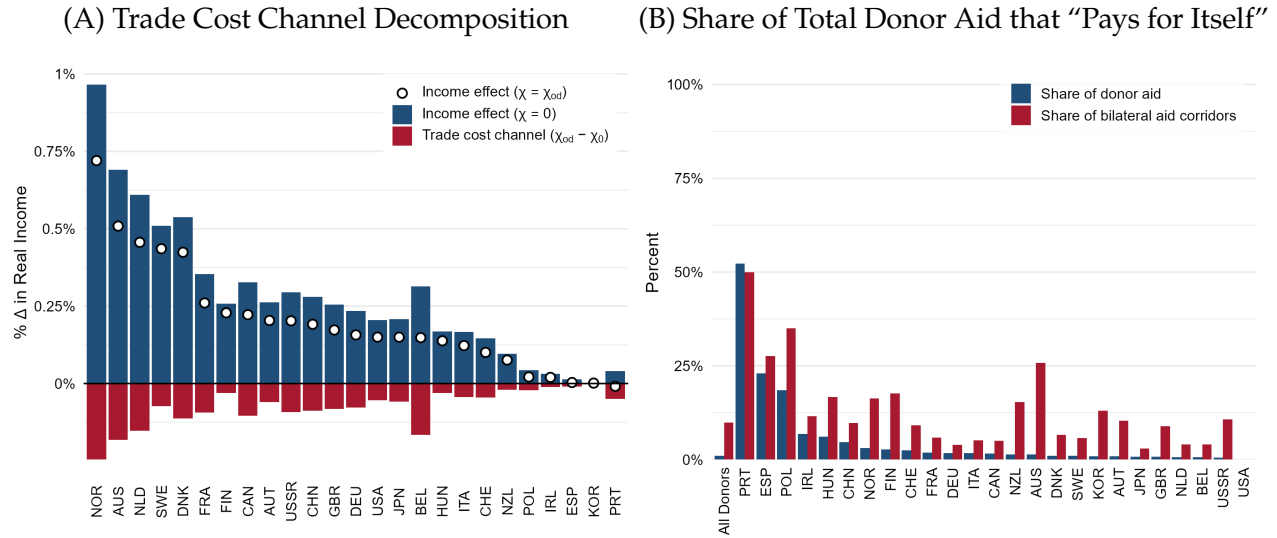
Measure	Mean	Median	Std. Dev.	Min.	Max.
Steady State USSR AID/ Rec. Income (%):	0.35%	0.10%	0.59%	0.00%	2.73%
Steady State Total USSR AID/USSR Income (%): 0.260%					
	$\chi = \chi_{od}$				
<i>Donor</i>					
% change in USSR real income: 0.203%					
% change in USSR real wage: -0.024%					
% change in US real income: 0.0006%					
<i>Recipients</i>					
% change in real income:	-0.67%	-0.25%	1.06%	-5.20%	0.00%
% change in real wage:	-0.37%	-0.13%	0.72%	-4.50%	0.00%
% change in import share from USSR:	-58.46%	-73.78%	29.63%	-85.28%	-0.52%
% change in import share from ROW:	0.47%	0.05%	2.57%	-3.84%	29.29%
% change in dom. absorption share:	0.44%	0.04%	2.09%	-0.14%	25.42%
	$\chi = 0$				
<i>Donor</i>					
% change in USSR real income: 0.294%					
% change in USSR real wage: 0.066%					
% change in US real income: -0.0009%					
<i>Recipients</i>					
% change in real income:	-0.37%	-0.09%	0.66%	-2.97%	0.09%
% change in real wage:	-0.11%	-0.04%	0.21%	-0.93%	0.09%
% change in import share from USSR:	-4.92%	-4.62%	1.27%	-13.66%	-3.43%
% change in import share from ROW:	-0.28%	0.06%	1.35%	-9.51%	1.30%
% change in dom. absorption share:	0.10%	0.02%	0.28%	-0.28%	1.87%
	$\chi = \chi_{od}, \nu = 0.06$				
<i>Donor</i>					
% change in USSR real income: 0.205%					
% change in USSR real wage: -0.021%					
% change in US real income: 0.0131%					
<i>Recipients</i>					
% change in real income:	0.12%	0.08%	1.28%	-4.68%	4.86%
% change in real wage:	0.38%	0.20%	1.08%	-4.02%	4.93%
% change in import share from USSR:	-59.17%	-74.61%	29.21%	-85.86%	-0.41%
% change in import share from ROW:	4.25%	3.13%	3.70%	-0.41%	29.96%
% change in dom. absorption share:	-0.25%	-0.16%	2.21%	-7.79%	23.65%
Num. of Recipients			56		

Notes: This table reports the welfare effects in response to a 86% reduction in the USSR foreign aid budget for the USSR and 56 recipient countries in which the USSR disbursed aid to under different aid-to-trade elasticities. Trade share summary statistics are constructed across sectors. The bilateral trade elasticity is used in accordance with the table in Appendix B.1.

the channel is turned on. The median donor defrays roughly 27% of the cost of aid through improved market access, essentially the same as the US and USSR. But for select donors, the market-access channel is more important. Belgium defrays about 53% of its aid's cost. Portugal's, South Korea's, and Spain's aid essentially fully pays for itself with improved market access, though these are countries where aid is least important in absolute terms. These countries' aid is small relative to their trade flows with the recipients, because these donors trade intensively with the countries to which they give aid.

Next, we extend the analysis to the donor-recipient pair level. It could be that while most countries' total aid is not justified by increased market access, aid to specific countries is. We run

Figure 4: Donor Welfare Decomposition from an 86% Reduction in Aid Budget

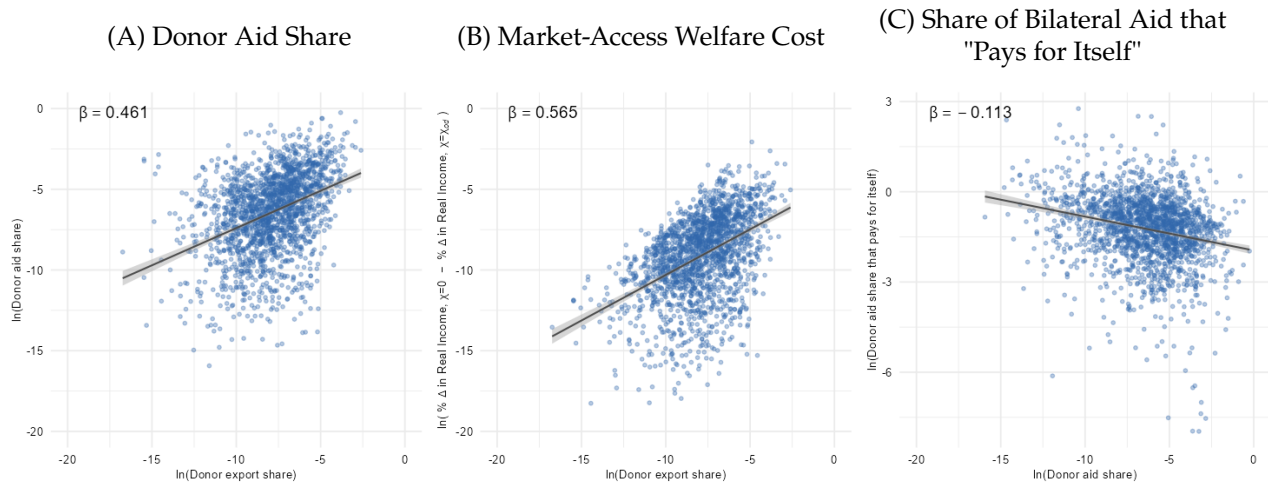


Note: This figure reports donor welfare effects from an 86% reduction in foreign aid under the bilateral aid-to-trade elasticity ($\chi = \chi_{od}$). *Left panel:* For each donor country, the dot represents the change in the donor's own real income when it reduces its foreign aid budget by 86% under $\chi = \chi_{od}$. The blue bars represent the change in the donor's real income under the baseline counterfactual with no aid-to-trade channel ($\chi = 0$). The red bars are constructed as the difference between the dot and the blue bar, capturing how much the trade channel impacts welfare. *Right panel:* A bilateral aid corridor "pays for itself" if removing the donor's aid to that recipient lowers the donor's own real income, meaning the trade-channel welfare gain from the aid exceeds the donor's budget cost. For each donor, we identify the set of pays-for-itself corridors by running the bilateral-aid-removal counterfactual one recipient at a time and flagging corridors that lead to a loss in donor real income. The blue bars report the share of the donor's total disbursed aid that flows to pays-for-itself corridors; the red bars report the share of the donor's bilateral aid corridors that pay for themselves. The "All Donors" group pools across all donors. Each counterfactual simulation is run separately, and welfare effects are percentage changes relative to the baseline equilibrium.

the aid-cancellation counterfactual one donor-recipient pair at a time. A bilateral aid flow "pays for itself" if the donor's own real income falls when its aid to that recipient is withdrawn, so that the lost market access outweighs the savings from cutting aid. Panel B of Figure 4 reports the shares of each donor's aid that is self-financing. Blue bars depict the share of the donor's total disbursed aid dollars that is self-financing; and red bars the share of the donor's recipient countries in that category. With the exception of Portugal, only a small minority of aid is self-financing, when measured as a share of aid dollars or of recipient countries. Also for every donor except Portugal, the share of countries that are self-financing exceeds the share of aid dollars. That is, recipients for which aid pays for itself are the donor's smaller ones. A donor can have aid to many recipients pay for itself, while the bulk of its total aid dollars go to countries that are not self-financing—e.g. Australia (26% of recipients but 1% of aid dollars), or Norway (16% versus 3%).

Finally, Figure 5 illustrates the variation in the market-access channel. The first two panels have the same horizontal axis, the log of the donor's bilateral export share to the recipient. The figure pools all donor-recipient pairs. On the y-axis in Panel A is the log of the donor's bilateral aid share, with an OLS slope of $\hat{\beta} = 0.461$. Thus, aid tends to flow to countries with this the donor trades more. The positive slope in Panel A is an accelerant for our mechanism: aid is directed precisely to the corridors where market access matters to the donor. On the y-axis in Panel B is the donor's

Figure 5: Do Donors Give Aid Where They Trade? Market-Access Benefits of Aid



Note: Each point is a donor–recipient pair, pooled across all donor–recipient pairs. The horizontal axis in the first two panels is the donor’s bilateral export share to recipient d , computed using total bilateral trade flows. The left panel’s vertical axis is the donor’s bilateral aid share, computed using total Cold War baseline aid flows. Only pairs with strictly positive aid and trade are retained. The middle panel’s vertical axis is the donor’s market access welfare cost of cutting aid to the aid recipient country. This measure is constructed by first calculating the donor’s welfare when they cut aid by 86% to each recipient country shutting down the aid-trade cost channel ($\chi = 0$). We then run the same counterfactual but turn on the aid-trade cost channel ($\chi = \chi_{od}$) and then take the difference between the two. The difference isolates the welfare loss to the donor from foregone trade-cost reductions when aid is withdrawn. Each counterfactual is run separately. The right panel plots, against the donor’s bilateral aid share, the fraction of aid to recipient d that pays for itself: the middle panel’s market-access welfare cost divided by the donor’s direct welfare gain from cutting aid with the channel shut down ($\chi = 0$), i.e., the share of the donor’s direct saving from withdrawing aid that is offset by foregone trade-cost reductions. Gray lines are pooled OLS fits with 95% confidence bands and β represents the OLS slope coefficient.

bilateral market-access welfare loss from withdrawing aid to that recipient: the gap between the donor’s welfare change with the market access channel shut off and with it active. The OLS slope in Panel B is $\hat{\beta} = 0.565$: the donor’s market-access welfare loss from withdrawing aid increases with its pre-existing export share. Foreign aid does not generate market access uniformly across recipients; it generates gains disproportionately in the donor-recipient pairs where bilateral trade was already large to begin with.

At the same time, the larger recipients also tend to have a lower fraction of aid pay for itself, as depicted in Panel C of Figure 5. Thus, larger aid flows, from the donor perspective, tend to have lower “rates of return” when measured by market access gains.

In sum, the market-access channel is quantitatively meaningful in the full sample of donors, compensating between a quarter and a third of the typical donor’s direct income effect. The market access gains are greatest precisely in the donor-recipient pairs with greater bilateral trade, but are generally not large enough to make aid pay for itself. For most donors, the aid commitments that absorb the bulk of the aid budget are directed to recipients where aid does not pay for itself with market access.

4.3 Spheres of Influence

Having argued that the market access mechanism cannot fully justify observed aid outlays, we now attempt to find other motives for aid. The reduced-form results in Section 2 establish that aid moves

UN voting closer to the donor. We now ask whether this estimated effect is quantitatively large: could aid at the scale disbursed during the Cold War meaningfully reshape diplomatic relations across countries?

We combine the model with the reduced-form estimates to answer this for the United States and the Soviet Union, providing evidence in three steps: (i) who falls in each superpower's sphere of influence; (ii) which aid is economically costliest to the donor; and (iii) whether aid is large enough to move a country from one alignment camp to the other.

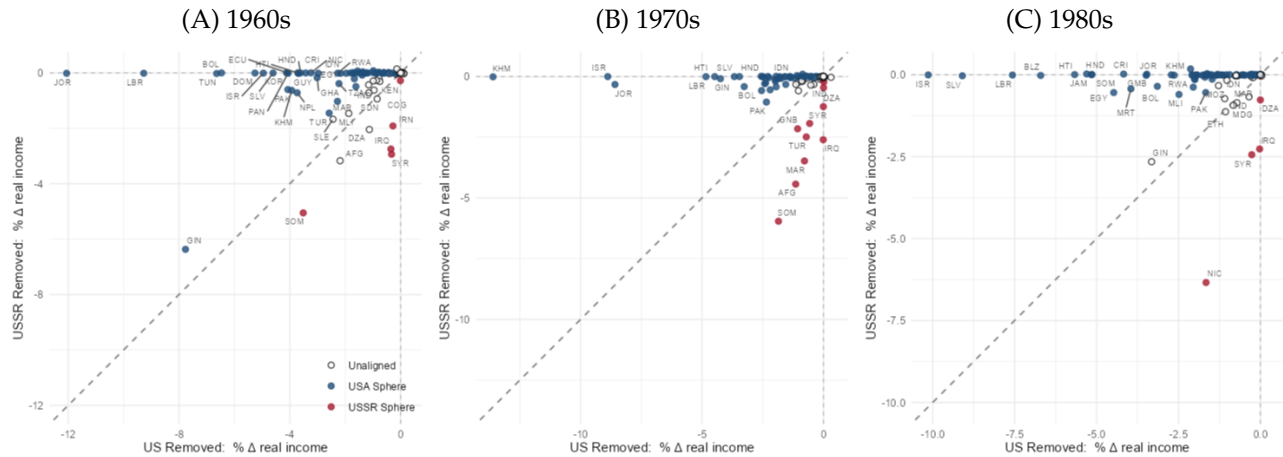
Spheres of influence. Figure 6 reports, by decade, the cross-section of recipient real-income losses from a US-only aid cancellation (horizontal axis) against the analogous losses from a USSR-only aid cancellation (vertical axis), with aid disbursements in each panel calibrated to the corresponding decade.²⁰ We heuristically classify countries into 3 categories: US and USSR camps, and unaligned. Unaligned recipients are defined as those that received aid from both superpowers and for which the welfare impacts of the US and Soviet cancellations differ by less than one percentage point. They are depicted by hollow dots. Blue dots denote countries in the US sphere of influence—those that lose 1 percentage of welfare more from the US aid cancellation than from the Soviet one—and red dots denote those in the Soviet sphere.

By this metric the US sphere is dominant in every decade. Over the Cold War period as a whole, 63 recipients are in the US sphere, 6 in the Soviet sphere, and 28 unaligned (Appendix Figure B.5). At the same time, some of the largest recipients, whether measured in total dollars or as a share of GDP (see Figures A.1–A.2), are unaligned. India and Turkey are the leading examples.

The decade panels reveal the changes over time. Of the 97 recipients we classify, the split moves from 63 US / 5 USSR / 29 unaligned in the 1960s, to 61 US / 10 USSR / 26 unaligned in the 1970s, to 72 US / 5 USSR / 20 unaligned in the 1980s. The Soviet sphere thus peaks in the 1970s and then halves to five recipients in the 1980s, while the US sphere expands to become even more dominant. The 1970s Soviet sphere of ten contracts sharply: four recipients move into the US sphere (Congo, Guinea-Bissau, Somalia, and Turkey) and three become unaligned (Afghanistan, Iran, and Morocco). Only three persist within the Soviet sphere across both decades—Algeria, Iraq, and Syria—while two new recipients enter the Soviet sphere in the 1980s: Nicaragua, moving over from the US sphere, consistent with rising Soviet support for the Sandinista government, and Argentina, entering from the unaligned group, consistent with the surge in Argentine grain exports to the USSR following the 1980 US grain embargo on the USSR. By the 1980s the Soviet sphere consists of Algeria, Argentina, Iraq, Nicaragua, and Syria. This pattern is consistent with a marked contraction and retargeting of the Soviet aid program over the 1980s; because each panel is calibrated to decade-specific aid, a smaller Soviet aid program mechanically leaves far fewer recipients more exposed to the USSR than to the US. We emphasize, however, that Figure 6 illustrates the economic exposure of the recipient to the donor; it does not necessarily imply that a recipient is also aligned politically with the donor, a question we

²⁰Appendix Figure B.5 uses our baseline calibration over the entire Cold War period.

Figure 6: Welfare Losses from US vs. USSR Aid Removal, by Decade



Note: This figure plots the percentage change in real income under counterfactual 1 (US aid removed, x-axis) and counterfactual 2 (USSR aid removed, y-axis) in each Cold War decade. Each decade’s simulations re-solve the model under that decade’s bilateral aid flows, constructed by applying each recipient’s decade aid-to-GDP ratio (1962–1969, 1970–1979, and 1980–1989) to its baseline GDP and allocating it across donors according to the decade’s bilateral aid shares; all other model primitives (trade shares, input–output structure, preferences, and value added) are held at their baseline values, with baseline incomes and gross output recomputed for consistency with each decade’s aid matrix. Within each decade, counterfactual 1 reduces all US bilateral aid flows by 86% and counterfactual 2 reduces all USSR bilateral aid flows by 86%, in both cases under the bilaterally calibrated aid-trade cost elasticities χ_{oid} . The sample, identical across the three panels, is the union of all countries that received US or USSR aid during the Cold War. Countries are colored blue if they are in the US sphere (above the 45-degree line and received US aid during that decade) and red if they are in the Soviet sphere (below the 45-degree line and received Soviet aid during that decade). Countries are hollow if they are unaligned: either the absolute difference in real income changes across the two counterfactuals is less than one percentage point and the country received aid from both great powers during that decade, or the country did not receive aid that decade from the great power whose sphere its position would otherwise imply. The scatter plots drop Laos because it is an outlier and skews the presentation of the graphs.

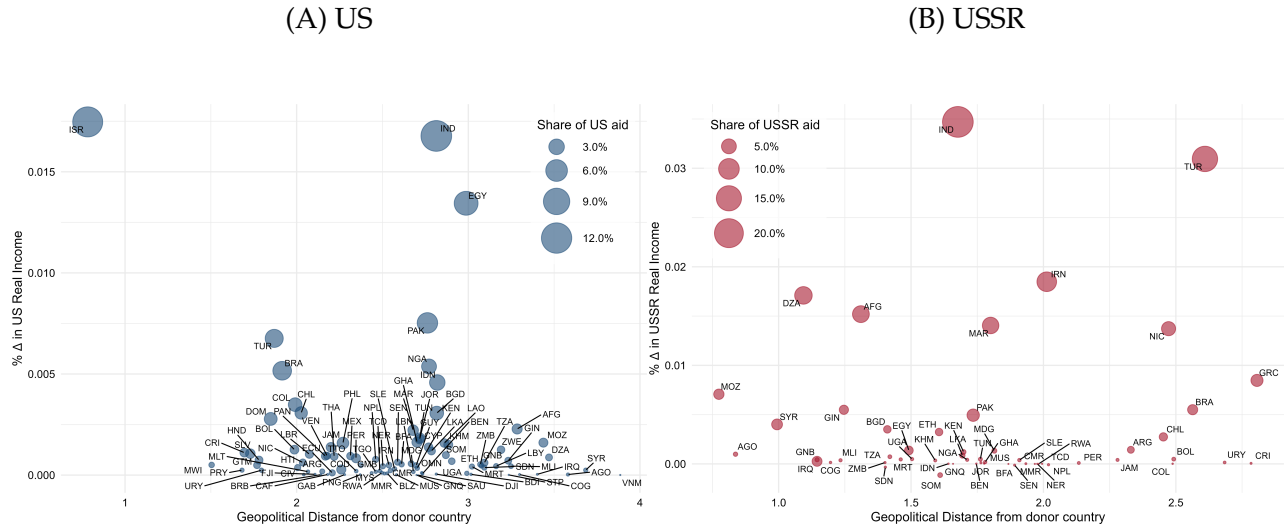
return to in Figure 8.

Donor cost and geopolitical alignment. Figure 7 plots the welfare cost to the US and USSR of aid to the recipient against the recipient’s geopolitical distance from the donor. The horizontal axis is the UN General Assembly ideal-point measure introduced in Fact 2 of Section 2. The vertical axis is the percent change in donor real income from removing aid to that recipient. Bubble sizes are proportional to the recipient’s share of the donor’s total Cold War aid disbursements.

The figure thus asks whether the donor’s costliest recipients were its closest allies. The defining feature of Figure 7 is *where* the costliest aid flows sit. For both the US and the USSR, the costliest recipients that also absorb the largest shares of the donor’s aid budget (the large bubbles), cluster at medium geopolitical distance, away from both ends of the x-axis. The donor’s costliest aid relationships were generally neither with its closest ideological allies nor with adversaries, but with middle-ground states. Donors likely had less to gain from paying to keep existing allies more firmly in its camp, and little hope of buying off states firmly within their rival’s camp; the geostrategic returns to aid were apparently highest in the middle.²¹ (The one exception is Israel for the US: it is the US’s costliest

²¹This empirical finding is consistent with the logic of the aid-as-policy-purchase mechanism. As formalized theoretically by, for example, [Bueno de Mesquita and Smith \(2007, p. 254\)](#), “aid is not expected to flow to countries whose leaders naturally favor policies that are important to the donor. Nor is aid expected to flow to countries whose leaders cannot afford politically to adopt the policies sought by a prospective donor. Rather, aid is expected to flow to countries whose leaders do not inherently support the policies of a prospective donor but are willing to back those policies in exchange for aid.”

