COMMERCIAL IMPERIALISM? POLITICAL INFLUENCE AND TRADE DURING
THE COLD WAR

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ABSTRACT

We exploit the recent declassification of CIA documents and examine whether there is evidence of US power being used to influence countries' decisions regarding international trade. We measure US influence using a newly constructed annual panel of CIA interventions aimed at installing and supporting leaders during the Cold War. Our presumption is that the US had greater influence over foreign leaders that were installed and backed by the CIA. We show that following CIA interventions there was an increase in foreign-country imports from the US, but there was no similar increase in foreign-country exports to the US. Further, the increase in US exports was concentrated in industries in which the US had a comparative disadvantage in producing, not a comparative advantage. This is consistent with US influence being used to create a larger foreign market for American products. Our analysis is able to rule out decreased bilateral trade costs, changing political ideology, and an increased supply of US loans and grants as explanations for the increase in US exports to the intervened country. We provide evidence that the increase in US exports arose through direct purchases of US products by foreign governments.

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1. Introduction

The possibility that political influence and power play an important role in international trade has long been recognized.[1] However, despite its importance, empirical evidence identifying the effects of influence on trade remains rare.[2] In this study, we provide evidence that during the Cold War, US influence over leaders installed and supported by the CIA was used to create a larger foreign market for US products.

Our analysis relies on the use of recently declassified CIA documents to generate a time- and country-specific measure of US political influence. We identify instances where US covert services engaged in interventions to install and/or support political leaders in other countries. Our presumption is that the US had greater influence over foreign leaders that were installed and supported by the CIA. Examining the relationship between US influence and annual bilateral trade, we find that US influence raised the share of total imports that the intervened country purchased from the US. We find no change in the total value of goods imported from the world, i.e. of trade creation. Instead, interventions caused a shift away from the purchase of products from non-US foreign countries and towards products from the US. Despite the robust finding of increased imports of goods from the US, intervened-country exports to the US did not increase. This finding is consistent with US political influence being used to create a larger market for US products in the intervened country.

As a further test of the political influence hypothesis, we examine differences in the effect of interventions on autocratic and democratic regimes. Existing theory and evidence (e.g., Grossman and Helpman, 1994, Mitra, Thomakos, and Ulubasoglu, 2002) suggests that US influence should have been greater in autocratic regimes, where leaders are less accountable to the general population and have greater freedom to choose policies. We find that, consistent with the political influence hypothesis, CIA interventions only increased the share of imports from the US in autocratic regimes, and had no effect in democratic regimes.

Although our baseline difference-in-difference estimating equations control for country-specific time-invariant factors (with country fixed effects) and time-specific country-invariant factors (with

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[1] See for example Hirschman (1945), Galtung (1971) and Antràs and Padro-i-Miquel (2008). As well, the recent book by Findlay and O'Rourke (2007), *Power and Plenty*, uses historical evidence to show that power, influence, and coercion are central to understanding the history of international trade. Also from a historical perspective, Mitchener and Weidenmier (2008) document the important role that colonial empires played in international trade during the late 19th and early 20th centuries, and Head, Mayer, and Ries (2010) examine how trade evolved following independence.

[2] One exception is Yeats (1990), which we discuss below.

time-period fixed effects), there is still concern that omitted time- and country-varying factors may bias the estimates. A primary concern is that interventions may have been more likely following a temporary decline in imports from the US. This form of selection will result in inflated estimates of the effect of interventions on imports from the US. We undertake a number of strategies to control for this. We include controls for pre-trends in the dependent variable and for pre-intervention fixed effects. We also control for observable factors that are likely determinants of pre-intervention dips in imports and correlated with the onset of CIA interventions. Specifically, we control for indicator variables for the existence of US sanctions placed against the foreign country and for the existence of conflict between the country and the US. The results remain robust to these measures taken to address the selection of CIA interventions.

Even taking the correlations as causal, there are many alternative interpretations for the estimated effects. In addition to the political influence explanation, there are three leading alternative interpretations. The first is that interventions decreased the bilateral trading costs between the US and the intervened country, and this caused an asymmetric increase in trade flows. The second is that the newly installed and/or supported leaders were ideologically more aligned with Western capitalist countries. This caused the foreign country to import more from all Western countries, not just the US. The third explanation is that following an intervention, US foreign grants and loans increased, and this caused purchases of US products to rise.

We test for the trade costs explanation by examining the effects of interventions on imports from the US in different industries. We show that the increase in imports from the US was greatest for goods in which the US had a relative comparative *dis*advantage in producing. That is, following interventions, the new goods that were shipped from the US to the intervened country were products that US firms were relatively uncompetitive in producing. This pattern is inconsistent with decreasing trade costs being the source of increased imports from the US. Increased integration between two countries should cause each country to specialize more in their comparative advantage products and export these to the foreign country. Standard models of international trade do not predict greater specialization in comparative disadvantage industries. The finding is consistent with US influence being used to create a larger market for US products that producers would otherwise have difficulty selling internationally.

We then turn to the political ideology explanation. The increase in imports from the US may have arisen because the newly installed leaders were more pro-Western and pro-capitalist and

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therefore they imported more from all Western countries, including the US. To test this explanation, we examine the effects of interventions on imports from all countries, not just from the US. We find no evidence that US interventions caused an increase in imports from countries that were ideologically aligned with the US.

Last, we turn to the increased US loans and grants explanation. We test directly whether US economic aid, military aid, food aid, or Export-Import Bank loans increased following an intervention. We find that interventions were followed by a significant increase in economic aid, food aid, and Export-Import Bank loans. However, we also find that these only