Figure 7: Welfare Gains for US and USSR from 86% Reduction in Bilateral Aid



Note: Each point is a recipient country. The horizontal axis is the log of the average absolute value of ideological distance (UN General Assembly ideal-point difference, 1962–1989) between the donor and the recipient. The vertical axis is the percent change in donor real income when reducing bilateral aid disbursed from that donor by 86% to that single recipient, computed using the bilateral aid-to-trade elasticities χ_{od} . Bubble size is the recipient’s share of the donor’s total Cold War aid (1962–1989). Each counterfactual simulation is run separately. All values are percentage changes relative to the baseline equilibrium.

aid recipient, and also the most UN-aligned.) Appendix Figure B.6 reproduces the plot for the other donors and recovers the same pattern: middle-power donors also direct a disproportionate share of aid to recipients an arm’s length away geopolitically, rather than to their closest partners. The Nordic countries are the clearest illustration: Sweden, Norway, and Denmark concentrated their unusually large aid budgets on states newly emerged from liberation struggles—most strikingly newly independent Mozambique, whose Marxist FRELIMO government Sweden had backed against Portuguese rule and which became a top recipient of Nordic aid after 1975, despite lying far from any donor on the Cold War alignment axis (Sellström, 2002).

The effect of aid on geopolitical alignment. Fact 2 in Section 2 establishes that aid had some capacity to shift the recipient’s geopolitical alignment towards the donor. We finally ask whether the scale of aid actually disbursed during the Cold War was large enough to meaningfully affect UN alignment. The left panel of Figure 8 plots each recipient’s observed average UN alignment with the US on the x-axis, labeling countries aligned on net with the USSR with red circles, and those aligned with the US with blue circles. On the y-axis is instead the counterfactual alignment if the US aid to that recipient were canceled entirely, so as to give aid the largest possible scope to move geopolitical alignment. We add a 45-degree line to the graph. Thus, aid moved a country closer to the US if the observation is below the 45-degree line. Aid moved a country from the Soviet to the US camp if the observation is in the lower-right quadrant: it’s a country that but for US aid would have been in the Soviet camp.

The exercise relies only on the Fact 2 estimate: we use the contemporaneous coefficient on aid intensity from Table 2, $\hat{\beta}_{gp} = -5.296$, which captures how much one unit of US aid as a share of

recipient GDP shifts the recipient's UN ideal-point distance toward the US. The implied movement away from the US is then $-\hat{\beta}_{gp} \times (\text{US aid disbursed}/\text{Recipient GDP})$, holding the recipient's distance to the USSR fixed. Although only a reduced-form exercise, it conveys the magnitude of the alignment shift aid could induce relative to a recipient's baseline ideological distance over the Cold War period.

The implied shifts are quite small relative to the observed dispersion in UN alignment. For the vast majority of recipients the counterfactual dot sits modestly below the 45-degree line but quite close to it. On average the implied move is just 8.6% of a recipient's baseline alignment difference, and its standard deviation across recipients is 14.7% of that baseline difference. Even at the right tail, where US aid was largest as a share of recipient GDP, not a single recipient is moved from positive (US-aligned) to negative (USSR-aligned) by the loss of all US aid. The conclusion is the same for the USSR, depicted in the right panel of Figure 8. No Soviet aid recipient would have moved from the Soviet side to the US side if Soviet aid were canceled. Whichever superpower withdraws its aid, the overall alignment of recipients is left essentially intact.

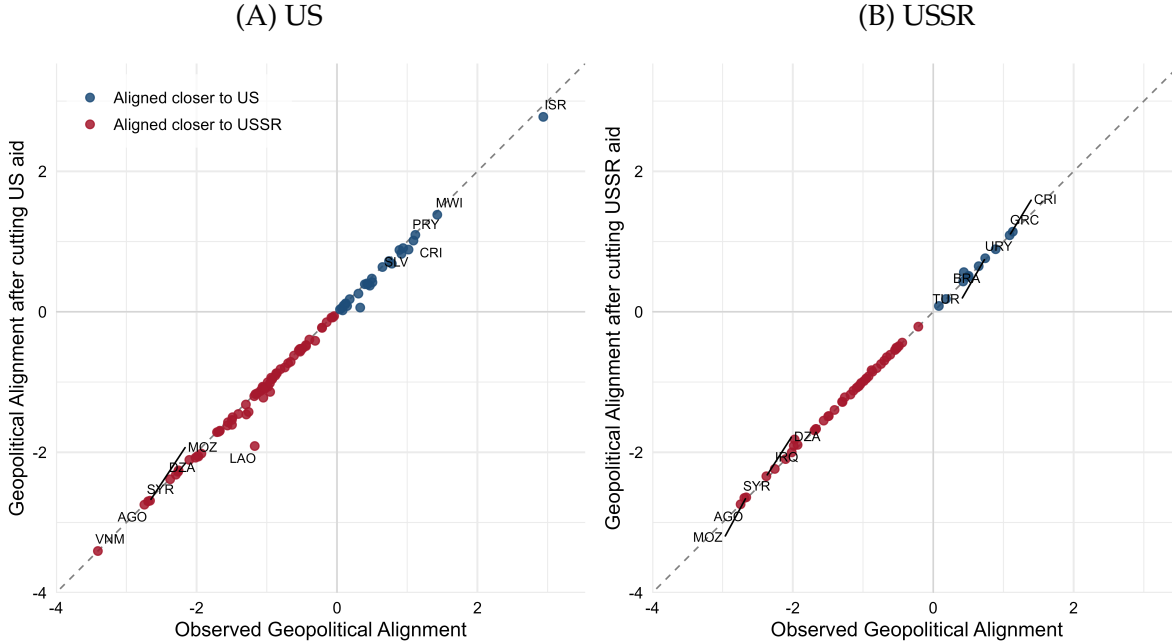
As an alternative gauge of the magnitude of these results, the estimates imply that canceling all of US aid to all recipients would change average geopolitical alignment with the US in the sample of recipient countries by 0.050. The standard deviation of *year-to-year* changes in average geopolitical alignment faced by the US in the UN is 0.454. This, the totality of US aid is predicted to move UN alignment by 0.11 ($= 0.05/0.454$) standard deviations of the annual alignment change.

We interpret this as a quantitative limit of foreign aid as a geopolitical instrument. However deliberately donors may have targeted geostrategically important, contested recipients in the hope of drawing them into their own orbit, the strategy does not appear to have succeeded in meaningfully moving countries across geopolitical camps. Although foreign aid empirically moves countries closer to the donor's UN stance, the scale of aid actually disbursed during the Cold War is small relative to the underlying ideological dispersion across recipients, even from a donor as large as the United States.

4.4 Alternative Implementations

Constant $\chi = 0.1$. Appendix Table B.4 reports the results of simply using the coefficient from column 4 of Table A.6 to calibrate a single $\chi = 0.1$. US welfare increases by 0.147% when 86% of US aid is cancelled, similar to the baseline with heterogeneous χ . Again, most of the gains come from a pure transfer of resources effect. US real wages decrease modestly by 0.008%. Relative to the scenario with no impact on trade costs, US welfare gains are 0.058% smaller, implying around 28% of the real income cost of aid pays for itself. For the USSR (bottom panel), gains under a constant $\chi = 1$ are 0.271%. Without the market access benefits, gains are 0.294%, implying market access defrays only about 8% of the direct loss, which is much smaller than that 31% under χ_{od} . This reflects the fact that Soviet aid recipients had comparatively large aid flows relative to bilateral trade, pushing the heterogeneous χ_{od} above the pooled value of 0.1. In other words, the loss of market access for the

Figure 8: Counterfactual Geopolitical Alignment from Full Aid Removal



Note: This figure plots the observed and counterfactual UN voting alignment of Cold War aid recipients (1962–1989) in two panels: the left panel cuts US aid to its recipients, the right panel cuts USSR aid to its recipients. Geopolitical Alignment is each recipient’s average geopolitical distance from the USSR minus its average geopolitical distance from the US, measured using UN General Assembly ideal points. Geopolitical distance is constructed exactly as in Fact 2, by taking the absolute value of the difference in UN General Assembly ideal points between donor and recipient, and then averaging across 1962–1989. In each panel, the horizontal axis is the observed alignment and the vertical axis is the counterfactual alignment after the indicated donor cuts its bilateral aid to that recipient; the dashed 45-degree line marks where the counterfactual equals the observed value (no change). Points are colored by the recipient’s observed camp: blue means it voted on average closer to the US (positive alignment), red means closer to the USSR (negative alignment). We compute the counterfactual using the contemporaneous coefficient on aid intensity from the Fact 2 regression in Table 2, column 4 ($\beta = -5.296$). Because the dependent variable in that regression is the absolute value of the bilateral ideal-point distance between donor and recipient, a negative coefficient means that higher aid intensity brings the two countries closer together (it lowers the distance). In the left panel, cutting US aid raises the recipient’s distance to the US by $-\beta \times (\text{US aid disbursed}/\text{Recipient GDP}) > 0$, holding its distance to the USSR fixed; since alignment is distance-to-USSR minus distance-to-US, this pushes alignment down and the point falls below the 45-degree line (toward the USSR). In the right panel, cutting USSR aid instead raises the recipient’s distance to the USSR by $-\beta \times (\text{USSR aid disbursed}/\text{Recipient GDP}) > 0$, holding its distance to the US fixed, which pushes alignment up and the point rises above the 45-degree line (toward the US). Recipients with fewer than five years of UN voting data over 1962–1989 are dropped, including Korea, which was only admitted to the UN in 1991.

USSR in the pooled calibration is substantially smaller than in the bilateral χ_{od} scenario.

Appendix Figure B.1 shows the heterogeneity in welfare declines across recipients under the uniform χ scenario for the US (top panel) and USSR (bottom panel) aid cut counterfactuals. Similar to Figure 3, the distributions are right skewed. Most recipient countries see small to negligible welfare declines, with the largest declines concentrated in countries like Israel and Cambodia (for the US counterfactual) and Afghanistan and Nicaragua (for the USSR counterfactual), which are countries with relatively large aid to trade flows with the US (USSR) and relatively large aid to income ratios. Relative to the heterogeneous χ scenario, losses in recipient countries are muted, and the relationship with trade flows relative to aid is weakened. Finally Appendix Figure B.3 contains the donor welfare decomposition relative to the $\chi = 0$ setting, and the share of donor aid that pays for itself with a uniform χ . As in the baseline, the trade cost channel mitigates the welfare impact of aid reductions with $\chi = 0.1$. For several countries the trade channel more than offsets the direct welfare gains from

cutting aid altogether: Korea, Spain, Portugal, Poland, Ireland, New Zealand, and Switzerland are all left worse off by cutting their own aid, their net real-income change turning negative in Panel A. This largely reflects the fact that these donors were smaller, more open economies that traded intensively with a handful of partners, often former colonies; withdrawing aid with $\chi = 0.1$ raises trade costs uniformly, including in exactly the corridors on which their trade-dependent economies most depend upon. Under a heterogeneous χ , the trade cost increase between partners with high trade flows would be muted, mitigating the negative impact on real income. Panel B of the figure shows that across all donors, around 45% of aid corridors pay for themselves in this counterfactual.

Alternative trade elasticity. Appendix Figures B.7 and B.8 plots the welfare changes across all counterfactuals with an alternative trade elasticity $\varepsilon = 5$. Qualitatively, all the conclusions remain similar. Unsurprisingly, with a higher trade elasticity, the quantitative magnitude of welfare declines is attenuated, with the attenuation strongest for the recipient countries with the largest absolute welfare declines. As a result, with a higher trade elasticity the gap between the welfare impacts of US and USSR aid withdrawal also quantitatively shrinks.

5. CONCLUSION

It has been widely conjectured that during the last era of great power politics – the Cold War – countries used foreign aid to influence recipient countries. Anecdotal evidence also points to one specific type of influence: market access. This paper estimates and quantifies the market access motive for foreign aid during the Cold War. Econometric estimates show that aid indeed improved the donor’s market access in the recipient country. According to our quantification, about one-third of aid disbursed paid for itself with the gains from market access. While our exercise can account for a significant share of the benefits from foreign aid, it is still important to measure and quantify the other two-thirds. This remains a fruitful avenue for future work.

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A. DATA AND EMPIRICAL RESULTS APPENDIX

A.1 Data

GDP. The final GDP series we use for our empirical analysis is constructed by splicing multiple GDP series together from various sources. We obtain our base series from the CEPII Gravity database (Conte, Cotterlaz, and Mayer, 2022), which is primarily sourced from the World Bank’s World Development Indicators (World Bank, 2025). CEPII also sources data from Barbieri (2005) which helps extend historical coverage. We elect to use the CEPII series due to its historical coverage. We then obtain additional GDP data from the World Bank and splice forwards and backwards onto the base series to account for any potential missing data from the baseline CEPII series. To forwards splice, we first construct growth rates using the World Bank series. Then, if the base series is missing data in year t , but the growth rate exists from the World Bank series between year $t - 1$ and t , as well as data at $t - 1$ for the base series, then we use the growth rate to construct data in year t for our spliced series. Since all series are in nominal USD, we use the US GDP deflator found on FRED [here](#) to deflate the series before splicing. We follow a similar approach when backwards splicing onto our base series. If the data for our base series is missing in year t , we use the growth rate between year t and $t + 1$ from the World Bank series to backwards splice onto our base series. We then follow the same approach using GDP data from the Maddison Project (Bolt and Van Zanden, 2023).

Aid. Our final bilateral aid series is constructed using three main sources. Soviet Union and Chinese aid comes from the Central Intelligence Agency’s Handbook of Economic Statistics (Central Intelligence Agency, 1962–1989), which covers bilateral aid flows between the Soviet Union and recipient countries for years 1966–1989, as well as between China and recipient countries for years 1956–1989. For the Soviet Union, we supplant aid data from Carter (1971) to recover bilateral Soviet aid data between 1955–1965.

For all other countries, we obtain aid data from the OECD Official Development Assistance database (OECD, 2023). We pull the official development assistance disbursements series from the database, which covers 28 donor countries and 158 recipient entities between 1960–1989. The donor countries during the Cold War era (1960–1989) are: ARE, AUS, AUT, BEL, CAN, CHE, DEU, DNK, ESP, FIN, FRA, GBR, HUN, IRL, ITA, JPN, KOR, KWT, NLD, NOR, NZL, POL, PRT, QAT, SAU, SWE, TWN, and USA. Saudi Arabia (SAU) does not report bilateral aid data so we discard the country for analysis. Moreover, we exclude all other Middle Eastern countries (ARE, KWT, QAT) from our analysis. Thus, across all three sources, we use data comprising of 26 donor countries. Once we make this restriction and throw out all observations before a country’s independence year, we are left with 133 recipient countries. We also exclude all observations for Vietnam between 1955–1975 and Afghanistan between 1979–1989 since these were years in which these countries were in conflict with great power countries and aid disbursed during this time period was likely for military purposes. Finally we exclude all bilateral observations between China and Taiwan for similar reasons. Since these data sources do not impute zeros, we construct our final panel by first creating bilateral observations for a year if within the decade, there exists an instance wherein the donor country disbursed aid to any country and the recipient country received aid from any country. If there is not data for a given bilateral-year pair, then we impute a zero. Finally, we deflate our aid series using the GDP deflator from FRED.

Trade. We construct our final spliced bilateral trade series by following a more nuanced splicing strategy than our GDP series due to inadequate data coverage across primary data sources. We obtain our four bilateral trade series from CEPII’s Gravity database (Conte, Cotterlaz, and Mayer, 2022), which comprise of bilateral trade data from UN-Comtrade (United Nations Statistics Division, 2025) and the IMF Direction of Trade Statistics (International Monetary Fund, 2025) reported by the origin and destination country. Our base series is UN-Comtrade reported by the destination country and then the hierarchy of series we use to splice onto our base

series is IMF reported by the destination country, UN-Comtrade reported by the origin country, and finally IMF DOTS reported by the destination country.

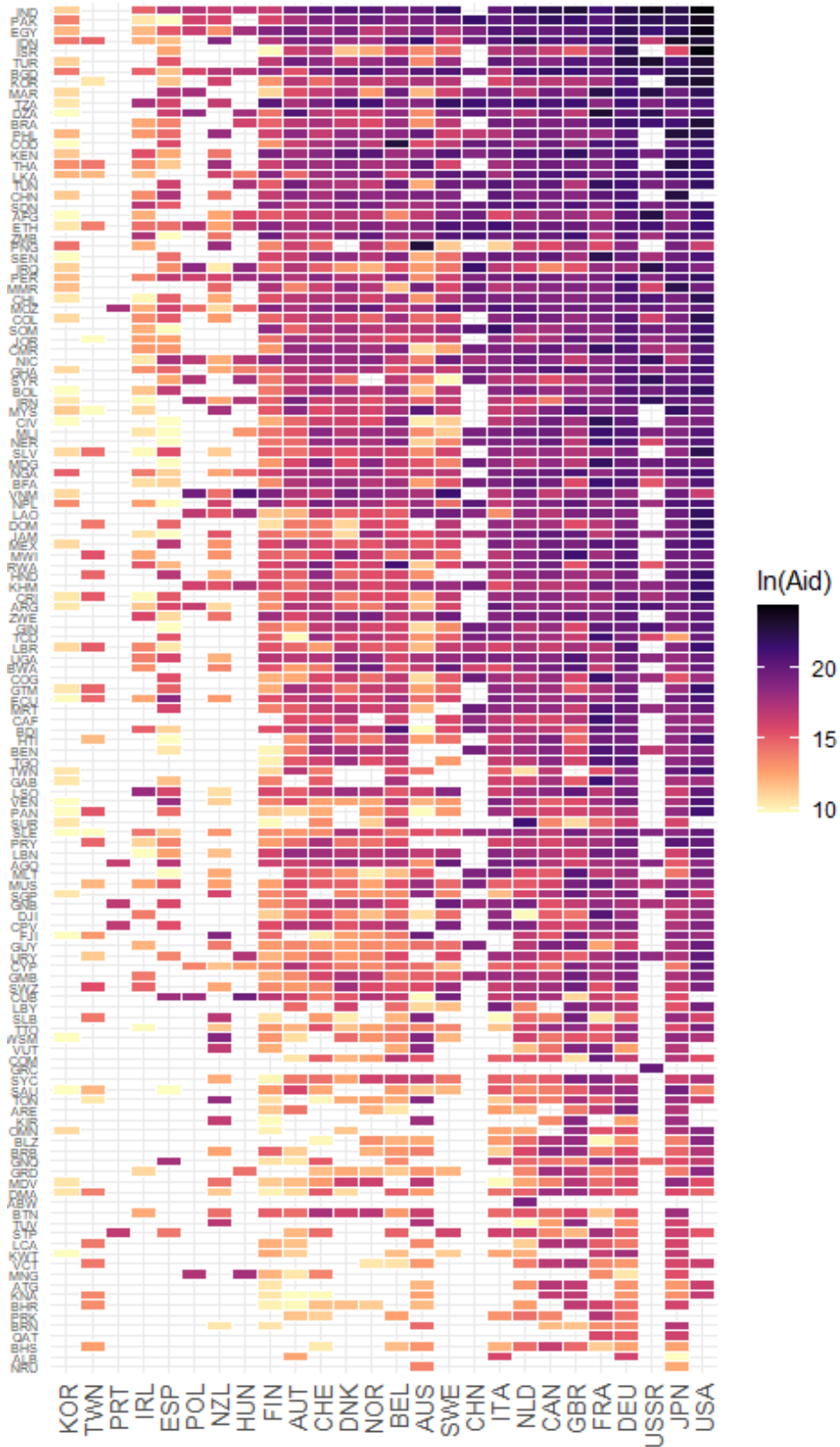
If for a given bilateral pair UN-Comtrade data is completely missing, then we use IMF data reported by the destination country as the base series and then proceed with the same hierarchy outlined above. After our base series is selected, we forward and backwards splice onto the series following the same strategy outlined for GDP. Once we finish forwards and backwards splicing onto the base series for each series (ex- IMF destination country), we collect all unconnected observations from the series we are using to splice and include them within our final spliced series to ensure we do not miss any observations. We impute zeros by proceeding as follows: when a pair is known to have trade activity with any bilateral partner (i.e., at least one observation exists from any source) and the given bilateral-year pair is missing data, we set the missing value to 0. This procedure yields a continuous, internally consistent bilateral trade flow series that attempts to preserve the level of the highest-quality data while using other sources only to splice onto for missing periods. One downside of this data source is that the bilateral trade data across the four series begins in 1962, whereas we have aid data spanning back to 1955, accounting for 455 observations. Yet, aid data between 1955-1961 only comprise of approximately 1.2% of non-zero bilateral aid observations during the Cold War period.

Estimating Equation. When we run our estimating equation (2.1), we lose 27 destination countries and the country iso codes are ABW, ATG, BHS, BLZ, BRN, BTN, COD, DMA, FJI, GRD, GUY, KIR, KNA, LCA, MDV, NRU, PNG, SLB, SOM, SUR, SYC, TON, TUV, VCT, and WSM. Most countries get dropped because we do not have data pertaining to whether the leader was left-leaning or light leaning from [Herre \(2022\)](#) or we cannot obtain annual population estimates from [Bolt and Van Zanden \(2023\)](#). When running the estimating equation to obtain our predicted weights, we also include bilateral aid observations for years 1950-1961 since they are informative of aid allocations during the Cold War era even though we do not have bilateral trade data for these years.

Table A.1: Donor and Recipient Countries

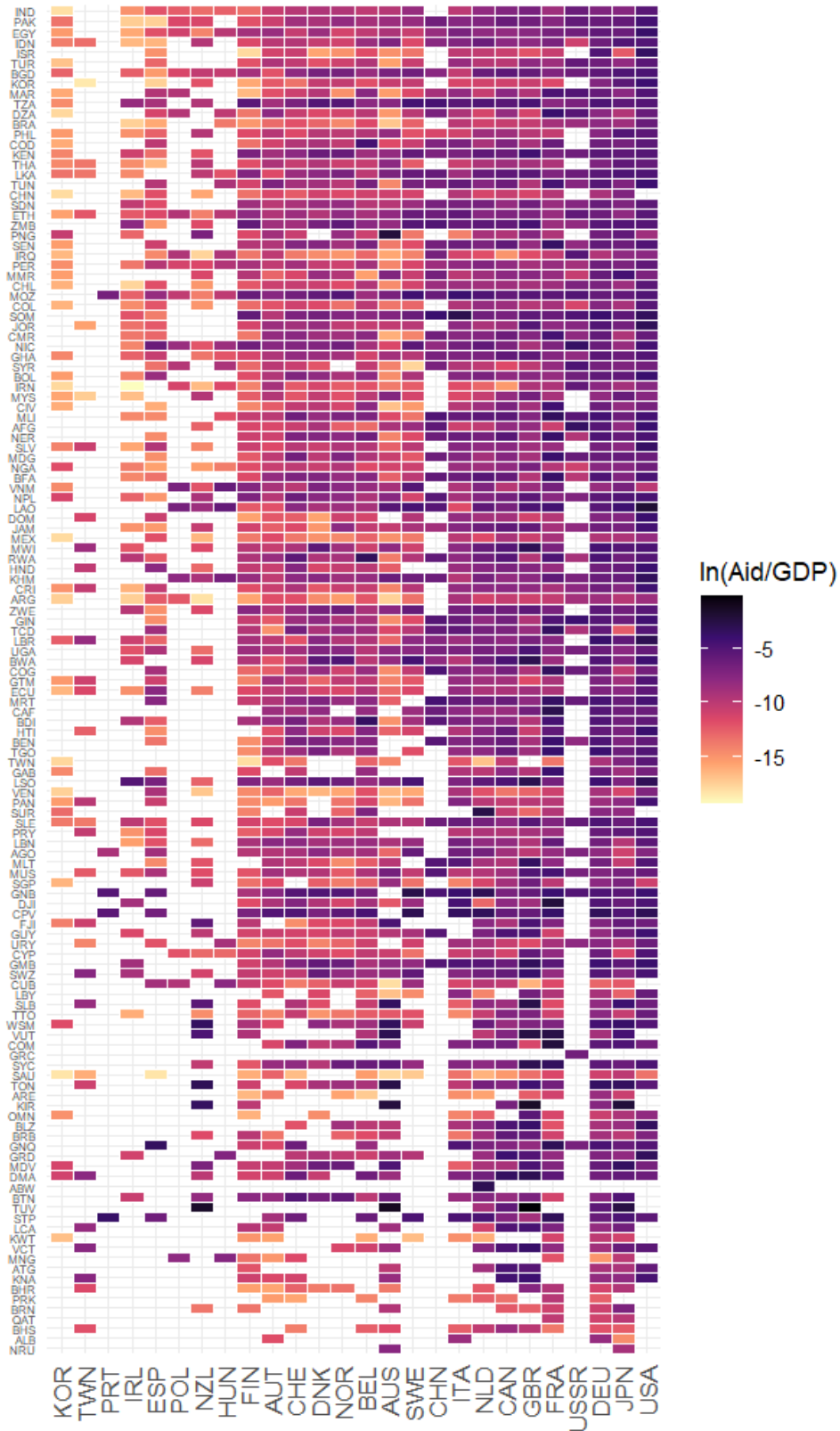
Donors	Recipients			
Australia	Aruba	Afghanistan	Angola	Albania
Austria	United Arab Emirates	Argentina	Antigua and Barbuda	Burundi
Belgium	Benin	Burkina Faso	Bangladesh	Bahrain
Canada	Bahamas	Belize	Bolivia	Brazil
Switzerland	Barbados	Brunei Darussalam	Bhutan	Botswana
China	Central African Rep.	Chile	China	Côte d'Ivoire
Germany	Cameroon	Dem. Rep. of Congo	Rep. of the Congo	Colombia
Denmark	Comoros	Cabo Verde	Costa Rica	Cuba
Spain	Cyprus	Djibouti	Dominica	Dominican Republic
Finland	Algeria	Ecuador	Egypt	Ethiopia
France	Fiji	Gabon	Ghana	Guinea
United Kingdom	Gambia	Guinea-Bissau	Equatorial Guinea	Greece
Hungary	Grenada	Guatemala	Guyana	Honduras
Ireland	Haiti	Indonesia	India	Iran
Italy	Iraq	Israel	Jamaica	Jordan
Japan	Kenya	Cambodia	Kiribati	Saint Kitts and Nevis
South Korea	South Korea	Kuwait	Laos	Lebanon
Netherlands	Liberia	Libya	Saint Lucia	Sri Lanka
Norway	Lesotho	Morocco	Madagascar	Maldives
New Zealand	Mexico	Mali	Malta	Myanmar
Poland	Mongolia	Mozambique	Mauritania	Mauritius
Portugal	Malawi	Malaysia	Niger	Nigeria
Sweden	Nicaragua	Nepal	Nauru	Oman
Taiwan	Pakistan	Panama	Peru	Philippines
United States	Papua New Guinea	North Korea	Paraguay	Qatar
Soviet Union	Rwanda	Saudi Arabia	Sudan	Senegal
	Singapore	Solomon Islands	Sierra Leone	El Salvador
	Somalia	São Tomé & Príncipe	Suriname	Eswatini
	Seychelles	Syria	Chad	Togo
	Thailand	Tonga	Trinidad and Tobago	Tunisia
	Turkey	Tuvalu	Taiwan	Tanzania
	Uganda	Uruguay	Saint Vincent	Venezuela
	Vietnam	Vanuatu	Samoa	Zambia
	Zimbabwe			

Figure A.1: Cumulative Bilateral Aid Disbursed during the Cold War



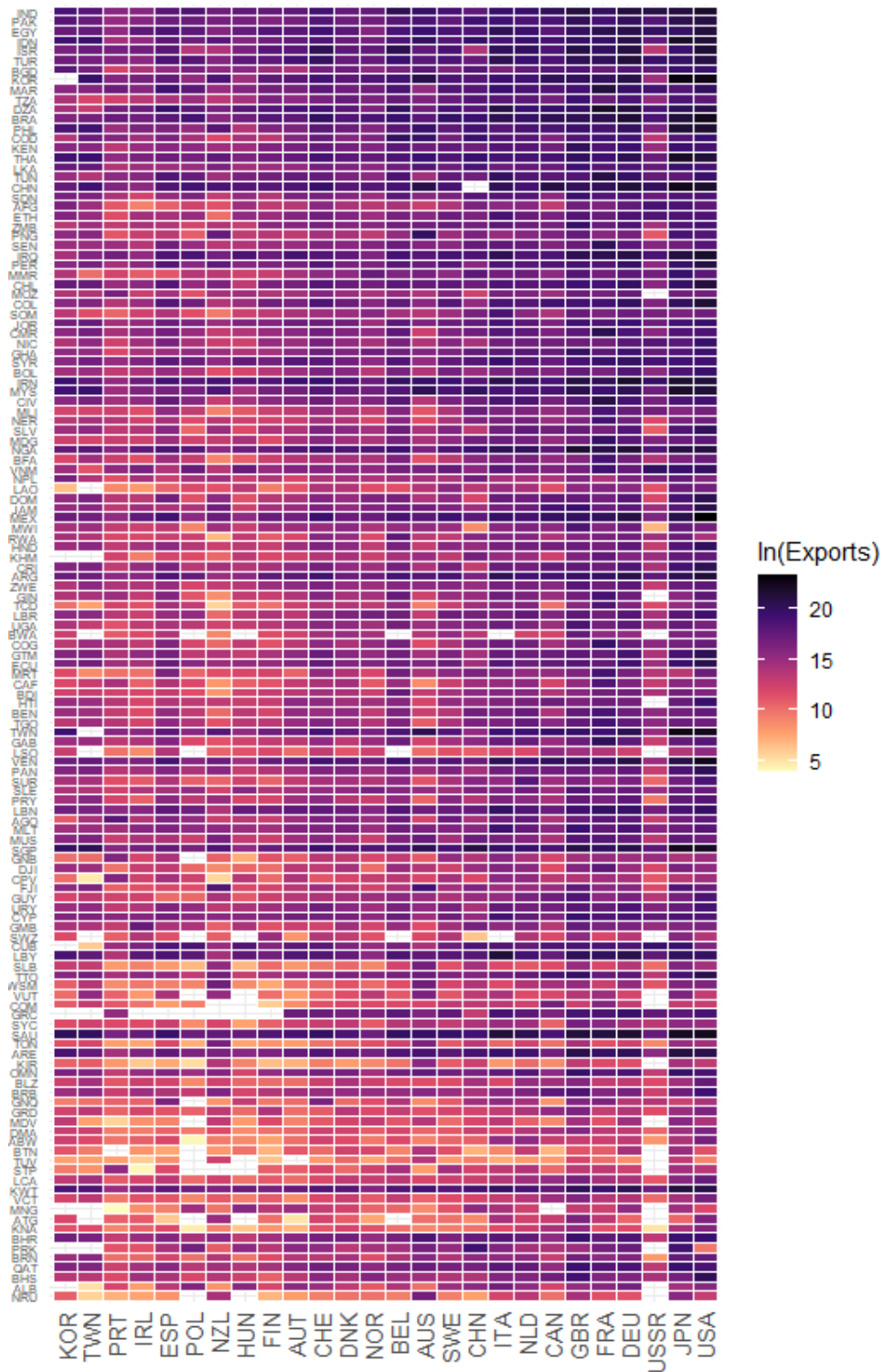
Note: $\ln(\text{Aid})$ is the log cumulative aid disbursed between 1962-1989 denominated in 2011 USD. Donor countries are organized by total aid disbursed (least to most) and recipient countries are organized by total aid received (least to most).

Figure A.2: Annualized Aid as a Share of GDP during the Cold War



Note: $\ln(\text{Aid}/\text{GDP})$ are the log average of annual bilateral aid disbursed divided by the recipient country's GDP log exports from 1962-1989. Origin countries are organized by total aid disbursed (least to most) and destination countries are organized by total aid received (least to most).

Figure A.3: Annual Bilateral Exports during the Cold War



Note: $\ln(\text{Exports})$ are the averaged log exports between origin destination pairs from 1962-1989, denominated in 2011 USD. Origin countries are organized by total aid disbursed (least to most) and destination countries are organized by total aid received (least to most).

A.2 Identification

A.2.1 Threats to identification

Our instrument is a deconstructed shift-share where the identifying variation comes from comparing bilateral pairs with different predicted aid shares that are impacted by a change in the total amount of aid disbursed by the donor country. Following [Borusyak, Hull, and Jaravel \(2025\)](#), we take an exogenous shares interpretation of our instrument, where identification requires that the predicted shares be orthogonal to the structural error term, conditional on our fixed effects. The main threat to identification then is time-varying bilateral shocks that impact our predicted aid shares and directly affect bilateral trade flows. Note that as our predicted aid shares are lagged by three periods, and our specification includes lagged bilateral trade as a control, any confounding bilateral shock would have to systematically impact predicted aid shares in period t and the change in bilateral trade from periods $t + 2$ to $t + 3$, controlling for all impacts on bilateral trade until period $t + 2$. Naturally this sets a high bar for a confounding shock.

One concern with this approach might be that the predicted shares are constructed from a gravity equation that includes time-varying predictors — most notably political ideology and geopolitical influence — that could themselves be direct determinants of bilateral trade in future periods, potentially violating this orthogonality condition (see [Appendix A.3](#) for the prediction equation). However, we argue this concern is limited in practice. The political ideology variables in our prediction equation are measured at the decade level whereas the geopolitical influence variables are time invariant. The level of geopolitical alignment between any bilateral pair is largely determined by these stable structural factors, and is well-absorbed by our bilateral fixed effects. At the annual frequency at which our regressions are estimated, these variables therefore generate no residualized variation in the predicted shares that could be correlated with the structural error. The remaining annual within-variation in the residualized shares is driven primarily by changes in origin and destination GDP per capita and population, which are themselves absorbed by our origin-year and destination-year fixed effects, respectively.

For the orthogonality condition to be violated, it would have to be the case that changes in our lagged predicted shares are serially correlated with future changes in unobservables that directly impact bilateral trade. But considering our bilateral fixed effects and lagged dependent variable already absorbs consistent and time-varying dimensions of geopolitical alignment, it is unlikely that our lagged predicted aid shares are systematically correlated with innovations in unobservables at the $t + h$ horizon, especially considering the shares are lagged by three years. Moreover, our predicted shares are constructed from coefficients estimated on the full sample before 1990, which also helps alleviate concerns that bilateral time-varying unobserved factors are correlated with our predicted shares.

Another potential violation of our exclusion restriction is the presence of classical measurement error. This then requires an additional assumption that our instrument be uncorrelated with the measurement error, $Cov(IV_{od,t}, u_{od,t}) = 0$. We view measurement error as the most likely source of bias because aid flow data (ODA) from Donor Assistance Committee (DAC) countries is challenging to measure and the definition of DAC aid has changed over time. According to a report produced by the former head of the DAC Statistics and Development Finance group at the OECD, “the ODA definition has always reflected a compromise between political expediency and statistical reality. It is based on interpretation and consensus and therefore allows for flexibility” ([Hynes and Scott, 2013](#)). The authors highlight line items in aid reports that do not necessarily lead to the direct transfer of funds from the origin to the destination country, likely leading to over-reporting of bilateral foreign aid flows as countries tried to meet the 0.7% ODA/GNI target set by the UN General Assembly in 1970.

Additional studies have also highlighted the pitfalls of measuring foreign aid flows ([Renard and Cassimon, 2001](#)). For instance, for a transaction to be counted as ODA, the grant element must be 25% or more. But what

is recorded as an aid flow is not the grant equivalent of the loan, but rather the face value of the loan in the year it was disbursed, and negative entries are reimbursements of principal in the year in which they occur, which further obfuscates the amount of ODA that is disbursed in a given year. In principle, restricting to the ODA grants component would sidestep the face-value loan measurement issue, but this too is insufficient: grants remain subject to the over-reporting concerns noted above, and excluding concessional loans would omit a substantial share of bilateral aid flows and an important channel through which aid impacts bilateral economic relations.

Moreover, measurement issues of true bilateral aid flows likely also plague non-DAC countries like the Soviet Union and China. There is ample evidence that the Soviet Union inflated economic numbers during the Cold War, which led the CIA to construct their own measurements of Soviet Union data. According to a Directorate of Intelligence report on *The Reliability of Soviet Published Statistics*, they state that the, "CIA constructs independent measures of Soviet economic performance largely because aggregates data published by the USSR's Central Statistical Administration are methodologically flawed and subject to manipulation by the leadership for political reasons" (Central Intelligence Agency, 1987). There is also a large body of research showing that China strategically under-reports financial flows to developing countries, and conceals how much aid they transfer bilaterally (Dreher et al., 2022).

Although systematic over(under)-reporting of bilateral aid flows by the origin country is likely absorbed within the origin-year fixed effect, these factors may lead to an increase in the variance in the measurement error of bilateral flows, which biases our OLS estimates towards zero. This is not problematic for our predicted aid shares because although aid may be measured with classical measurement error, aid flows are not used as independent variables in the prediction equation. Since measurement error within the dependent variable does not impact the estimation of OLS coefficients, then our prediction shares are unaffected. Further, the variables used in the prediction regression are likely measured with less error and certainly not subject to the concerns discussed here. But the shift component may still exhibit classical measurement error since it comprises the sum of all bilateral aid flows across destination countries.

As we show in Appendix A.2.2, for our shift-share instrument this contamination enters only through the own-pair term. Therefore, the leave-one-out instrument fully satisfies the exclusion restriction, $Cov(IV_{od,t}, u_{od,t}) = 0$, under the assumption of no dyadic interdependence in the measurement-error structure, $Cov(u_{od',t}, u_{od,t}) = 0$ for $(d' \neq d)$. But it might be the case that the total amount of foreign aid disbursed by the origin country may be measured with less measurement error. Since the total shock averages over all the bilateral idiosyncratic error terms, the aggregate shock's measurement error variance may be smaller. Within Appendix Table A.9, we also report results using the total sum of foreign aid disbursed by the origin country as a share of GDP as the shock within our shift-share instrument.

A.2.2 Measurement error in aid

In this subsection we discuss the potential determinants of the measurement bias of aid flows and put some structure on the directional bias of our OLS estimates. Suppose the true model is:

$$\ln(\text{Trade})_{od,t+h} = \beta^h \cdot \text{Aid}_{od,t} + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h},$$

but we do not observe true $\text{Aid}_{od,t}$. Due to misreporting we instead observe:

$$\widetilde{\text{Aid}}_{od,t} = \text{Aid}_{od,t} + u_{od,t},$$

where $u_{od,t}$ is the misreporting error, which can be positive (over-reporting) or negative (under-reporting) depending on the donor. After rearranging we substitute back into the true model to obtain the regression we actually estimate:

$$\ln(\text{Trade})_{od,t+h} = \beta^h \widetilde{\text{Aid}}_{od,t} + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \eta_{od,t+h},$$

where the composite error $\eta_{od,t+h} = -\beta^h u_{od,t} + \varepsilon_{od,t+h}$ contains the misreporting term. After we partial out the fixed effects, the OLS estimator in the limit is:

$$\text{plim } \hat{\beta}^{OLS} = \frac{\text{Cov}(\widetilde{\text{Aid}}_{od,t}, \ln(\text{Trade})_{od,t+h})}{\text{Var}(\widetilde{\text{Aid}}_{od,t})} = \frac{\text{Cov}(\widetilde{\text{Aid}}_{od,t}, \beta^h \widetilde{\text{Aid}}_{od,t} + \eta_{od,t+h})}{\text{Var}(\widetilde{\text{Aid}}_{od,t})} = \beta^h + \frac{\text{Cov}(\widetilde{\text{Aid}}_{od,t}, \eta_{od,t+h})}{\text{Var}(\widetilde{\text{Aid}}_{od,t})}$$

We can further substitute in for the numerator of the bias term by expanding the covariance:

$$\text{Cov}(\widetilde{\text{Aid}}_{od,t}, u_{od,t}) = \text{Cov}(\text{Aid}_{od,t} + u_{od,t}, u_{od,t}) = \text{Cov}(\text{Aid}_{od,t}, u_{od,t}) + \text{Var}(u_{od,t}).$$

So the full bias expression is:

$$\text{plim } \hat{\beta}^{OLS} - \beta^h = \frac{-\beta^h \cdot [\text{Cov}(\text{Aid}_{od,t}, u_{od,t}) + \text{Var}(u_{od,t})]}{\text{Var}(\widetilde{\text{Aid}}_{od,t})} \quad (\text{A.1})$$

Classical Measurement Error

In the classical measurement error case, the error is orthogonal to aid, so the covariance between aid and the error term is zero. Then the OLS coefficient will be biased downward. We can see this by rearranging equation (A.1):

$$\text{plim } \hat{\beta}^{OLS} - \beta^h = \frac{-\beta^h \cdot \text{Var}(u_{od,t})}{\text{Var}(\widetilde{\text{Aid}}_{od,t})} < 0.$$

Leave one out IV with Classical Measurement Error

Suppose the measurement error in the bilateral aid flow from donor o to recipient d in year t is independent of the measurement error in any other bilateral aid flow from the same donor:

$$\text{Cov}(u_{od,t}, u_{od',t}) = 0 \quad \forall d' \neq d.$$

This assumption requires that misreporting in one bilateral aid flow is unrelated to misreporting in any other bilateral aid flow from the same donor. Under this assumption, the leave-one-out version of our shift-share instrument fully satisfies the exclusion restriction. For simplicity, we just assume that the shift-share shock is

the sum of bilateral aid and the leave-one-out instrument excludes the own pair from the shock:

$$IV_{od,t} = \hat{\lambda}_{od,t-3} \times \left(\sum_{d' \neq d} \widetilde{Aid}_{od',t} \right),$$

where $\hat{\lambda}_{od,t-3}$ is the predicted aid share and is therefore a predetermined constant. Since $\hat{\lambda}_{od,t-3}$ is fixed, we can write:

$$Cov(IV_{od,t}, u_{od,t}) = \hat{\lambda}_{od,t-3} \cdot Cov \left(\sum_{d' \neq d} \widetilde{Aid}_{od',t}, u_{od,t} \right).$$

Expanding $\widetilde{Aid}_{od',t} = Aid_{od',t} + u_{od',t}$:

$$Cov \left(\sum_{d' \neq d} \widetilde{Aid}_{od',t}, u_{od,t} \right) = Cov \left(\sum_{d' \neq d} Aid_{od',t}, u_{od,t} \right) + Cov \left(\sum_{d' \neq d} u_{od',t}, u_{od,t} \right).$$

The first term is zero under the assumption that true aid flows to other recipients are uncorrelated with the measurement error in the od pair. The second term is:

$$Cov \left(\sum_{d' \neq d} u_{od',t}, u_{od,t} \right) = \sum_{d' \neq d} Cov(u_{od',t}, u_{od,t}) = 0,$$

where the final equality follows directly from the initial assumption that there is no dyadic interdependence within the error structure. Therefore, the leave-one-out instrument is completely uncorrelated with the bilateral measurement error, satisfying the exclusion restriction.

Bounding Measurement Error Bias in the Standard Shift-Share IV

Now consider the standard shift-share instrument:

$$IV_{od,t} = \hat{\lambda}_{od,t-3} \times \sum_{d'} \widetilde{Aid}_{od',t},$$

where the shock is total observed aid disbursed by origin o in year t , summing over all destinations. The exclusion restriction requires $Cov(IV_{od,t}, u_{od,t}) = 0$. Since $\hat{\lambda}_{od,t-3}$ is a predetermined constant, we can expand:

$$Cov(IV_{od,t}, u_{od,t}) = \hat{\lambda}_{od,t-3} \cdot \left[Cov(\widetilde{Aid}_{od,t}, u_{od,t}) + Cov \left(\sum_{d' \neq d} \widetilde{Aid}_{od',t}, u_{od,t} \right) \right].$$

Under our assumption of no dyadic interdependence, the second term is zero since errors are independent across bilateral pairs. Under the assumption of classical measurement error, the first term is:

$$Cov(\widetilde{Aid}_{od,t}, u_{od,t}) = Cov(Aid_{od,t} + u_{od,t}, u_{od,t}) = Cov(Aid_{od,t}, u_{od,t}) + Var(u_{od,t}) = Var(u_{od,t}).$$

So the standard instrument is contaminated through the own-pair term in the shock. The IV probability limit is:

$$\text{plim } \hat{\beta}^{IV} = \beta^h + \frac{Cov(IV_{od,t}, \eta_{od,t+h})}{Cov(IV_{od,t}, \widetilde{Aid}_{od,t})}.$$

The numerator of the bias term is:

$$Cov(IV_{od,t}, \eta_{od,t+h}) = -\beta^h \cdot \hat{\lambda}_{od,t-3} \cdot Var(u_{od,t}).$$

The denominator expands as:

$$Cov(IV_{od,t}, \widetilde{Aid}_{od,t}) = \hat{\lambda}_{od,t-3} \cdot \left[Var(\widetilde{Aid}_{od,t}) + Cov\left(\sum_{d' \neq d} \widetilde{Aid}_{od',t}, \widetilde{Aid}_{od,t}\right) \right],$$

where $Var(\widetilde{Aid}_{od,t}) = Var(Aid_{od,t}) + Var(u_{od,t})$. The $\hat{\lambda}_{od,t-3}$ cancels, giving:

$$\text{plim } \hat{\beta}^{IV} - \beta^h = \frac{-\beta^h \cdot Var(u_{od,t})}{Var(Aid_{od,t}) + Var(u_{od,t}) + Cov\left(\sum_{d' \neq d} \widetilde{Aid}_{od',t}, \widetilde{Aid}_{od,t}\right)}. \quad (\text{A.2})$$

The cross-pair covariance term in the denominator of equation (A.2) reflects the strength of the first stage of the leave-one out IV design: a larger positive covariance means total donor disbursements are a stronger predictor of the bilateral flow, which corresponds to greater instrument relevance. Since this term is non-negative, it only makes the denominator larger relative to the numerator, pushing the bias toward zero. Moreover, the variance of bilateral aid also pushes the bias towards zero.

A.3 Additional Results

Aid Prediction Estimating Equation

Table A.2 reports the results from our PPML prediction equation (2.2):

Table A.2: PPML Gravity Regression: Determinants of Bilateral Aid Flows during Cold War Period

	Real Aid	
	Coef.	SE
<i>Geography</i>		
ln(Distance)	-0.433	(0.061)
Common Language	0.824	(0.071)
Contiguity	-0.422	(0.298)
Ever Colony	0.269	(0.140)
<i>Economic Fundamentals</i>		
ln(GDP p.c.) Origin	0.646	(0.087)
ln(Population) Origin	0.920	(0.035)
ln(GDP p.c.) Destination	-0.102	(0.029)
ln(Population) Destination	0.537	(0.020)
<i>Geopolitical Influence</i>		
US Influence (Decade)	-0.162	(0.104)
USSR Influence (Decade)	-0.006	(0.097)
US Influence × US	0.144	(0.074)
US Influence × Western	0.052	(0.068)
USSR Influence × USSR	0.395	(0.205)
<i>Political Ideology</i>		
Prop. Left (Decade)	0.425	(0.141)
Prop. Right (Decade)	-0.230	(0.373)
Right × US	1.095	(0.410)
Right × Western	0.885	(0.383)
Left × USSR	0.545	(0.233)
<i>Religion</i>		
Protestant	0.230	(0.253)
Catholic	-0.692	(0.095)
<i>Colonial Relationships</i>		
PRT Colony × PRT	-0.647	(0.964)
GBR Colony × GBR	0.194	(0.191)
USA Colony × USA	-0.543	(0.261)
ESP Colony × ESP	-1.330	(0.543)
NLD Colony × NLD	2.159	(0.193)
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 between 1962-1989. SE's clustered at the iso-year level.

Table A.3: Predicted Cold War Aid Shares

	Percentiles							Mean	Std. dev.	Obs.
	p1	p10	p25	p50	p75	p90	p99			
$\hat{\lambda}_{od}$	0.0006	0.0016	0.0030	0.0059	0.0112	0.0224	0.0972	0.0107	0.0187	63,378

Notes: Summary statistics for the predicted bilateral aid share from the Cold War period PPML gravity regression from equation (2.2), which is used to construct the shift-share instrument.

First Stage Results

Table A.4 reports the first stage results of Table 1.

Table A.4: First Stage Results of Equation 2.1

	$h = 0$		$h = 5$	
	(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) [0.145]	0.269 (0.044) [0.139]	0.287 (0.048) [0.149]	0.280 (0.046) [0.146]
$\left(\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}} \right)$		0.086 (0.020) [0.031]		0.079 (0.019) [0.030]
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
<i>SE's clustered two-way (origin \times year & bilateral)</i>				
N of Clusters	2,737	2,737	2,710	2,707
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 (·); standard errors clustered two-way are reported in brackets [·]. The constant is suppressed.

A.4 Robustness

Drop Great Powers (USA, USSR, & CHN)

Table A.5 reports results from equation (2.1) using the leave-one-out instrument from equation (2.3): $IV_{od,t} = \hat{\lambda}_{od,t-3} \times \frac{\sum_{j \neq d} Aid_{oj,t}}{GDP_{d,t-3}}$, but drops the United States, the Soviet Union and China when running the final estimating equation.

Table A.5: Impact of Aid on Trade Flows: Leaving out Great Powers

	$h = 0: \frac{Trade_{od,t}}{GDP_{d,t-3}}$				$h = 5: \frac{Trade_{od,t+5}}{GDP_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{Aid_{od,t}}{GDP_{d,t-3}} \right)$	0.161 (0.091) [0.118]	0.141 (0.089) [0.112]	1.027 (0.137) [0.221]	0.611 (0.143) [0.181]	0.003 (0.025) [0.031]	-0.009 (0.025) [0.028]	2.017 (0.359) [0.597]	1.819 (0.357) [0.575]
$\left(\frac{Trade_{od,t-1}}{GDP_{d,t-3}} \right)$		0.458 (0.098) [0.082]		0.521 (0.153) [0.133]		0.268 (0.072) [0.081]		0.249 (0.098) [0.102]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			76.84	75.59			76.24	74.99
AR-p			0.00	0.00			0.00	0.00
AR-CI 90%			(0.823, 1.232)	(0.397, 0.825)			(1.539, 2.608)	(1.343, 2.407)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			24.10	23.15			23.99	23.03
AR-p			0.00	0.00			0.00	0.00
AR-CI 90%			[0.724, 1.438]	[0.333, 0.919]			[1.198, 3.126]	[1.031, 2.885]
Observations	50,737	50,735	44,635	44,635	50,200	50,159	44,087	44,069

Notes: Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. Trade as a share of GDP is also denominated in 2011 USD divided by destination GDP lagged by three years. The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a leave-one-out shift-share that takes the total aid disbursed by the origin country (excluding the bilateral pair) divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. For consistency, the prediction weights are constructed using all countries and then we drop USA, USSR, and CHN when we run our final regressions. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (-); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [-]. AR-CI's are computed by first demeaning all variables by the fixed effects. The constant is suppressed.

Response of Log Trade on IHS Aid

In Table A.6 we change equation (2.1) by using log trade as the dependent variable and IHS aid as the regressor:

$$\ln(\text{Trade})_{od,t+h} = \beta^h \text{asinh}(\widehat{\text{Aid}}_{od,t}) + \gamma \ln(\text{Trade})_{od,t-1} + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}, \quad (\text{A.3})$$

where $\text{asinh}(\widehat{\text{Aid}}_{od,t})$ is instrumented using the following instrument: $\text{IV}_{od,t} = \widehat{\lambda}_{od,t-3} \times \ln\left(\sum_{j \neq d} \text{Aid}_{oj,t}\right)$.

Table A.6: Impact of Aid on Trade Flows: IHS Aid and Log Trade

	$h = 0: \ln(\text{Trade}_{od,t})$				$h = 5: \ln(\text{Trade}_{od,t+5})$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{asinh}(\text{Aid}_{od,t})$	0.012 (0.001) [0.002]	0.007 (0.001) [0.001]	0.264 (0.070) [0.092]	0.099 (0.033) [0.039]	0.008 (0.001) [0.001]	0.008 (0.001) [0.001]	0.086 (0.030) [0.045]	0.055 (0.022) [0.044]
$\ln(\text{Trade}_{od,t-1})$		0.491 (0.010) [0.012]		0.494 (0.012) [0.016]		0.035 (0.010) [0.012]		0.030 (0.012) [0.015]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			14.74	13.76			19.28	15.21
AR- p			0.00	0.00			0.00	0.01
AR-CI 90%			(0.192, 0.435)	(0.060, 0.174)			(0.046, 0.146)	(0.025, 0.099)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			5.08	5.09			6.95	5.56
AR- p			0.00	0.01			0.06	0.30
AR-CI 90%			[0.167, 0.658]	[0.051, 0.241]			[0.018, 0.198]	[-0.047, 0.137]
Observations	64,942	60,583	48,219	47,497	67,330	58,851	47,821	46,313

Notes: Aid and trade variables are denominated in 2011 USD. IHS (asinh) stands for inverse hyperbolic sine. For the IV specifications, IHS aid is instrumented via a shift-share; the shares for the shift-share are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. The shift takes the total log aid disbursed by the origin country after subtracting out any bilateral aid disbursed by the aid partner for a given year as the shock. KP-F is the Kleibergen-Paap F-statistic. AR- p is the p-value from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. The constant is suppressed.

Shift-share Weights Lagged by One Year

Table A.7 reports results from equation (2.1), using the instrument from equation (2.3): $IV_{od,t} = \hat{\lambda}_{od,t-1} \times \frac{\sum_{j \neq d} Aid_{oj,t}}{GDP_{d,t-3}}$, but only lagging the weights by a year.

Table A.7: Impact of Aid on Trade Flows: One Year Lagged Weights

	$h = 0: \frac{Trade_{od,t}}{GDP_{d,t-3}}$				$h = 5: \frac{Trade_{od,t+5}}{GDP_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{Aid_{od,t}}{GDP_{d,t-3}}\right)$	0.158 (0.077) [0.099]	0.130 (0.074) [0.092]	0.851 (0.123) [0.387]	0.478 (0.123) [0.241]	0.026 (0.025) [0.035]	0.012 (0.025) [0.031]	1.481 (0.309) [0.645]	1.314 (0.298) [0.573]
$\left(\frac{Trade_{od,t-1}}{GDP_{d,t-3}}\right)$		0.500 (0.081) [0.070]		0.574 (0.131) [0.118]		0.256 (0.080) [0.089]		0.228 (0.081) [0.089]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			36.43	35.31			35.03	35.67
AR-p			0.00	0.00			0.00	0.00
AR-CI 90%			(0.685, 1.074)	(0.314, 0.681)			(1.018, 1.992)	(0.869, 1.806)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			3.84	3.70			3.69	3.65
AR-p			0.01	0.01			0.00	0.00
AR-CI 90%			[0.443, 3.451]	[0.224, 2.219]			[0.907, ...]	[0.804, ...]
Observations	58,565	58,471	51,656	51,574	56,968	56,540	50,268	49,905

Notes: Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. Trade as a share of GDP is also denominated in 2011 USD divided by destination GDP lagged by three years. The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a leave-one-out shift-share that takes the total aid disbursed by the origin country (excluding the bilateral pair) divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by one year. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (-); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [.]. AR-CI's are computed by first demeaning all variables by the fixed effects. The constant is suppressed. The upper bounds of the two-way clustered AR-CIs for columns (7) and (8) are unbounded.

Trimming Outlier Prediction Weights

Table A.8 reports results for the main empirical specification (2.1) as well as trimming prediction weights at the p1-p99 cutoff.

Table A.8: Impact of Aid on Trade Flows: Trimming Outlier Weights

	$h = 0: \frac{\text{Trade}_{od,t}}{\text{GDP}_{d,t-3}}$				$h = 5: \frac{\text{Trade}_{od,t+5}}{\text{GDP}_{d,t-3}}$			
	IV: Full		IV: p1-p99		IV: Full		IV: p1-p99	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}}\right)$	0.860 (0.119) [0.392]	0.464 (0.121) [0.241]	0.901 (0.135) [0.435]	0.473 (0.128) [0.260]	1.545 (0.314) [0.678]	1.367 (0.302) [0.602]	1.577 (0.327) [0.734]	1.382 (0.314) [0.644]
$\left(\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}}\right)$		0.574 (0.132) [0.119]		0.578 (0.132) [0.120]		0.223 (0.081) [0.089]		0.226 (0.082) [0.090]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F	38.55	37.09	34.76	33.30	36.53	37.01	33.00	33.46
AR-p	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AR-CI 90%	(0.700, 1.075)	(0.301, 0.665)	(0.720, 1.146)	(0.302, 0.684)	(1.076, 2.063)	(0.916, 1.866)	(1.140, 2.117)	(0.913, 1.900)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F	3.87	3.72	3.64	3.50	3.71	3.67	3.51	3.48
AR-p	0.01	0.01	0.01	0.02	0.00	0.00	0.00	0.00
AR-CI 90%	[0.447, 3.496]	[0.210, 2.164]	[0.443, 4.319]	[0.199, ...]	[0.941, ...]	[0.831, ...]	[0.924, ...]	[0.809, ...]
Observations	51,615	51,534	50,678	50,600	50,224	49,865	49,287	48,952

Notes: Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. Trade as a share of GDP is also denominated in 2011 USD divided by destination GDP lagged by three years. The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a leave-one-out shift-share that takes the total aid disbursed by the origin country (excluding the bilateral pair) divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. Columns (1), (2), (5), and (6) use the full sample; columns (3), (4), (7), and (8) restrict to pairs with predicted aid share between p1 and p99. KP-F is the Kleibergen-Paap F-statistic. AR-p is the p-value from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. The constant is suppressed. The upper bounds of the two-way clustered AR-CIs for columns (4)–(8) are unbounded.

Total Aid Shock IV

Table A.9 reports results from equation (2.1), but uses the total aid disbursed by the origin country as the shock for the instrument: $IV_{od,t} = \hat{\lambda}_{od,t-3} \times \frac{\sum_j Aid_{oj,t}}{GDP_{d,t-3}}$.

Table A.9: Impact of Aid on Trade Flows: Full Shock IV

	$h = 0: \frac{Trade_{od,t}}{GDP_{d,t-3}}$				$h = 5: \frac{Trade_{od,t+5}}{GDP_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{Aid_{od,t}}{GDP_{d,t-3}}\right)$	0.158 (0.077) [0.099]	0.130 (0.074) [0.092]	0.819 (0.108) [0.354]	0.440 (0.112) [0.218]	0.026 (0.025) [0.035]	0.012 (0.025) [0.031]	1.460 (0.283) [0.609]	1.300 (0.275) [0.547]
$\left(\frac{Trade_{od,t-1}}{GDP_{d,t-3}}\right)$		0.500 (0.081) [0.070]		0.576 (0.132) [0.119]		0.256 (0.080) [0.089]		0.229 (0.081) [0.089]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			43.47	42.00			40.82	40.79
AR-p			0.00	0.00			0.00	0.00
AR-CI 90%			(0.673, 0.998)	(0.289, 0.626)			(1.037, 1.929)	(0.888, 1.755)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			4.22	4.08			4.05	3.96
AR-p			0.01	0.01			0.00	0.00
AR-CI 90%			[0.446, 2.798]	[0.210, 1.694]			[0.918, 5.648]	[0.813, 5.330]
Observations	58,565	58,471	51,615	51,534	56,968	56,540	50,224	49,865

Notes: Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. Trade as a share of GDP is also denominated in 2011 USD divided by destination GDP lagged by three years. The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a shift-share that takes the total aid disbursed by the origin country divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. AR-CI's are computed by first demeaning all variables by the fixed effects. The constant is suppressed.

Geopolitical Distance using Total Aid Shock IV

Table A.10 reports results from equation (2.4), but uses the total aid disbursed by the origin country as the shock for the instrument: $IV_{od,t} = \hat{\lambda}_{od,t-3} \times \frac{\sum_{jd} Aid_{oj,t}}{GDP_{d,t-3}}$.

Table A.10: Impact of Aid on Geopolitical Distance: Full Shock IV

	$h = 0$: Geopol. Dist. $_{od,t}$				$h = 5$: Geopol. Dist. $_{od,t+5}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{Aid_{od,t}}{GDP_{d,t-3}}\right)$	-1.569 (0.354) [.]	-0.451 (0.128) [0.153]	-10.029 (3.998) [6.009]	-4.798 (2.310) [2.922]	-0.491 (0.188) [0.236]	-0.372 (0.220) [.]	-5.218 (1.609) [2.856]	-4.582 (1.803) [2.686]
Geopol. Dist. $_{od,t-1}$		0.702 (0.027) [0.027]		0.705 (0.027) [0.027]		0.065 (0.022) [.]		0.074 (0.023) [0.032]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			29.37	27.66			49.04	46.52
AR-p			0.00	0.02			0.00	0.01
AR-CI 90%			(-17.261, -4.683)	(-8.973, -1.712)			(-7.872, -3.069)	(-7.555, -1.892)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			4.03	4.29			4.81	5.24
AR-p			0.03	0.04			0.01	0.03
AR-CI 90%			[-45.493, -3.713]	[-19.210, -1.254]			[-18.837, -2.217]	[-15.214, -1.328]
Observations	50,112	48,737	44,790	43,535	50,574	47,621	45,362	42,735

Notes: Geopolitical Distance (Geopol. Dist.) is the absolute value difference in ideal point UN-Voting estimates between origin and destination countries as constructed from Bailey et al. 2017. Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a shift-share that takes the total aid disbursed by the origin country divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. Standard errors reported as [.] indicate that the two-way clustered variance-covariance matrix was non-positive semi-definite, and valid standard errors could not be computed despite applying the Cameron, Gelbach Miller (2011) eigenvalue adjustment. The constant is suppressed.

Response of Log Geopolitical Distance on IHS Aid

In Table A.11 we change equation (2.4) by using log geopolitical distance as the dependent variable and IHS aid as the regressor:

$$\ln(\text{Geopol. Dist.})_{od,t+h} = \beta_{IV}^h \text{asinh}(\widehat{\text{Aid}}_{od,t}) + \gamma \ln(\text{Geopol. Dist.})_{od,t-1} + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h},$$

where $\text{asinh}(\widehat{\text{Aid}}_{od,t})$ is instrumented using the following instrument: $IV_{od,t} = \widehat{\lambda}_{od,t-3} \times \ln\left(\sum_{j \neq d} \text{Aid}_{oj,t}\right)$.

Table A.11: Impact of Aid on Geopolitical Distance: IHS Aid and Log Geopolitical Dist.

	$h = 0: \ln(\text{Geopol. Dist.}_{od,t})$				$h = 5: \ln(\text{Geopol. Dist.}_{od,t+5})$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{asinh}(\widehat{\text{Aid}}_{od,t})$	-0.001 (0.001) [0.001]	-0.001 (0.000) [0.000]	-0.161 (0.060) [0.069]	-0.103 (0.045) [0.054]	0.001 (0.000) [0.001]	0.001 (0.000) [0.001]	-0.048 (0.022) [0.034]	-0.047 (0.021) [0.028]
$\ln(\text{Geopol. Dist.}_{od,t-1})$		0.383 (0.030) [0.031]		0.395 (0.035) [0.037]		0.021 (0.021) [0.021]		0.003 (0.026) [0.027]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			9.13	7.14			12.43	9.77
AR-p			0.00	0.00			0.01	0.00
AR-CI 90%			(-0.336, -0.100)	(-0.254, -0.057)			(-0.098, -0.021)	(-0.100, -0.023)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			3.17	2.39			5.09	3.61
AR-p			0.01	0.01			0.16	0.08
AR-CI 90%			[..., -0.089]	[..., -0.055]			[-0.156, 0.005]	[-0.214, -0.008]
Observations	60,466	56,248	44,285	42,994	61,678	55,235	45,083	42,447

Notes: Aid is denominated in 2011 USD. IHS (asinh) stands for inverse hyperbolic sine. Geopolitical Distance (Geopol. Dist.) is the absolute value difference in ideal point UN-Voting estimates between origin and destination countries as constructed from Bailey et al. 2017. For the IV specifications, IHS aid is instrumented via a shift-share; the shares for the shift-share are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. The shift takes the total log aid disbursed by the origin country after subtracting out any bilateral aid disbursed by the aid partner for a given year as the shock. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (-); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [.]. The lower bounds for the AR-CI intervals under two-way clustering for columns (3) and (4) are unbounded from below. The constant is suppressed.

Controlling for Competing Bloc Aid

Equation (A.4) augments our main estimating equation (2.1) by also controlling for the sum of bilateral aid flows coming from the competing bloc of countries (Communist vs. Western) relative to the aid-disbursing country:

$$\frac{\text{Trade}_{od,t+h}}{\text{GDP}_{d,t-3}} = \beta^h \left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}} \right) + \phi \left(\frac{\text{Aid}_{od,t}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}} \right) + \gamma \left(\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}} \right) + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}, \quad (\text{A.4})$$

Other-bloc aid flows is constructed by taking the recipient country's total aid flows from the geopolitical bloc opposite that of donor o : when o is a Communist donor (USSR, CHN, HUN, and POL), the control is total aid flows from Western countries (KOR, TWN, PRT, IRL, ESP, NZL, FIN, AUT, CHE, DNK, NOR, BEL, AUS, SWE, ITA, NLD, CAN, GBR, FRA, DEU, JPN, USA), and when o is a Western donor, the control is aid flows to the recipient country from Communist countries. The other-bloc aid flow control is then normalized by lagged GDP, which places all variables in comparable units. Intuitively, we want to ensure that our instrumented aid flow is robust to controlling for the aid inflows coming from donor countries from the competing bloc (Communist vs. Western) within our estimated sample. If the coefficient β^h is larger in equation (A.4) relative to our baseline specification, then this would suggest that the baseline estimate understates the true bilateral market access effect of aid due to competition across blocs. If the instrumented aid flow is positively correlated with competing donors' aid—since donor blocs may have competed over the same pool of recipients and may have also been responding to unobserved time-varying shocks in the error term—and other-bloc aid is negatively correlated with bilateral trade due to a competing market access channel, then omitting the control induces a downward bias in the IV estimate.

Including $\text{Aid}_{od,t}^{\text{Other-Bloc}}$ partials out this competitive dynamic, isolating the pure bilateral market access channel. It is important to highlight that other-bloc aid flows are an endogenous regressor—aid disbursed by other donors to destination d is likely correlated with unobserved determinants of bilateral trade between origin country o and destination country d . We include it not to identify the causal effect of other-bloc aid on trade, but rather to partial out a time-varying competitive channel that would otherwise may bias β^h . We therefore do not interpret the coefficient ϕ causally. It is important to note that controlling for aid from donors in the same bloc as donor o would be redundant in our specification: for each destination-year, same-bloc aid is mechanically equal to total aid received by destination d in year t minus aid from the competing bloc, and total destination-year aid is absorbed by the destination \times year fixed effects. If same-bloc aid is defined excluding donor o 's own bilateral flow, it is additionally just the residual of total destination-year aid after netting out both bilateral aid and other-bloc aid, so it is perfectly collinear with the existing aid regressors and the destination \times year fixed effects.

Table A.12 presents results from equation (A.4). Consistent with the bias argument outlined above, the IV estimates of β^h are larger here than in our baseline specification at both the $h = 0$ and $h = 5$ horizon, suggesting that omitting the competitive channel does indeed induce a downward bias in the baseline estimates. For instance, at $h = 0$ the IV estimate in column (4) is 0.496 relative to a value of 0.464 at the $h = 0$ horizon in our baseline results in Table A.6. The estimate is significant at the less than 1% level under origin-year clustering and at the less than 10% level under two-way clustering. Moreover, the AR- p values are once again significant at the less than 5% level and the 90% AR CI's continue to exclude zero for both sets of standard errors. The persistence of positive and significant effects after controlling for other-bloc aid flows strengthens our interpretation that the bilateral aid-trade relationship reflects a genuine market access channel rather than a spurious correlation driven by donor bloc competition over recipients.

Table A.12: Impact of Aid on Trade Flows: Control for Competing Bloc Aid

	$h = 0: \frac{\text{Trade}_{od,t}}{\text{GDP}_{d,t-3}}$				$h = 5: \frac{\text{Trade}_{od,t+5}}{\text{GDP}_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}}\right)$	0.160 (0.079) [0.101]	0.132 (0.076) [0.094]	0.920 (0.136) [0.445]	0.496 (0.134) [0.274]	0.022 (0.025) [0.035]	0.008 (0.025) [0.030]	1.648 (0.350) [0.766]	1.465 (0.339) [0.691]
$\left(\frac{\text{Aid}_{od,t}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}}\right)$	0.005 (0.006) [0.005]	0.006 (0.006) [0.005]	0.079 (0.025) [0.050]	0.040 (0.021) [0.032]	-0.017 (0.007) [0.010]	-0.016 (0.007) [0.010]	0.143 (0.049) [0.076]	0.129 (0.048) [0.073]
$\left(\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}}\right)$		0.500 (0.081) [0.071]		0.572 (0.132) [0.119]		0.256 (0.080) [0.089]		0.217 (0.081) [0.089]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			33.23	31.69			32.16	32.14
AR-p			0.00	0.00			0.00	0.00
AR-CI 90%			(0.738, 1.166)	(0.317, 0.718)			(1.180, 2.227)	(1.011, 2.026)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			3.40	3.23			3.34	3.25
AR-p			0.01	0.02			0.00	0.00
AR-CI 90%			[0.451, ...]	[0.208, ...]			[0.966, ...]	[0.850, ...]
Observations	58,565	58,471	51,615	51,534	56,968	56,540	50,224	49,865

Notes: Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. Trade as a share of GDP is also denominated in 2011 USD divided by destination GDP lagged by three years. Other-bloc aid is defined based off of the origin country bloc. For instance, if the origin country is a Communist country (USSR, CHN, HUN, POL) then other-bloc aid comprises of all the bilateral aid flows disbursed to the destination country by Western countries (all other countries within the donor sample). The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a leave-one-out shift-share that takes the total aid disbursed by the origin country (excluding the bilateral pair) divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. AR-CI's are computed by first demeaning all variables by the fixed effects. The upper bounds of the two-way clustered AR-CI's for columns (3), (4), (7), and (8) are unbounded. The constant is suppressed.

Competing Blocs: Full Shock IV

Table A.13 reports results from equation (2.5), but uses the total aid disbursed by the origin country as the shock for the instrument: $IV_{od,t} = \hat{\lambda}_{od,t-3} \times \frac{\sum_{jd} Aid_{oj,t}}{GDP_{d,t-3}}$.

Table A.13: Impact of Aid on Competing Bloc Trade Flows: Full Shock IV

	$h = 0: \frac{Trade_{od,t}^{Other-Bloc}}{GDP_{d,t-3}}$				$h = 5: \frac{Trade_{od,t+5}^{Other-Bloc}}{GDP_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{Aid_{od,t}}{GDP_{d,t-3}} \right)$	-0.011 (0.027) [0.033]	-0.006 (0.024) [0.026]	-0.110 (0.253) [0.228]	0.087 (0.250) [0.167]	0.003 (0.012) [.]	0.003 (0.012) [0.009]	-1.865 (0.542) [1.074]	-1.712 (0.515) [1.008]
$\left(\frac{Aid_{od,t}^{Other-Bloc}}{GDP_{d,t-3}} \right)$	0.069 (0.023) [0.023]	-0.002 (0.022) [0.014]	0.523 (0.044) [0.065]	0.212 (0.043) [0.050]	0.140 (0.032) [.]	0.118 (0.031) [0.035]	0.190 (0.098) [0.143]	0.085 (0.098) [0.132]
$\left(\frac{Trade_{od,t-1}^{Other-Bloc}}{GDP_{d,t-3}} \right)$		0.732 (0.023) [0.039]		0.763 (0.028) [0.053]		0.202 (0.065) [0.106]		0.334 (0.069) [0.126]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SEs clustered at the origin \times year level</i>								
KP-F			35.36	35.57			34.93	35.31
AR-p			0.67	0.73			0.00	0.00
AR-CI 90%			(-0.489, 0.269)	(-0.288, 0.501)			(-2.845, -1.140)	(-2.643, -1.023)
<i>SEs clustered two-way (origin \times year and bilateral)</i>								
KP-F			3.66	3.67			3.61	3.64
AR-p			0.63	0.59			0.00	0.01
AR-CI 90%			[-0.904, 0.426]	[-0.225, 0.805]			[..., -0.909]	[..., -0.814]
Observations	58,908	58,880	51,894	51,866	57,141	56,983	50,389	50,231

Notes: Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. Trade as a share of GDP is also denominated in 2011 USD divided by destination GDP lagged by three years. Other-bloc aid is defined based off of the origin country bloc. For instance, if the origin country is a Communist country (USSR, CHN, HUN, POL) then other-bloc aid comprises of all the bilateral aid flows disbursed to the destination country by Western countries (all other countries within the donor sample). Other-bloc trade is constructed similarly. The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a shift-share that takes the total aid disbursed by the origin country divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. AR-CI's are computed by first demeaning all variables by the fixed effects. The constant is suppressed.

Competing Blocs: IHS Aid and Log Competing Bloc Trade

In Table A.14 we change equation (2.5) by using log trade from the other bloc as the dependent variable and IHS aid as the regressor:

$$\ln(\text{Trade})_{od,t+h}^{\text{Other-Bloc}} = \beta_{oth}^h \widehat{\text{asinh}(\text{Aid}_{od,t})} + \phi \text{asinh}(\text{Aid})_{od,t}^{\text{Other-Bloc}} + \gamma \ln(\text{Trade})_{od,t-1}^{\text{Other-Bloc}} + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}, \quad (\text{A.5})$$

where $\widehat{\text{asinh}(\text{Aid}_{od,t})}$ is instrumented using the following instrument: $\text{IV}_{od,t} = \widehat{\lambda}_{od,t-3} \times \ln\left(\sum_{j \neq d} \text{Aid}_{oj,t}\right)$.

Table A.14: Impact of Aid on Competing Bloc Trade: IHS Aid and Log Trade

	$h = 0: \ln(\text{Trade})_{od,t}^{\text{Other-Bloc}}$				$h = 5: \ln(\text{Trade})_{od,t+5}^{\text{Other-Bloc}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{asinh}(\text{Aid}_{od,t})$	0.000 (0.000) [0.001]	-0.000 (0.000) [0.000]	-0.201 (0.065) [0.092]	-0.060 (0.022) [0.026]	-0.001 (0.000) [0.001]	-0.000 (0.000) [0.001]	-0.063 (0.019) [0.030]	-0.066 (0.022) [0.034]
$\text{asinh}(\text{Aid})_{od,t}^{\text{Other-Bloc}}$	0.012 (0.002) [0.003]	0.005 (0.001) [0.001]	-0.065 (0.027) [0.036]	-0.019 (0.009) [0.011]	0.000 (0.002) [0.002]	-0.001 (0.002) [0.002]	-0.026 (0.008) [0.012]	-0.029 (0.009) [0.013]
$\ln(\text{Trade}_{od,t-1})$		0.600 (0.018) [0.022]		0.649 (0.022) [0.026]		0.103 (0.022) [0.030]		0.130 (0.032) [0.044]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			13.34	13.84			23.87	17.71
AR-p			0.00	0.00			0.00	0.00
AR-CI 90%			(-0.371, -0.134)	(-0.110, -0.034)			(-0.101, -0.040)	(-0.112, -0.040)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			5.88	6.71			10.28	7.91
AR-p			0.00	0.00			0.05	0.06
AR-CI 90%			[-0.549, -0.105]	[-0.142, -0.028]			[-0.123, -0.017]	[-0.145, -0.014]
Observations	65,705	61,357	48,716	47,940	68,657	59,686	48,506	46,802

Notes: Aid and trade variables are denominated in 2011 USD. Other-bloc aid is defined based off of the origin country bloc. For instance, if the origin country is a Communist country (USSR, CHN, HUN, POL) then other-bloc aid comprises of all the bilateral aid flows disbursed to the destination country by Western countries (all other countries within the donor sample). Other-bloc trade is constructed similarly. IHS (asinh) stands for inverse hyperbolic sine. For the IV specifications, IHS aid is instrumented via a shift-share that takes the total log aid disbursed by the origin country after subtracting out any bilateral aid disbursed by the aid partner for a given year as the shock. The shares for the shift-share are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year, to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR-p is the p-value from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (-); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [-]. The constant is suppressed.

A.5 Does Aid Increase Donor Imports?

Having established that foreign aid increases bilateral trade and shifts geopolitical alignment, we also investigate whether bilateral aid improves donor country access to imports originating from recipient countries. Equation (A.6) does this by regressing the bilateral aid as a share of the recipient countries' GDP on the imports aid disbursing country o obtains from recipient country d as a share of the recipient countries' GDP:

$$\frac{\text{Trade}_{do,t+h}}{\text{GDP}_{d,t-3}} = \beta_{im}^h \left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}} \right) + \gamma \left(\frac{\text{Trade}_{do,t-1}}{\text{GDP}_{d,t-3}} \right) + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}. \quad (\text{A.6})$$

Therefore, β_{im}^h captures the dollar effect of bilateral aid on donor-country imports from the recipient at horizon h , where both aid and imports are normalized by the same predetermined measure of recipient GDP. Within the post-Cold War era, there has been evidence of great powers using aid as a strategic tool to facilitate access to recipient-country resources (Harchaoui, Maseland, and Watkinson, 2021; *The New York Times*, 2025). Although this channel has not, to our knowledge, been empirically studied directly in the Cold War era, this channel may be operative since donors may have tried to secure greater access to raw materials, like commodities, produced by recipient countries that are integral to the production processes of industrial economies. Our specification also includes all of the same fixed effects and controls as in equation (2.1) and we also follow the same IV strategy highlighted in equation (2.3).

Overall, the results in Table A.15 suggest that aid had an ambiguous effect on increasing donor imports. Although the coefficients are similar in magnitude relative to our main specification, the results are generally not robust to two-way clustering. We also construct alternative specifications using IHS aid and log imports (see Table A.16) as well as construct the cumulative impulse response of aid on imports following Ramey and Zubairy (2018) (see Table A.17) and the coefficients are not precisely estimated. At the $h = 0$ horizon, our preferred specification (column 4) indicates that a one dollar increase in bilateral aid raises donor-country imports from the recipient by 0.427 dollars. Although the estimate is statistically significant at the 5% level under origin-year clustering, under two-way clustering the AR- p value is 0.13 and the AR 90% confidence interval includes zero. Moreover, when turning to the alternative specification using IHS aid and log imports (see Table A.16), the result is insignificant under both sets of standard errors, with AR- p values of 0.43 and 0.65, respectively.

Turning to the medium-run effects, the results are slightly stronger but still not robust to alternative specifications. In our preferred specification (column 8 of Table A.15), a one dollar increase in bilateral aid increases donor-country imports by 1.750 dollars five years later. This estimate is statistically significant at the 1% level under origin-year clustering. Under two-way clustering the result has an AR- p value of 0.08 and AR 90% confidence intervals excluding zero. But when we change the estimating equation to instead use IHS aid and log imports, the coefficient has an AR- p value of 0.09 under origin-year clustering and 0.38 under two-way clustering at the $h = 5$ horizon. Finally, when analyzing the results from the cumulative impulse response specification in Table A.17 the result continues to have AR- p values above 0.1 at the $h = 3$ and $h = 5$ horizon.

Taken together, these results suggest that the evidence for bilateral aid increasing donor-country imports from recipients is, at best, ambiguous — effects are not robust across clustering schemes or functional forms, making it difficult to draw firm conclusions about this channel.

Donor Imports: Aid/GDP and Imports/GDP

In Table A.15 we estimate equation (A.6) using the shift-share from equation (2.3): $IV_{od,t} = \hat{\lambda}_{od,t-3} \times \frac{\sum_{j \neq d} \text{Aid}_{oj,t}}{\text{GDP}_{d,t-3}}$.

Table A.15: Impact of Aid on Imports

	$h = 0: \frac{\text{Trade}_{do,t}}{\text{GDP}_{d,t-3}}$				$h = 5: \frac{\text{Trade}_{do,t+5}}{\text{GDP}_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{\text{Aid}_{od,t}}{\text{GDP}_{d,t-3}} \right)$	0.021 (0.009) [.]	0.002 (0.006) [0.008]	1.169 (0.342) [0.837]	0.427 (0.186) [0.331]	0.047 (0.017) [0.028]	0.040 (0.016) [0.026]	2.086 (0.619) [1.340]	1.750 (0.562) [1.178]
$\left(\frac{\text{Trade}_{do,t-1}}{\text{GDP}_{d,t-3}} \right)$		0.806 (0.064) [0.040]		0.857 (0.080) [0.036]		0.325 (0.111) [0.091]		0.336 (0.138) [0.119]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			38.37	38.12			36.53	38.25
AR-p			0.00	0.01			0.00	0.00
AR-CI 90%			(0.711, 1.789)	(0.177, 0.764)			(1.258, 3.206)	(0.997, 2.768)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			3.85	3.81			3.72	3.77
AR-p			0.13	0.13			0.07	0.08
AR-CI 90%			[0.016, 5.442]	[-0.030, 2.280]			[0.459, 10.436]	[0.320, 8.710]
Observations	58,560	58,467	51,613	51,532	56,980	56,536	50,236	49,861

Notes: Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. Trade is the bilateral imports of the aid disbursing countries from the aid recipient country. Imports as a share of GDP is also denominated in 2011 USD divided by destination GDP lagged by three years. The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a leave-one-out shift-share that takes the total aid disbursed by the origin country (excluding the bilateral pair) divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors reported as [·] indicate that the two-way clustered variance-covariance matrix was non-positive semi-definite, and valid standard errors could not be computed despite applying the Cameron, Gelbach Miller (2011) eigenvalue adjustment. The constant is suppressed.

Donor Imports: IHS Aid and Log Trade

In Table A.16 we change equation (2.1) by using log imports of the aid disbursing country o originating from the aid recipient country d , $\ln(\text{Trade})_{do,t+h}$, as the dependent variable and IHS aid, $\text{asinh}(\text{Aid}_{od,t})$, as the regressor:

$$\ln(\text{Trade})_{do,t+h} = \beta^h \widehat{\text{asinh}(\text{Aid}_{od,t})} + \gamma \ln(\text{Trade})_{do,t-1} + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h},$$

where $\widehat{\text{asinh}(\text{Aid}_{od,t})}$ is instrumented using the following instrument: $\text{IV}_{od,t} = \widehat{\lambda}_{od,t-3} \times \ln\left(\sum_{j \neq d} \text{Aid}_{oj,t}\right)$.

Table A.16: Impact of Aid on Donor Import Flows

	$h = 0: \ln(\text{Trade}_{do,t})$				$h = 5: \ln(\text{Trade}_{do,t+5})$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{asinh}(\text{Aid}_{od,t})$	0.006 (0.001) [.]	0.002 (0.001) [0.001]	0.069 (0.040) [0.070]	0.019 (0.029) [0.041]	0.004 (0.001) [0.002]	0.003 (0.001) [0.002]	0.109 (0.047) [0.064]	0.055 (0.033) [0.061]
$\ln(\text{Trade}_{do,t-1})$		0.469 (0.010) [0.011]		0.474 (0.011) [0.013]		0.040 (0.010) [0.012]		0.049 (0.012) [0.014]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			14.88	14.22			18.03	14.91
AR-p			0.09	0.54			0.01	0.09
AR-CI 90%			(0.009, 0.142)	(-0.030, 0.062)			(0.047, 0.200)	(0.006, 0.115)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			5.10	5.28			6.40	5.70
AR-p			0.36	0.65			0.04	0.38
AR-CI 90%			[-0.083, 0.221]	[-0.070, 0.108]			[0.031, 0.311]	[-0.058, 0.198]
Observations	57,724	52,525	44,449	42,867	61,457	51,257	44,855	41,937

Notes: Aid and trade variables are denominated in 2011 USD. Trade is the bilateral imports of the aid disbursing countries from the aid recipient country. IHS (asinh) stands for inverse hyperbolic sine. For the IV specifications, IHS aid is instrumented via a shift-share; the shares for the shift-share are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. The shift takes the total log aid disbursed by the origin country after subtracting out any bilateral aid disbursed by the aid partner for a given year as the shock. KP-F is the Kleibergen-Paap F-statistic. AR-p is the p-value from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. The constant is suppressed.

Donor Imports: Cumulative Impulse Response

In Table A.17, we change equation (4.1) by using the cumulative imports of the aid disbursing country o originating from the aid recipient country d as the dependent variable:

$$\sum_{j=0}^h \frac{\text{Trade}_{do,t+j}}{\text{GDP}_{d,t-3}} = \beta^{\text{CUM},h} \left(\sum_{j=0}^h \frac{\text{Aid}_{od,t+j}}{\text{GDP}_{d,t-3}} \right) + \gamma \left(\frac{\text{Trade}_{do,t-1}}{\text{GDP}_{d,t-3}} \right) + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}.$$

Table A.17: Cumulative Impulse Response of Bilateral Imports/GDP to Aid/GDP

	$h = 3: \sum_{j=0}^3 (\text{Trade}_{do,t+j}/\text{GDP}_{d,t-3})$				$h = 5: \sum_{j=0}^5 (\text{Trade}_{do,t+j}/\text{GDP}_{d,t-3})$			
	Naive IV		IV		Naive IV		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\sum_{j=0}^h (\text{Aid}_{od,t+j}/\text{GDP}_{d,t-3})$	0.113 (0.045) [0.051]	0.054 (0.032) [0.040]	1.371 (0.436) [1.052]	0.715 (0.326) [0.620]	0.239 (0.109) [0.097]	0.149 (0.082) [0.081]	1.667 (0.535) [1.249]	1.061 (0.437) [0.863]
$(\text{Trade}_{do,t-1}/\text{GDP}_{d,t-3})$		2.737 (0.211) [0.230]		3.042 (0.256) [0.178]		3.479 (0.372) [0.283]		3.837 (0.477) [0.296]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			41.84	41.69			36.16	36.05
AR- p			0.00	0.01			0.00	0.00
AR-CI 90%			(0.787, 2.160)	(0.279, 1.307)			(0.951, 2.637)	(0.476, 1.852)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			3.66	3.63			3.34	3.31
AR- p			0.16	0.19			0.13	0.15
AR-CI 90%			[-0.077, 7.247]	[-0.138, 4.379]			[-0.052, ...]	[-0.127, ...]
Observations	57,360	57,270	50,581	50,503	56,569	56,479	49,896	49,818

Notes: The dependent variable is the cumulative bilateral imports scaled by the destination countries' GDP over the indicated horizon. Imports is the bilateral imports of the aid disbursing countries from the aid recipient country. The independent variable is the cumulative aid disbursed scaled by the destination countries' GDP over the indicated horizon. All variables are scaled by the destination countries' GDP, which is a moving average between years $t - 2$, $t - 3$, and $t - 4$. Naive IV columns instrument cumulative Aid/GDP using contemporaneous Aid/GDP. For the shift-share IV specifications (columns (3), (4), (7), (8)), cumulative Aid/GDP is instrumented via a shift-share that uses predicted bilateral aid shares lagged by three years as the share. The shift is the total origin-country aid after subtracting out any bilateral aid disbursed by the aid partner for a given year as the shock. KP-F is the Kleibergen-Paap F-statistic. AR- p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. The upper bounds of the two-way clustered AR-CIs for columns (7) and (8) are unbounded. The constant is suppressed.

A.6 Contemporary Period (1990-2019): Negligible Impact Aid has on Trade

Table A.19 reports results following our main estimating equation (2.1), but between 1990-2019 for the 26 donor countries in our Cold War sample. Table A.20 reports the results using IHS aid as the regressor and log trade as the outcome variable. In order to construct our predicted shares regression, we run the same PPML regression but drop all geopolitical variables related to the Cold War within the prediction equation, which is reported in Table A.18 below:

Table A.18: PPML Gravity Regression: Determinants of Bilateral Aid Flows During Contemporary Period (1990-2019)

	Real Aid	
	Coef.	SE
<i>Geography</i>		
ln(Distance)	-0.421***	(0.045)
Common Language	0.036	(0.064)
Contiguity	0.098	(0.519)
Ever Colony	0.023	(0.252)
<i>Economic Fundamentals</i>		
ln(GDP p.c.) Origin	0.951***	(0.078)
ln(Population) Origin	0.972***	(0.031)
ln(GDP p.c.) Destination	-0.232***	(0.034)
ln(Population) Destination	0.425***	(0.015)
<i>Religion</i>		
Protestant	-1.323***	(0.244)
Catholic	-0.279***	(0.095)
<i>Colonial Relationships</i>		
PRT Colony × PRT	3.069***	(0.330)
GBR Colony × GBR	0.928***	(0.292)
USA Colony × USA	-0.310	(0.285)
ESP Colony × ESP	1.575***	(0.302)
NLD Colony × NLD	1.303***	(0.309)
FRA Colony × FRA	1.411***	(0.286)
BEL Colony × BEL	2.640***	(0.402)
ITA Colony × ITA	-1.229***	(0.454)
JPN Colony × JPN	-2.981***	(0.501)
Constant	-12.184***	(0.839)
Observations	88,766	
Pseudo R ²	0.466	

Notes. PPML regression of real bilateral aid flows on gravity and political controls between 1990-2019. Standard errors clustered at the origin-year level (740 clusters). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Contemporary Period: Aid/GDP and Trade/GDP

In Table A.19 we estimate equation (2.1) for the contemporary period (1990-2019) using the shift-share from equation (2.3): $IV_{od,t} = \hat{\lambda}_{od,t-3} \times \frac{\sum_{j \neq d} Aid_{oj,t}}{GDP_{d,t-3}}$.

Table A.19: Impact of Aid on Trade Flows: Contemporary Period (1990–2019)

	$h = 0: \frac{Trade_{od,t}}{GDP_{d,t-3}}$				$h = 5: \frac{Trade_{od,t+5}}{GDP_{d,t-3}}$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\left(\frac{Aid_{od,t}}{GDP_{d,t-3}} \right)$	0.039 (0.055) [0.070]	0.021 (0.047) [0.056]	12.211 (5.654) [13.896]	6.704 (4.820) [7.818]	0.330 (0.233) [0.397]	0.330 (0.232) [0.396]	1.125 (1.700) [3.739]	1.439 (1.773) [3.829]
$\left(\frac{Trade_{od,t-1}}{GDP_{d,t-3}} \right)$		0.382 (0.126) [0.037]		0.351 (0.149) [0.023]		0.002 (0.023) [0.027]		-0.015 (0.018) [0.006]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SEs clustered at the origin \times year level</i>								
KP-F			17.89	17.95			15.55	15.66
AR-p			0.01	0.12			0.51	0.42
AR-CI 90%			(5.468, 24.350)	(0.188, 16.286)			(-1.697, 3.948)	(-1.224, 4.381)
<i>SEs clustered two-way (origin \times year and bilateral)</i>								
KP-F			11.65	11.76			6.52	6.59
AR-p			0.30	0.31			0.76	0.70
AR-CI 90%			[-4.732, 47.227]	[-2.829, 26.404]			[-5.859, 9.324]	[-5.092, 10.457]
Observations	102,694	102,694	77,615	77,615	81,757	81,757	60,275	60,275

Notes: Aid as a share of GDP is constructed by taking bilateral aid in 2011 USD divided by the destination country's GDP in 2011 USD lagged by three years. Trade as a share of GDP is also denominated in 2011 USD divided by destination GDP lagged by three years. The GDP series is a spliced series where the base series is from CEPII and then we forward and backwards splice GDP data from the World Bank and the Maddison Project. For the IV specifications, aid-share is instrumented via a leave-one-out shift-share that takes the total aid disbursed by the origin country (excluding the bilateral pair) divided by the destination country's GDP lagged by three years as the shock. The shares are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (-); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [-]. AR-CI's are computed by first demeaning all variables by the fixed effects. The constant is suppressed.

Contemporary Period: IHS Aid and Log Trade

In Table A.20 we change equation (2.1) by using log trade as the dependent variable and IHS aid as the regressor, but only run the specification for the contemporary period (1990-2019):

$$\ln(\text{Trade})_{od,t+h} = \beta^h \widehat{\text{asinh}}(\text{Aid}_{od,t}) + \gamma \ln(\text{Trade})_{od,t-1} + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h},$$

where $\widehat{\text{asinh}}(\text{Aid}_{od,t})$ is instrumented using the following instrument: $\text{IV}_{od,t} = \widehat{\lambda}_{od,t-3} \times \ln\left(\sum_{j \neq d} \text{Aid}_{oj,t}\right)$.

Table A.20: Impact of Aid on Trade Flows: Contemporary Period (1990-2019), IHS Aid and Log Trade

	$h = 0: \ln(\text{Trade}_{od,t})$				$h = 5: \ln(\text{Trade}_{od,t+5})$			
	OLS		IV		OLS		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\widehat{\text{asinh}}(\text{Aid}_{od,t})$	0.004 (0.001) [0.001]	0.002 (0.001) [0.001]	0.147 (0.091) [0.193]	0.075 (0.056) [0.096]	0.000 (0.001) [0.001]	0.001 (0.001) [0.001]	-0.134 (0.388) [0.683]	-0.202 (0.585) [1.049]
$\ln(\text{Trade}_{od,t-1})$		0.504 (0.007) [0.010]		0.505 (0.010) [0.012]		0.064 (0.009) [0.012]		0.022 (0.015) [0.023]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			5.11	4.92			0.25	0.18
AR-p			0.04	0.12			0.58	0.47
AR-CI 90%			(0.039, 0.485)	(0.008, 0.274)			(..., ...)	(..., ...)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			0.83	0.79			0.08	0.06
AR-p			0.28	0.27			0.72	0.64
AR-CI 90%			[..., ...]	[..., ...]			[..., ...]	[..., ...]
Observations	103,896	101,800	75,170	74,838	84,399	81,409	58,869	58,433

Notes: Aid and trade variables are denominated in 2011 USD. IHS (asinh) stands for inverse hyperbolic sine. For the IV specifications, IHS aid is instrumented via a shift-share that takes the total log aid disbursed by the origin country after subtracting out any bilateral aid disbursed by the aid partner for a given year as the shock. The shares for the shift-share are constructed by using the predicted aid flows from a PPML regression divided by the total predicted aid disbursed by the origin country for a given year to obtain a predicted aid share. The shares are lagged by three years. KP-F is the Kleibergen-Paap F-statistic. AR-p is the p-value from the Anderson-Rubin test developed by Andrews (2018). Standard errors clustered at the origin-year level are reported in parentheses (-); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. AR-CIs reported as (..., ...) are completely unbounded. The constant is suppressed.

A.7 Cumulative Impulse Response

Within the next set of specifications, we follow the approach of [Ramey and Zubairy \(2018\)](#) and estimate the following equation (4.1):

$$\sum_{j=0}^h \frac{\text{Trade}_{od,t+j}}{\text{GDP}_{d,t-3}} = \beta^{\text{CUM},h} \left(\sum_{j=0}^h \frac{\text{Aid}_{od,t+j}}{\text{GDP}_{d,t-3}} \right) + \gamma \left(\frac{\text{Trade}_{od,t-1}}{\text{GDP}_{d,t-3}} \right) + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}.$$

Both the independent and dependent variables are cumulated across the time horizon $j = 0, \dots, h$, while the denominator remains fixed for comparability. Table A.21 reports results from equation (4.1) using the leave-one-out instrument from equation (2.3): $\text{IV}_{od,t} = \hat{\lambda}_{od,t-3} \times \frac{\sum_{j \neq d} \text{Aid}_{oj,t}}{\text{GDP}_{d,t-3}}$.

Table A.21: Cumulative Impulse Response of Aid on Trade (Equation 4.1)

	$h = 3: \sum_{j=0}^3 (\text{Trade}_{od,t+j}/\text{GDP}_{d,t-3})$				$h = 5: \sum_{j=0}^5 (\text{Trade}_{od,t+j}/\text{GDP}_{d,t-3})$			
	Naive IV		IV		Naive IV		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\sum_{j=0}^h (\text{Aid}_{od,t+j}/\text{GDP}_{d,t-3})$	0.331 (0.138) [0.076]	0.249 (0.119) [0.069]	1.052 (0.113) [0.463]	0.736 (0.122) [0.345]	0.455 (0.204) [0.106]	0.331 (0.156) [0.091]	1.273 (0.143) [0.564]	0.963 (0.138) [0.436]
$(\text{Trade}_{od,t-1}/\text{GDP}_{d,t-3})$		1.579 (0.266) [0.288]		1.845 (0.435) [0.465]		2.036 (0.360) [0.402]		2.421 (0.573) [0.626]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			41.96	41.24			36.22	35.54
AR- p			0.00	0.00			0.00	0.00
AR-CI 90%			(0.883, 1.238)	(0.553, 0.919)			(1.082, 1.510)	(0.756, 1.191)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			3.67	3.57			3.34	3.25
AR- p			0.0	0.02			0.00	0.01
AR-CI 90%			[0.564, 4.392]	[0.317, 3.226]			[0.679, ...]	[0.504, ...]
Observations	57,363	57,274	50,581	50,503	56,571	56,485	49,895	49,820

Notes: The dependent variable is the cumulative bilateral trade scaled by the destination countries' GDP over the indicated horizon. The independent variable is the cumulative aid disbursed scaled by the destination countries' GDP over the indicated horizon. All variables are scaled by the destination countries' GDP, which is a moving average between years $t - 2$, $t - 3$, and $t - 4$. Naive IV columns instrument cumulative Aid/GDP using contemporaneous Aid/GDP. For the shift-share IV specifications (columns (3), (4), (7), (8)), cumulative Aid/GDP is instrumented via a shift-share that uses predicted bilateral aid shares lagged by three years as the share. The shift is the total origin-country aid after subtracting out any bilateral aid disbursed by the aid partner for a given year as the shock. KP-F is the Kleibergen-Paap F-statistic. AR- p and AR-CI 90% are p -values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. The upper bounds of the two-way clustered AR-CIs for columns (7) and (8) are unbounded. The constant is suppressed.

Cumulative Impulse Response using Full Aid Shock IV

Table A.22 reports results from equation (4.1), but uses the full aid shock for the instrument:

$$IV_{od,t} = \hat{\lambda}_{od,t-3} \times \frac{\sum_j \text{Aid}_{oj,t}}{\text{GDP}_{d,t-3}}.$$

Table A.22: Cumulative Impulse Response of Trade on Aid (Equation 4.1): Full Shock IV

	$h = 3: \sum_{j=0}^3 (\text{Trade}_{od,t+j}/\text{GDP}_{d,t-3})$				$h = 5: \sum_{j=0}^5 (\text{Trade}_{od,t+j}/\text{GDP}_{d,t-3})$			
	Naive IV		IV		Naive IV		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\sum_{j=0}^h (\text{Aid}_{od,t+j}/\text{GDP}_{d,t-3})$	0.331 (0.138) [0.076]	0.249 (0.119) [0.069]	1.031 (0.108) [0.442]	0.719 (0.118) [0.329]	0.455 (0.204) [0.106]	0.331 (0.156) [0.091]	1.250 (0.137) [0.541]	0.943 (0.133) [0.417]
$(\text{Trade}_{od,t-1}/\text{GDP}_{d,t-3})$		1.579 (0.266) [0.288]		1.850 (0.436) [0.465]		2.036 (0.360) [0.402]		2.428 (0.574) [0.626]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			44.64	43.85			38.40	37.67
AR- p			0.00	0.00			0.00	0.00
AR-CI 90%			(0.869, 1.210)	(0.543, 0.896)			(1.066, 1.477)	(0.744, 1.163)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			3.83	3.74			3.48	3.40
AR- p			0.01	0.02			0.00	0.00
AR-CI 90%			[0.566, 3.930]	[0.320, 2.877]			[0.681, ...]	[0.505, ...]
Observations	57,363	57,274	50,581	50,503	56,571	56,485	49,895	49,820

Notes: The dependent variable is the cumulative bilateral trade scaled by the destination countries' GDP over the indicated horizon. The independent variable is the cumulative aid disbursed scaled by the destination countries' GDP over the indicated horizon. All variables are scaled by the destination countries' GDP, which is a moving average between years $t - 2$, $t - 3$, and $t - 4$. Naive IV columns instrument cumulative Aid/GDP using contemporaneous Aid/GDP. For the shift-share IV specifications (columns (3), (4), (7), (8)), cumulative Aid/GDP is instrumented via a shift-share that uses predicted bilateral aid shares lagged by three years as the share. The shift is the total origin-country aid as the shock. KP-F is the Kleibergen-Paap F-statistic. AR- p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [.]. The upper bounds of the two-way clustered AR-CIs for columns (7) and (8) are unbounded. The constant is suppressed.

Cumulative Impulse Response dropping Great Powers (USA, USSR, CHN)

Table A.23 reports results from (4.1), but drops the United States, the Soviet Union, and China when running the final estimating equation.

Table A.23: Cumulative Impulse Response of Trade on Aid (Equation 4.1): Dropping Great Powers

	$h = 3: \sum_{j=0}^3 (\text{Trade}_{od,t+j}/\text{GDP}_{d,t-3})$				$h = 5: \sum_{j=0}^5 (\text{Trade}_{od,t+j}/\text{GDP}_{d,t-3})$			
	Naive IV		IV		Naive IV		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\sum_{j=0}^h (\text{Aid}_{od,t+j}/\text{GDP}_{d,t-3})$	0.363 (0.211) [0.109]	0.281 (0.181) [0.095]	1.277 (0.163) [0.292]	0.894 (0.179) [0.258]	0.576 (0.455) [0.128]	0.413 (0.334) [0.111]	1.582 (0.197) [0.383]	1.228 (0.205) [0.341]
$(\text{Trade}_{od,t-1}/\text{GDP}_{d,t-3})$		1.602 (0.349) [0.366]		1.818 (0.542) [0.570]		2.112 (0.471) [0.501]		2.404 (0.713) [0.762]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			67.10	65.28			80.41	77.85
AR-p			0.00	0.00			0.00	0.00
AR-CI 90%			(1.060, 1.545)	(0.627, 1.189)			(1.319, 1.907)	(0.955, 1.565)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			20.24	19.30			21.23	20.31
AR-p			0.00	0.00			0.00	0.00
AR-CI 90%			[0.877, 1.819]	[0.498, 1.373]			[1.056, 2.293]	[0.760, 1.862]
Observations	50,385	50,385	44,291	44,291	50,159	50,159	44,069	44,069

Notes: The dependent variable is the cumulative bilateral trade scaled by the destination countries' GDP over the indicated horizon. The independent variable is the cumulative aid disbursed scaled by the destination countries' GDP over the indicated horizon. All variables are scaled by the destination countries' GDP, which is a moving average between years $t-2$, $t-3$, and $t-4$. Naive IV columns instrument cumulative Aid/GDP using contemporaneous Aid/GDP. For the shift-share IV specifications (columns (3), (4), (7), (8)), cumulative Aid/GDP is instrumented via a shift-share that uses predicted bilateral aid shares lagged by three years as the share. The shift is the total origin-country aid after subtracting out any bilateral aid disbursed by the aid partner for a given year as the shock. For consistency, the prediction weights are constructed using all countries and then we drop USA, USSR, and CHN when we run our final regressions. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. The constant is suppressed.

Trimming Predicted Outliers for Cumulative Impulse Response

Table A.24 reports report results for the cumulative impulse response (4.1) trimming prediction weights at the p1-p99 level using the leave-one-out instrument.

Table A.24: Cumulative Impulse Response of Trade on Aid (Equation 4.1): Trimming Outlier Weights

	$h = 3: \sum_{j=0}^3 (\text{Trade}_{od,t+j}/\text{GDP}_{d,t-3})$				$h = 5: \sum_{j=0}^5 (\text{Trade}_{od,t+j}/\text{GDP}_{d,t-3})$			
	IV: no trim		IV: p1-p99		IV: no trim		IV: p1-p99	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\sum_{j=0}^h (\text{Aid}_{od,t+j}/\text{GDP}_{d,t-3})$	1.052 (0.113) [0.463]	0.736 (0.122) [0.345]	1.077 (0.120) [0.499]	0.736 (0.126) [0.363]	1.273 (0.143) [0.564]	0.963 (0.138) [0.436]	1.304 (0.151) [0.608]	0.962 (0.142) [0.456]
$(\text{Trade}_{od,t-1}/\text{GDP}_{d,t-3})$		1.845 (0.435) [0.465]		1.875 (0.439) [0.470]		2.421 (0.573) [0.626]		2.471 (0.579) [0.632]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F	41.96	41.24	41.58	41.14	36.22	35.54	36.56	36.16
AR-p	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AR-CI 90%	(0.883, 1.238)	(0.553, 0.919)	(0.898, 1.275)	(0.547, 0.924)	(1.082, 1.510)	(0.756, 1.191)	(1.078, 1.554)	(0.750, 1.197)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F	3.67	3.57	3.64	3.59	3.34	3.25	3.32	3.28
AR-p	0.01	0.02	0.01	0.02	0.00	0.01	0.00	0.01
AR-CI 90%	[0.564, 4.392]	[0.317, 3.226]	[0.552, 4.751]	[0.295, 3.350]	[0.679, ...]	[0.504, ...]	[0.665, ...]	[0.482, ...]
Observations	50,581	50,503	49,657	49,582	49,895	49,820	48,981	48,909

Notes: The dependent variable is the cumulative bilateral trade scaled by the destination countries' GDP over the indicated horizon. The independent variable is the cumulative aid disbursed scaled by the destination countries' GDP over the indicated horizon. All variables are scaled by the destination countries' GDP, which is a moving average between years $t-2$, $t-3$, and $t-4$. For the shift-share IV specifications, cumulative Aid/GDP is instrumented via a leave-one-out shift-share that uses predicted bilateral aid shares lagged by three years as the share. The shift is the total origin-country aid after subtracting out any bilateral aid disbursed by the aid partner for a given year as the shock. Columns (1), (2), (5), and (6) use the full sample; columns (3), (4), (7), and (8) restrict to pairs with predicted aid share between p1-p99. KP-F is the Kleibergen-Paap F-statistic. AR-p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. All regressions absorb origin \times year, destination \times year, and bilateral fixed effects. The constant is suppressed. The upper bound for the AR-CI 90% intervals for columns (5), (6), (7) and (8) are unbounded for standard errors clustered two-way.

Competing Blocs: Cumulative Impulse Response of IHS Aid on Competing Bloc Trade

In Table A.25, we change equation (4.1) by using the cumulative trade flows to destination country d originating from countries in the other bloc from the aid disbursing country o as the dependent variable and similarly control for the cumulative sum of other bloc aid:

$$\sum_{j=0}^h \frac{\text{Trade}_{od,t+j}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}} = \beta^{\text{CUM},h} \left(\sum_{j=0}^h \frac{\text{Aid}_{od,t+j}}{\text{GDP}_{d,t-3}} \right) + \phi \left(\sum_{j=0}^h \frac{\text{Aid}_{od,t+j}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}} \right) + \gamma \left(\frac{\text{Trade}_{od,t-1}^{\text{Other-Bloc}}}{\text{GDP}_{d,t-3}} \right) + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t+h}.$$

Table A.25: Cumulative Impulse Response of Bilateral Competing Bloc Trade/GDP to Aid/GDP

	$h = 3: \sum_{j=0}^3 (\text{Trade}_{od,t+j}^{\text{Other-Bloc}} / \text{GDP}_{d,t-3})$				$h = 5: \sum_{j=0}^5 (\text{Trade}_{od,t+j}^{\text{Other-Bloc}} / \text{GDP}_{d,t-3})$			
	Naive IV		IV		Naive IV		IV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\sum_{j=0}^h (\text{Aid}_{od,t+j} / \text{GDP}_{d,t-3})$	-0.055 (0.053) [0.047]	-0.031 (0.039) [0.039]	-0.662 (0.237) [0.415]	-0.470 (0.223) [0.331]	-0.053 (0.084) [0.081]	-0.022 (0.064) [0.066]	-1.031 (0.333) [0.635]	-0.826 (0.309) [0.546]
$\sum_{j=0}^h (\text{Aid}_{od,t+j}^{\text{Other-Bloc}} / \text{GDP}_{d,t-3})$	0.394 (0.040) [0.067]	0.277 (0.044) [0.057]	0.601 (0.047) [0.090]	0.375 (0.057) [0.090]	0.538 (0.084) [0.117]	0.414 (0.086) [0.116]	0.528 (0.048) [0.116]	0.352 (0.064) [0.121]
$(\text{Trade}_{od,t-1}^{\text{Other-Bloc}} / \text{GDP}_{d,t-3})$		2.214 (0.131) [0.222]		2.318 (0.136) [0.266]		2.559 (0.219) [0.397]		2.928 (0.251) [0.486]
Origin \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Destination \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Bilateral FE	✓	✓	✓	✓	✓	✓	✓	✓
<i>SE's clustered at origin \times year level</i>								
KP-F			36.92	36.94			32.61	32.53
AR- p			0.00	0.02			0.00	0.00
AR-CI 90%			(-1.091, -0.345)	(-0.839, -0.171)			(-1.634, -0.585)	(-1.385, -0.413)
<i>SE's clustered two-way (origin \times year & bilateral)</i>								
KP-F			3.41	3.41			3.14	3.13
AR- p			0.02	0.04			0.01	0.03
AR-CI 90%			[..., -0.225]	[..., -0.121]			[..., -0.363]	[..., -0.251]
Observations	57,768	57,740	50,914	50,886	57,011	56,983	50,259	50,231

Notes: The dependent variable is the cumulative bilateral other-bloc trade scaled by the destination countries' GDP over the indicated horizon. Other-bloc aid is defined based off of the origin country bloc. For instance, if the origin country is a Communist country (USSR, CHN, HUN, POL) then other-bloc aid comprises of all the bilateral aid flows disbursed to the destination country by Western countries (all other countries within the donor sample). Other-bloc trade is constructed similarly. The independent variable is the cumulative aid disbursed scaled by the destination countries' GDP over the indicated horizon. All variables are scaled by the destination countries' GDP, which is a moving average between years $t-2$, $t-3$, and $t-4$. Naive IV columns instrument cumulative Aid/GDP using contemporaneous Aid/GDP. For the shift-share IV specifications (columns (3), (4), (7), (8)), cumulative Aid/GDP is instrumented via a shift-share that uses predicted bilateral aid shares lagged by three years as the share. The shift is the total origin-country aid after subtracting out any bilateral aid disbursed by the aid partner for a given year as the shock. KP-F is the Kleibergen-Paap F-statistic. AR- p and AR-CI 90% are p-values and weak-instrument-robust 90% confidence intervals from the Anderson-Rubin test developed by Andrews (2018). AR-CI's are computed by first demeaning all variables by the fixed effects. Standard errors clustered at the origin-year level are reported in parentheses (·); standard errors clustered two-way at the origin-year and bilateral level are reported in brackets [·]. The lower bounds of the two-way clustered AR-CIs for columns (3), (4), (7), and (8) are unbounded. The constant is suppressed.

B. MODEL AND QUANTIFICATION APPENDIX

B.1 Inferring χ from Gravity Coefficient

We begin with the sectoral trade share from the model and substitute the aid-augmented bilateral cost $\tau_{od} = \tilde{\tau}_{od}/Aid_{od}^\chi$:

$$\pi_{o,dj} = \mu_{o,dj} \left(\frac{\tilde{\tau}_{o,dj} P_{oj}}{Aid_{od}^\chi \cdot P_{dj}^f} \right)^{1-\varepsilon}.$$

Bilateral trade flows in sector j are $T_{od,j} = \pi_{o,dj} \cdot P_{dj}^f Y_{dj}$, so:

$$T_{od,j} = \mu_{o,dj} \cdot \tilde{\tau}_{o,dj}^{1-\varepsilon} \cdot P_{oj}^{1-\varepsilon} \cdot \left(P_{dj}^f \right)^\varepsilon \cdot Y_{dj} \cdot Aid_{od}^{\chi(\varepsilon-1)}.$$

We then sum across sectors j to obtain aggregate bilateral trade flows:

$$Trade_{od} = \sum_j T_{od,j} = Aid_{od}^{\chi(\varepsilon-1)} \sum_j \mu_{o,dj} \cdot \tilde{\tau}_{o,dj}^{1-\varepsilon} \cdot P_{oj}^{1-\varepsilon} \cdot \left(P_{dj}^f \right)^\varepsilon \cdot Y_{dj}.$$

The summation collects all origin-specific, destination-specific, and bilateral structural terms. By taking logs and incorporating origin \times year fixed effects we control for all origin-year-specific terms such as factory gate-prices, destination \times year fixed effects controls for destination final prices, and bilateral fixed effects controls for time-invariant bilateral demand shifters:

$$\ln(Trade_{od,t}) = \chi(\varepsilon - 1) \ln(Aid_{od,t}) + \delta_{o,t} + \delta_{d,t} + \delta_{od} + \varepsilon_{od,t}.$$

This maps directly into our estimating equation, with the reduced-form coefficient matching our impulse response function $\hat{\beta} = \chi(\varepsilon - 1)$. Since our model is static, we use a long-run estimate of the trade elasticity that matches the ten-year horizon from [Boehm, Levchenko, and Pandalai-Nayar \(2023\)](#) and calibrate $\varepsilon = 2$ so $\hat{\beta} = \chi$.

B.2 Bilateral Aid-Trade Ratios for US and USSR Recipients

Table B.1 summarizes the aid-trade ratios and computes bilateral elasticities from our five-year impulse response estimates using the coefficient from column (8) in Table A.21 for all countries that the have positive aid and trade flows with the United States during the Cold War era. Table B.2 summarizes the aid-trade ratios and computes bilateral elasticities from our five-year impulse response estimates using the coefficient from column (8) in Table A.21 for all countries that the have positive aid and trade flows with the Soviet Union during the Cold War era.

Table B.1: Bilateral Elasticity by Recipient Country (Donor: USA, 1962–1989)

Rec.	Aid (\$B)	Trade (\$B)	Ratio	Elas.	Rec.	Aid (\$B)	Trade (\$B)	Ratio	Elas.
RWA	0.34	0.04	8.286	7.979	HND	2.65	14.91	0.178	0.171
LAO	3.02	0.55	5.459	5.257	HTI	1.56	9.02	0.173	0.167
NPL	1.17	0.30	3.949	3.803	MMR	0.30	1.75	0.173	0.167
SOM	1.42	0.74	1.925	1.854	MDG	0.31	1.93	0.162	0.156
KHM	2.37	1.29	1.836	1.768	STP	0.00	0.02	0.160	0.154
MLI	0.83	0.54	1.539	1.482	IDN	9.27	58.38	0.159	0.153
AFG	1.65	1.21	1.369	1.318	DOM	3.69	23.58	0.157	0.151
NER	0.85	0.73	1.164	1.121	MUS	0.10	0.71	0.146	0.141
GNB	0.09	0.09	1.029	0.991	BEN	0.18	1.23	0.145	0.140
MOZ	0.60	0.63	0.961	0.925	CRI	2.81	20.25	0.139	0.133
BFA	0.87	0.96	0.913	0.880	NIC	1.20	9.74	0.124	0.119
UGA	0.38	0.44	0.854	0.823	SYR	0.73	6.26	0.117	0.113
BGD	6.81	8.61	0.791	0.762	MLT	0.26	2.22	0.115	0.111
SDN	2.94	3.73	0.787	0.758	BLZ	0.13	1.14	0.112	0.107
MWI	0.41	0.56	0.733	0.706	URY	0.53	4.74	0.111	0.107
TZA	1.25	1.86	0.673	0.648	GTM	2.28	20.67	0.110	0.106
EGY	28.40	45.24	0.628	0.604	GUY	0.40	3.72	0.109	0.105
ETH	1.98	3.32	0.597	0.575	CHL	4.13	43.45	0.095	0.092
TCD	0.37	0.64	0.584	0.563	PAN	1.62	20.07	0.081	0.078
BDI	0.17	0.29	0.582	0.560	JAM	2.03	25.50	0.080	0.077
MRT	0.44	0.80	0.551	0.531	PHL	5.51	71.09	0.078	0.075
PAK	19.97	38.09	0.524	0.505	FJI	0.07	0.85	0.077	0.074
ISR	35.85	68.42	0.524	0.505	PER	3.05	40.15	0.076	0.073
SEN	1.22	2.34	0.521	0.502	COL	4.66	64.07	0.073	0.070
GMB	0.19	0.37	0.512	0.493	COG	0.06	0.97	0.065	0.062
DJI	0.07	0.14	0.511	0.492	AGO	0.11	1.73	0.061	0.059
SLE	0.52	1.05	0.490	0.472	BRA	9.86	167.54	0.059	0.057
GIN	0.78	1.65	0.473	0.456	KOR	12.50	217.07	0.058	0.055
LKA	2.13	4.55	0.468	0.451	ECU	1.36	24.87	0.054	0.052
JOR	4.39	9.72	0.451	0.435	THA	2.48	53.02	0.047	0.045
IND	38.60	95.52	0.404	0.389	LBN	0.55	12.37	0.045	0.043
TGO	0.28	0.70	0.402	0.387	NGA	1.71	41.79	0.041	0.039
ZWE	0.62	1.60	0.389	0.375	CIV	0.20	5.15	0.039	0.038
BOL	3.22	8.79	0.366	0.352	DZA	0.94	28.30	0.033	0.032
SLV	4.88	14.00	0.349	0.336	OMN	0.13	4.36	0.030	0.029
CAF	0.07	0.21	0.344	0.331	GAB	0.06	2.39	0.025	0.024
GNQ	0.01	0.04	0.339	0.327	LBY	0.28	11.92	0.024	0.023
TUN	3.01	8.95	0.336	0.324	ARG	0.74	56.42	0.013	0.013
KEN	1.59	4.84	0.328	0.316	TTO	0.25	25.89	0.009	0.009
COD	2.49	7.63	0.326	0.314	IRN	0.41	48.42	0.009	0.008
LBR	2.02	6.22	0.325	0.313	VEN	1.17	181.76	0.006	0.006
MAR	3.93	13.88	0.283	0.272	MYS	0.31	57.45	0.005	0.005
TUR	9.68	36.36	0.266	0.256	PNG	0.01	2.77	0.004	0.004
GHA	1.64	6.96	0.236	0.227	BRB	0.03	6.39	0.004	0.004
CYP	0.56	2.61	0.215	0.207	MEX	1.28	369.38	0.003	0.003
PRY	0.50	2.56	0.196	0.188	IRQ	0.14	92.10	0.002	0.002
ZMB	0.87	4.83	0.180	0.174	VNM	0.01	12.26	0.001	0.001
CMR	0.60	3.33	0.179	0.173	SAU	0.00	151.93	0.000	0.000

Note: Elasticity $\chi_{od} = (\text{Aid}/\text{Trade}) \times \beta^{CUM,5}$, where $\hat{\beta}^{CUM,5} = 0.963$. Aid and trade denominated in 2011 USD.

Table B.2: Bilateral Elasticity by Recipient Country (Donor: USSR, 1962–1989)

Rec.	Aid (\$B)	Trade (\$B)	Ratio	Elas.	Rec.	Aid (\$B)	Trade (\$B)	Ratio	Elas.
AGO	0.14	0.01	12.081	11.634	AFG	2.96	4.24	0.697	0.671
CHL	1.05	0.20	5.182	4.990	ARG	0.93	1.49	0.628	0.605
MRT	0.08	0.02	3.641	3.506	ETH	1.56	3.23	0.483	0.465
KEN	0.25	0.09	2.708	2.608	LKA	0.52	1.18	0.443	0.426
TCD	0.01	0.00	1.979	1.906	COG	0.07	0.15	0.437	0.421
NER	0.01	0.00	1.886	1.817	BRA	1.64	3.79	0.433	0.417
SLE	0.15	0.09	1.729	1.665	GNB	0.04	0.10	0.372	0.358
BOL	0.28	0.16	1.715	1.652	GRC	0.46	1.32	0.352	0.339
PAK	4.22	2.60	1.623	1.563	URY	0.10	0.28	0.336	0.323
TZA	0.17	0.13	1.344	1.294	MLI	0.19	0.57	0.323	0.311
NIC	3.29	2.47	1.329	1.280	IRN	3.66	12.39	0.295	0.284
TUR	11.98	9.14	1.310	1.261	CMR	0.04	0.19	0.228	0.219
MUS	0.02	0.02	1.273	1.226	SDN	0.22	0.97	0.222	0.214
IRQ	5.15	4.26	1.210	1.165	SEN	0.05	0.24	0.198	0.191
MDG	0.37	0.32	1.146	1.104	TUN	0.22	1.18	0.189	0.182
KHM	0.11	0.09	1.140	1.098	NPL	0.06	0.35	0.168	0.161
UGA	0.11	0.10	1.133	1.091	EGY	2.03	12.89	0.157	0.151
MAR	6.22	5.55	1.120	1.079	BFA	0.00	0.03	0.150	0.144
DZA	4.32	3.97	1.087	1.046	BEN	0.02	0.14	0.125	0.121
JAM	0.09	0.08	1.065	1.025	JOR	0.08	0.79	0.099	0.095
CRI	0.05	0.04	1.029	0.991	GNQ	0.00	0.03	0.074	0.071
ZMB	0.05	0.05	0.953	0.918	GHA	0.07	1.08	0.066	0.063
PER	0.13	0.16	0.814	0.784	RWA	0.00	0.07	0.058	0.056
BGD	1.13	1.48	0.765	0.737	COL	0.01	0.31	0.032	0.031
SYR	3.73	4.88	0.764	0.736	MMR	0.01	0.60	0.014	0.013
SOM	0.36	0.48	0.754	0.727	IDN	0.02	1.31	0.013	0.012
IND	23.56	32.52	0.724	0.698	NGA	0.03	2.75	0.011	0.011

Note: Elasticity $\chi_{od} = (\text{Aid}/\text{Trade}) \times \hat{\beta}^{CUM,5}$, where $\hat{\beta}^{CUM,5} = 0.963$. Aid and trade denominated in 2011 USD.

B.3 Hat Algebra

We follow [Dekle, Eaton, and Kortum \(2008\)](#) and solve the model in changes. We denote by a ' (a prime) a value of a variable post-shock. The pre-shock ("steady state") value of the variable is written without a prime. Denote by \hat{x} a gross proportional change between the post-shock value and the pre-shock value: $\forall x, \hat{x} = \frac{x'}{x}$. Then the exact hat equilibrium is defined as:

Market Clearing Conditions

The goods market clearing for tradables is:

$$\hat{P}_{dj} \hat{Y}_{dj} P_{dj} Y_{dj} = \sum_o \hat{\pi}_{d,oj} \pi_{d,oj} \left[\zeta_{oj} \hat{P}_o \hat{\mathcal{F}}_o P_o \mathcal{F}_o + \sum_{k=1}^J (1 - \eta_k) \gamma_{j,ok} \hat{P}_{ok} \hat{Y}_{ok} P_{ok} Y_{ok} \right].$$

Services market clearing is:

$$\hat{P}_{dj} \hat{Y}_{dj} P_{dj} Y_{dj} = \zeta_{dj} \hat{P}_d \hat{\mathcal{F}}_d P_d \mathcal{F}_d + \sum_{k=1}^J (1 - \eta_k) \gamma_{j,dk} \hat{P}_{dk} \hat{Y}_{dk} P_{dk} Y_{dk}.$$

Labor market clearing is:

$$\hat{I}_d \mathcal{I}_d = \hat{P}_d \hat{\mathcal{F}}_d P_d \mathcal{F}_d \iff \hat{W}_d \hat{L}_d W_d L_d + \sum_o \widehat{Aid}_{od} Aid_{od} - \hat{T}_d T_d + \hat{D}_d D_d = \sum_{j=1}^J \eta_j \hat{P}_{dj} \hat{Y}_{dj} P_{dj} Y_{dj}.$$

Prices and price indices

Changes in consumer prices are given by:

$$\hat{P}_d = \prod_{j=1}^J (\hat{P}_{dj})^{\zeta_{dj}}.$$

Changes in producer prices are given by:

$$\hat{P}_{dj} = \hat{Z}_{dj}^{-1} \hat{W}_d^{\eta_j} \left(\prod_{k=1}^J (\hat{P}_{dk}^f)^{\gamma_{k,dj}} \right)^{1-\eta_j}, \quad \hat{P}_{dj}^f = \left[\sum_o \pi_{o,dj} \hat{\mu}_{o,dj} (\hat{\tau}_{o,dj} \hat{P}_{oj})^{1-\varepsilon} \right]^{\frac{1}{1-\varepsilon}}, \quad \hat{P}_{dj}^f = \hat{P}_{dj}$$

Trade Flows

Sectoral trade flows are given by:

$$\hat{\pi}_{o,dj} = \frac{\hat{\mu}_{o,dj} (\hat{\tau}_{o,dj} \hat{P}_{oj})^{1-\varepsilon}}{\sum_{\ell} \pi_{\ell,dj} \hat{\mu}_{\ell,dj} (\hat{\tau}_{\ell,dj} \hat{P}_{\ell j})^{1-\varepsilon}}.$$

Government

Government budget and bilateral tradecosts are:

$$\hat{T}_o = \sum_d \lambda_{od} \widehat{Aid}_{od}, \quad \hat{\tau}_{od} = \frac{\hat{\tau}_{od}}{(\widehat{Aid}_{od})^\chi}$$

where $\lambda_{od} = \frac{Aid_{od}}{\sum_d Aid_{od}}$.

Under the alternative formulation of the trade cost then it would be:

$$\hat{\tau}_{od} = \frac{\hat{\tau}_{od} \left(\sum_{k \neq o} \lambda_{kd} \widehat{\text{Aid}}_{kd} \right)^\psi}{\widehat{\text{Aid}}_{od}^\chi},$$

where $\lambda_{kd} = \frac{\text{Aid}_{kd}}{\sum_{k' \neq d} \text{Aid}_{k'n}}$ is the baseline share of rival-donor k 's aid in total third-country aid received by destination n , and $\widehat{\text{Aid}}_{kn} = \text{Aid}'_{kn} / \text{Aid}_{kn}$ is the gross change in bilateral aid from donor k to destination n .

B.4 Calibration

To obtain our final sectoral trade shares, we begin by using origin and destination trade data from UN-COMTRADE at the SITC-1 level for the years 1970-1975. We deflate the trade data using the GDP deflator from FRED. We use the following concordance to map SITC-1 sectors to our three tradable sectors: food and live animals, animal and vegetable oils and fats are mapped to agriculture; beverages and tobacco, manufactured goods, machinery and transport, chemicals, and miscellaneous manufactured goods are mapped to manufacturing; mineral fuels and lubricants and related materials, crude materials and inedible except fuels, and commodities and transactions not classified according to kind are mapped to commodities. When the destination country reports the bilateral trade flow, we use the destination country's value divided by a correction factor; when only the origin country reports, we use the origin country's value directly. The correction factor is the median ratio of destination-reported to origin-reported flows across all corridors where both countries reported between 1970-1975.

The most challenging model object for us to calibrate without consistent gross output data is domestic absorption, which is then used to pin down the domestic trade share as well as all other bilateral trade shares. We begin by computing a synthetic version of gross output (GO) that is consistent with our trade flow data. Within the Long-Run WIOD and the Historic IO tables, countries report sectoral gross output and sectoral exports data. Since we are averaging across different time horizons and the Historic IO tables come from different years, we elect to take the ratio of GO/exports and multiply by our total sectoral exports data from UN-COMTRADE to obtain a synthetic measure of GO. We then obtain our final value for sectoral domestic absorption by subtracting our synthetic version of GO by sectoral exports. One issue with this approach is that we only have IO tables for select countries, so we supplement our data by using sectoral value added data from United Nations System of National Accounts (UN-SNA). To obtain our alternative synthetic value of gross output, we begin by averaging the sectoral UN-SNA value added data across 1970-1975 and then divide by our constructed sectoral value-added shares (using regional aggregates) to obtain gross output. We obtain our final value of sectoral domestic absorption by subtracting our synthetic sectoral GO by sectoral exports. In a few cases, domestic absorption is negative, which is likely attributed to the fact that we are using data from various datasets. In these instances, we take the regional sectoral average of GO/exports ratio, multiply the ratio by the countries' sectoral exports to obtain the synthetic gross output, and then finally obtain our final value for domestic absorption by subtracting our synthetic GO by exports. Once we have a value of domestic absorption for all country-sector pairs that is internally consistent with our UN-COMTRADE trade data, we then finally compute bilateral sectoral trade shares.

Because our baseline equilibrium is calibrated to 1970-1975 data, while aid flows span the entire Cold War, we discipline the level of bilateral aid by targeting recipients' observed aid intensities. For each recipient, we compute the ratio of total aid received to recipient GDP within each Cold War decade (1962-1969, 1970-1979, and 1980-1989) and average this ratio across the three decades, so that baseline aid receipts match the decade-level aid intensities documented in Figures 1 and 2. We then multiply the average aid-to-GDP ratio by the recipient's baseline real GDP to obtain its total aid receipts in the model, and allocate this total across donors according to each donor's share of the recipient's cumulative Cold War aid. The donor-side disbursements implied by this procedure are consistent with aid disbursed as a share of donor GDP, reported in Figure 2. For our model's calibration, we use value added data from UN-SNA, aggregated up to the national level and deflate the series using the GDP deflator from FRED, and finally averaged over 1970-1975. We use value added data from UN-SNA since the data source has broad country coverage and to also be consistent with our construction of domestic absorption.

The Long-Run WIOD has historic IO data for: AUS, AUT, BEL, BRA, CAN, CHN, DEU, DNK, ESP, FIN, FRA, GBR, GRC, HKG, IND, IRL, ITA, JPN, KOR, MEX, NLD, PRT, SWE, TWN, USA. For data from the Long-Run

WIOD, we group sectors AtB into Agriculture, sector C into Commodities, sector D into manufacturing, and sectors E, F, G, H, I, J, K, LtQ into services. The countries we use historic IO tables are: ARG, CHL, CIV, COG, CSK, ECU, FJI, GHA, GTM, HTI, ISR, MAR, MDG, PER, PHL, PNG, POL, RWA, SGP, THA, TUR, TZA, URY, YUG, ZMB. We do not report here how we partition each historic IO table into our aggregate sectors since the tables all have different sectoral breakdowns, but to give a general overview, we try as closely as possible to match our sectoral mapping of SITC-1 sectors to our main tradable sectors, while also aligning with how we map the Long-Run WIOD's sectors to our aggregate sectors. We include public/government services within the services aggregate. Below Table B.3 reports summary statistics on our main objects for our calibration.

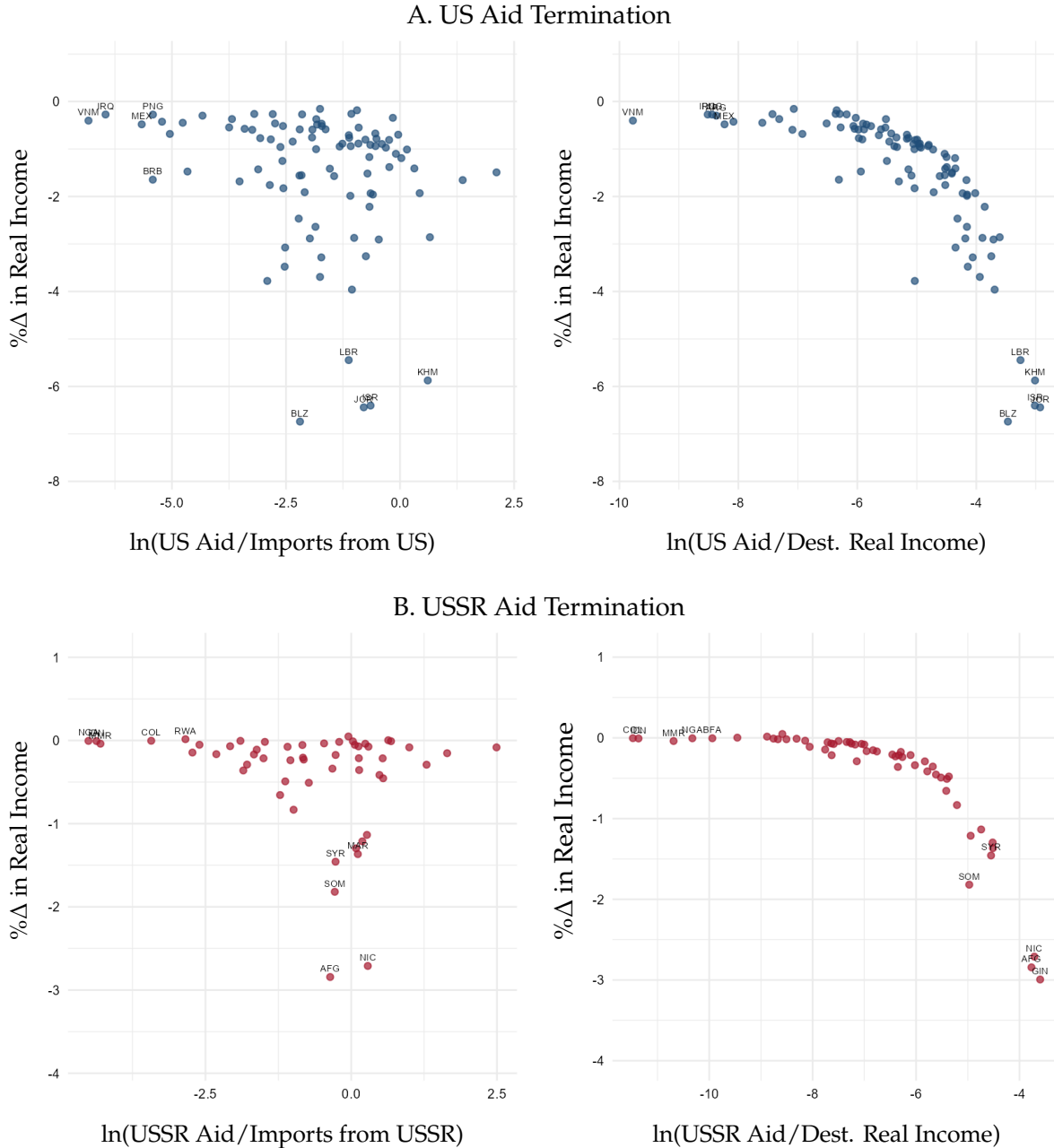
Table B.3: Summary Statistics of Model Calibration

Measure	Mean	Median	Std. Dev.	Min.	Max.
<i>Consumption Shares</i>					
Agriculture	0.1579	0.1429	0.0846	0.0079	0.3492
Commodities	0.0420	0.0350	0.0469	0.0001	0.3919
Manufacturing	0.3390	0.3379	0.0833	0.0784	0.5816
Services	0.4612	0.4430	0.1194	0.1934	0.7734
<i>Equilibrium Domestic Trade Shares</i>					
Agriculture	0.8568	0.9201	0.1881	0.0509	0.9997
Commodities	0.7531	0.8539	0.2572	0.0027	0.9964
Manufacturing	0.6862	0.7210	0.2212	0.0169	0.9961
Services	1.0000	1.0000	0.0000	1.0000	1.0000
<i>Value Added Shares</i>					
Agriculture	0.6741	0.6663	0.1148	0.4366	0.8412
Commodities	0.6079	0.5943	0.0440	0.5495	0.6717
Manufacturing	0.3566	0.3488	0.0430	0.3094	0.4157
Services	0.6298	0.6281	0.0315	0.5595	0.6737
<i>Own IO Shares</i>					
Agriculture	0.3263	0.2610	0.1569	0.0107	0.8579
Commodities	0.1955	0.1708	0.1333	0.0013	0.7095
Manufacturing	0.4221	0.4229	0.1074	0.0047	0.6489
Services	0.5140	0.5314	0.0968	0.2804	0.8194
Num. of Countries			127		

Notes: This table reports the summary statistics of the main model objects used for our analysis. Since we first solve our model to balance trade across countries, we report the equilibrium domestic trade shares.

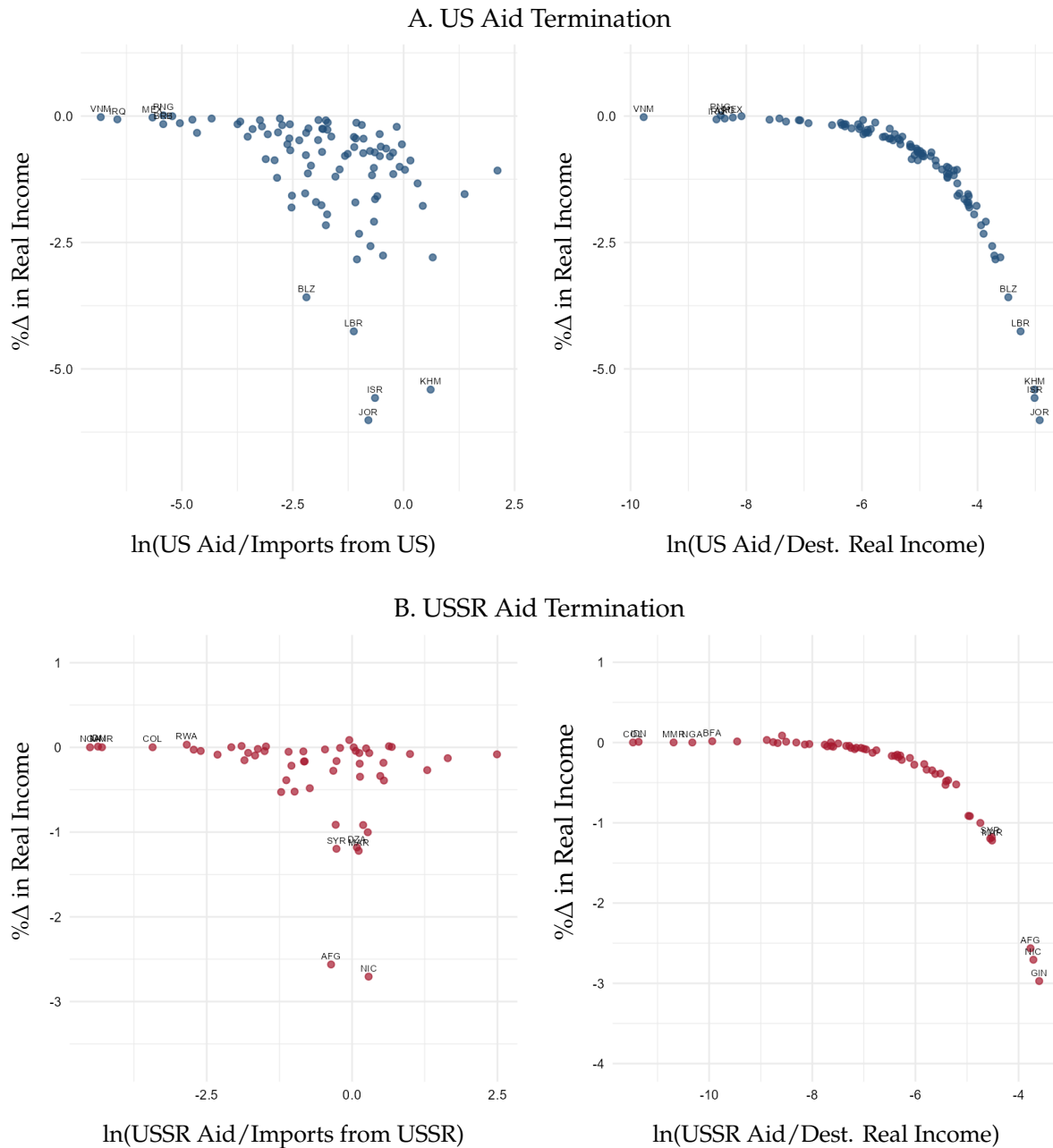
B.5 Additional Figures from Counterfactuals

Figure B.1: Welfare Effects- 86% Reduction in US and USSR Foreign Aid Budget, $\chi = 0.099$



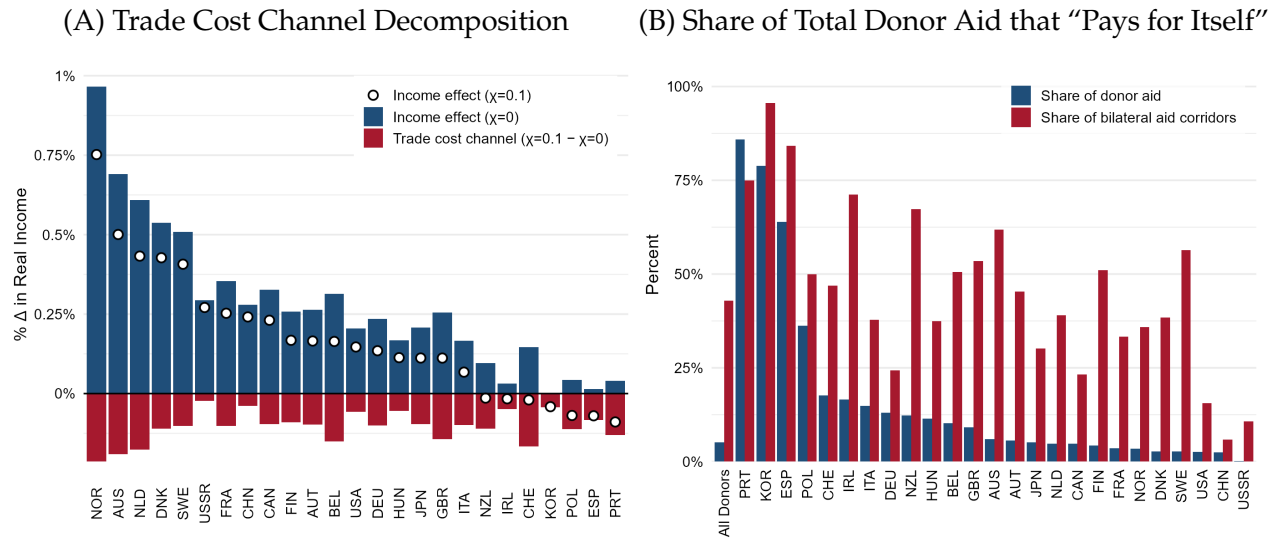
Note: Figure B.1 plots the percent change in real income from steady state in response to an 86% reduction in the US (top row) and USSR (bottom row) aid budget for countries that received foreign aid from the great powers during the Coldwar era, where $\chi=0.099$. The left panels' x-axes are constructed by taking the log of US (USSR) aid disbursed to the destination country divided by the total bilateral imports of the destination country from the US (USSR) during the Coldwar era. The right panels' x-axes are constructed by taking the log of the US (USSR) aid disbursed by the US (USSR) during the Coldwar era and dividing by the steady state real income of the destination country. Saudi Arabia (SAU) and Laos (LAO) are removed from the US figures since they are outliers and skew the presentation of our results. Guinea (GIN) and Mozambique (MOZ) are discarded from the bottom left chart because there is no reported imports flows between these recipient countries and the USSR during the Cold War period.

Figure B.2: Welfare Effects- 86% Reduction in US and USSR Foreign Aid Budget, $\chi = 0$



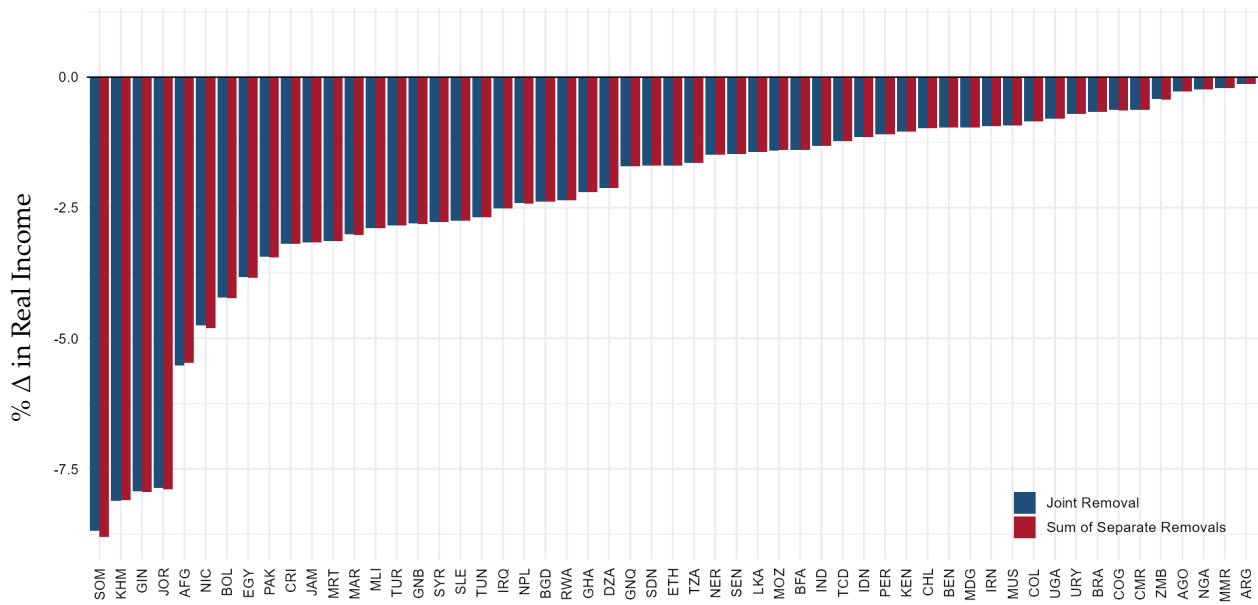
Note: Figure B.2 plots the percent change in real income from steady state in response to an 86% reduction in the US (top row) and USSR (bottom row) aid budget for countries that received foreign aid from the great powers during the Coldwar era, where $\chi=0$. The left panels' x-axes are constructed by taking the log of US (USSR) aid disbursed to the destination country divided by the total bilateral imports of the destination country from the US (USSR) during the Coldwar era. The right panels' x-axes are constructed by taking the log of the US (USSR) aid disbursed by the US (USSR) during the Coldwar era and dividing by the steady state real income of the destination country. Saudi Arabia (SAU) and Laos (LAO) are removed from the US figures since they are outliers and skew the presentation of our results. Guinea (GIN) and Mozambique (MOZ) are discarded from the bottom left chart because there is no reported imports flows between these recipient countries and the USSR during the Cold War period.

Figure B.3: Donor Welfare Decomposition from an 86% Reduction in Aid Budget, $\chi = 0.1$



Note: This figure reports donor welfare effects from an 86% reduction in foreign aid under the uniform aid-to-trade elasticity ($\chi = 0.1$). *Left panel:* For each donor country, the dot represents the change in the donor's own real income when it reduces its foreign aid budget by 86% under $\chi = 0.1$. The blue bars represent the change in the donor's real income under the baseline counterfactual with no aid-to-trade channel ($\chi = 0$). The red bars are constructed as the difference between the dot and the blue bar, capturing how much the trade channel impacts welfare. *Right panel:* A bilateral aid corridor "pays for itself" if removing the donor's aid to that recipient lowers the donor's own real income, meaning the trade-channel welfare gain from the aid exceeds the donor's budget cost. For each donor, we identify the set of pays-for-itself corridors by running the uniform-aid-removal counterfactual one recipient at a time and flagging corridors that lead to a loss in donor real income. The blue bars report the share of the donor's total disbursed aid that flows to pays-for-itself corridors; the red bars report the share of the donor's bilateral aid corridors that pay for themselves. The "All Donors" group pools across all donors. Each counterfactual simulation is run separately, and welfare effects are percentage changes relative to the baseline equilibrium.

Figure B.4: Sum of Separate vs. Joint Aid Removals



Recipient Countries Receiving Aid from both US and USSR

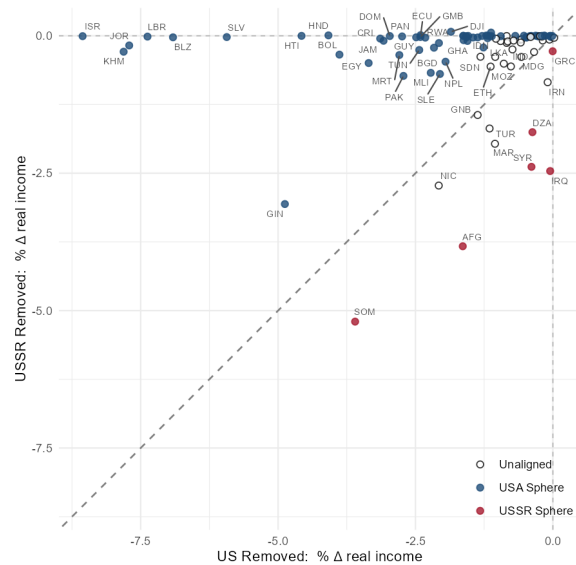
Note: Figure B.3 plots the sum of the percent change in real income from steady state in counterfactuals 1 and 2 versus against the real income losses when we run both shocks simultaneously (run counterfactuals 1 and 2 jointly). Since the bars in the joint removal versus sum of separate removals are nearly identical, this indicates that the aid shocks are quasi-additive.

Table B.4: Welfare Effects — 86% Reduction in US and USSR Foreign Aid Budgets, $\chi = 0.1$

Measure	Mean	Median	Std. Dev.	Min.	Max.
<u>United States</u>					
Steady State US AID/Rec. Income (%):	0.88%	0.46%	1.39%	0.00	11.42%
Steady State Total US AID/US Income (%): 0.180%					
<i>Donor</i>					
% change in US real income: 0.147%					
% change in US real wage: -0.008%					
% change in USSR real income: -0.0013%					
<i>Recipients</i>					
% change in real income:	-1.72%	-0.95%	2.49%	-21.46%	-0.16%
% change in real wage:	-0.88%	-0.51%	1.35%	-11.96%	-0.06%
% change in import share from US:	-17.96%	-17.70%	2.35%	-37.64%	-12.83%
% change in import share from ROW:	0.59%	0.96%	2.89%	-23.65%	7.02%
% change in dom. absorption share:	0.75%	0.38%	1.48%	-0.25%	17.11%
Num. of US Recipients			96		
<u>USSR</u>					
Steady State USSR AID/ Rec. Income (%):	0.35%	0.10%	0.59%	0.00%	2.73%
Steady State Total USSR AID/USSR Income (%): 0.260%					
<i>Donor</i>					
% change in USSR real income: 0.271%					
% change in USSR real wage: 0.043%					
% change in US real income: -0.0005%					
<i>Recipients</i>					
% change in real income:	-0.45%	-0.17%	0.71%	-2.99%	0.05%
% change in real wage:	-0.18%	-0.08%	0.29%	-1.29%	0.06%
% change in import share from USSR:	-20.33%	-20.15%	1.01%	-26.44%	-15.21%
% change in import share from ROW:	-0.23%	0.05%	0.93%	-6.15%	0.85%
% change in dom. absorption share:	0.19%	0.04%	0.58%	-0.27%	5.88%
Num. of USSR Recipients			56		

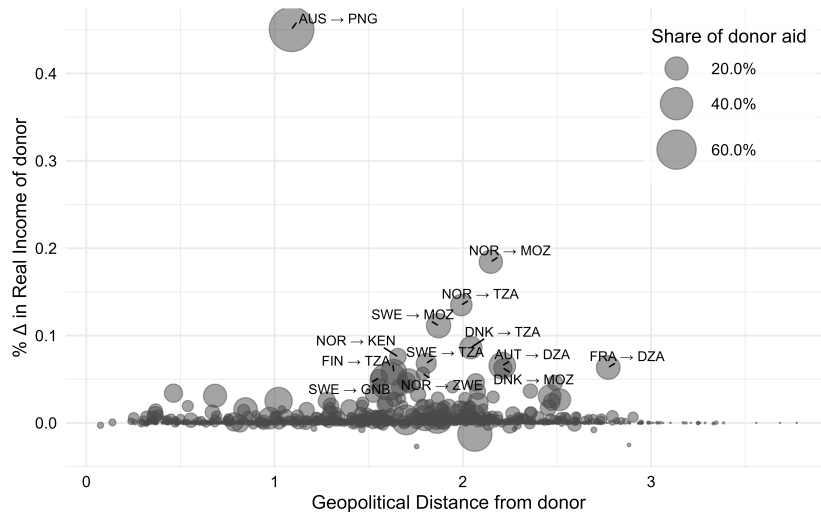
Notes: This table reports the welfare effects in response to a 86% reduction in the US (96 recipients) and USSR (56 recipients) foreign aid budgets under a common aid-to-trade elasticity of $\chi = 0.1$. Trade share summary statistics are constructed across sectors.

Figure B.5: Welfare Losses from US vs. USSR Aid Removal



Note: Figure 4 plots the real income losses under counterfactual 1 (x-axis) and 2 (y-axis) for countries that received aid during the Cold War era from either great power. We color countries in blue if they are in the US sphere (above the 45 degree line), red if countries are in the Soviet sphere (below the 45 degree line), and black if they are unaligned (the absolute value in the difference of losses across counterfactuals 1 and 2 is less than 1 percent and countries received aid from both the US and USSR). We drop Laos (LAO) since it is an outlier and skews the presentation of the results.

Figure B.6: Donor Welfare Gains from Bilateral Aid Removal Across Other Donor Countries



Note: Each point is a recipient country. The horizontal axis is the log of the average absolute value of ideological distance (UN General Assembly ideal-point difference, 1962–1989) between the donor and the recipient. The vertical axis is the percent change in donor real income when reducing bilateral aid disbursed from that donor by 86% to that single recipient, computed using the bilateral aid-to-trade elasticities χ_{od} and pooled across 21 donor countries. For each donor and each of its recipients, we run a separate counterfactual that cuts the donor’s bilateral aid to that recipient by 86%, holding all other aid flows fixed. Each point is one donor-recipient pair. The size of each dot is proportional to the recipient’s share of the donor’s total Cold War aid disbursements. We label pairs with a donor welfare gain above 0.05% to identify the underlying corridor. We exclude Switzerland and Korea because they only became full UN members after the sample period.

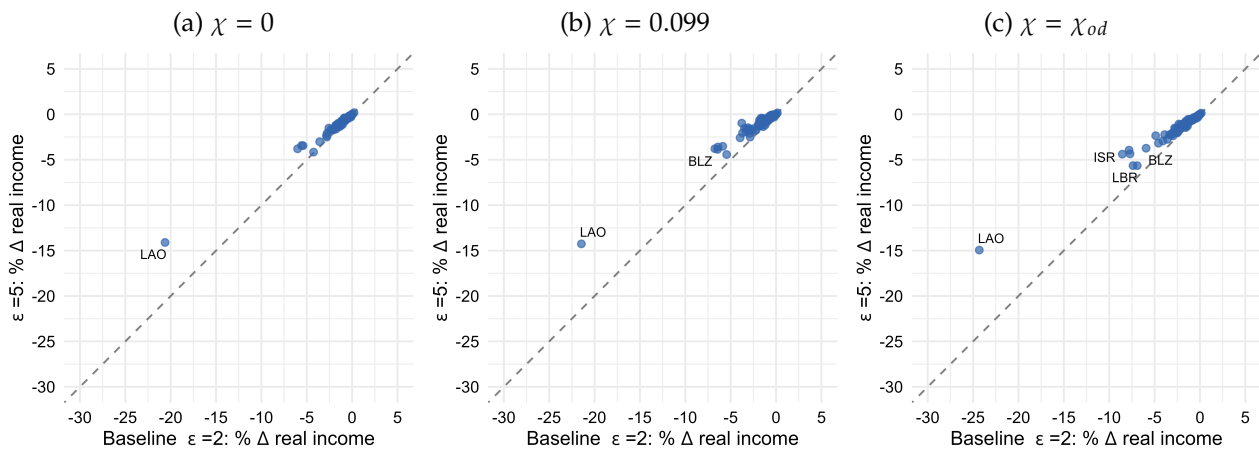
B.6 Alternative Trade Elasticity: $\varepsilon = 5$

Across all six panels, the donor itself gains positive welfare from cutting 86% of its own aid, and this result is preserved under both elasticity assumptions; the magnitude of the gain, however, responds asymmetrically to ε . The United States is essentially invariant—across cf1 ($\chi = 0$), cf2 ($\chi = 0.099$), and cf7 (bilateral χ), U.S. welfare shifts by at most 0.024 percentage points when ε rises from 2 to 5 (from +0.205 to +0.180, +0.147 to +0.158, and +0.150 to +0.129)—so if the United States were plotted, it would sit essentially on the 45° line in each scatter. The USSR is meaningfully more sensitive: its donor gain falls by roughly 35–40 percent under $\varepsilon = 5$, from +0.294 to +0.176 ($\chi = 0$), +0.271 to +0.168 ($\chi = 0.099$), and +0.202 to +0.133 (bilateral), placing it well below the 45° line.

Among the countries whose aid was actually cut—96 U.S. recipients and 56 USSR recipients—welfare losses are uniformly attenuated under $\varepsilon = 5$. In the U.S. panels, mean recipient real income falls by -1.22% , -1.72% , and -1.95% under $\varepsilon = 2$ versus -0.91% , -1.02% , and -1.25% under $\varepsilon = 5$ in cf1, cf2, and cf7, with the vast majority of recipients attenuated (86/9, 95/1, and 92/3 attenuations to amplifications). The pattern is the same for USSR recipients, where mean losses move from -0.37% , -0.45% , and -0.67% to -0.28% , -0.30% , and -0.40% in cf3, cf4, and cf8 (39/5, 49/4, and 51/5 attenuated/amplified). The biggest base-case losers absorb most of the attenuation in absolute terms—LAO's loss falls from -24.3% to -14.9% in cf7, SOM's from -5.2% to -2.3% in cf8, with similar contractions for JOR, ISR, KHM on the U.S. side and AFG, GIN, NIC, IRQ on the USSR side—placing nearly all recipient points above the 45° line.

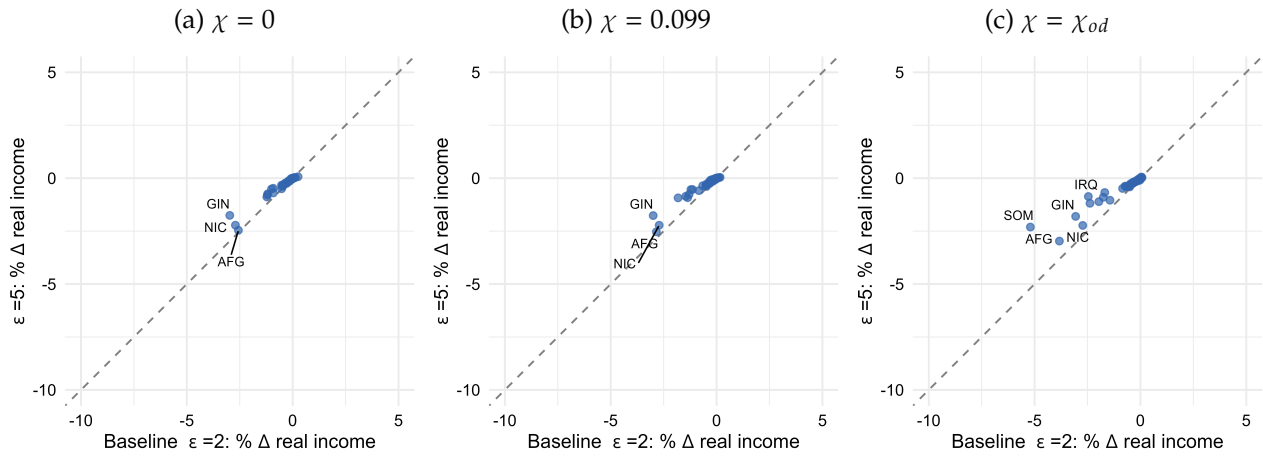
Both the smaller donor gains and the smaller recipient losses under $\varepsilon = 5$ reflect the same canonical Armington force: with welfare scaling as $1/\varepsilon$ in trade reallocations, the market-access benefit the donor retains and the consumption-variety loss recipients absorb are mechanically dampened. The qualitative conclusions—donors gain, recipients lose, and the U.S.–USSR asymmetry favors the U.S.—are robust to ε ; quantitatively, the higher-elasticity world compresses gains and losses on both sides and narrows the U.S.–USSR gap in donor payoffs.

Figure B.7: Welfare Losses from 86% Reduction in US Aid: Baseline $\varepsilon = 2$ vs. $\varepsilon = 5$



Note: This figure plots the real income losses when the US cuts aid across all countries by 86% under the baseline ($\varepsilon = 2$, x-axis) against an alternative larger trade elasticity of 5 ($\varepsilon = 5$, y-axis) across three aid-to-trade elasticities. Points above the 45-degree line indicate larger losses under the lower elasticity.

Figure B.8: Welfare Losses from 86% Reduction in USSR Aid: Baseline $\varepsilon = 2$ vs. $\varepsilon = 5$



Note: This figure plots the real income losses when the USSR cuts aid across all countries by 86% under the baseline ($\varepsilon = 2$, x-axis) against an alternative larger trade elasticity of 5 ($\varepsilon = 5$, y-axis) across three aid-to-trade elasticities. Points above the 45-degree line indicate larger losses under the lower elasticity.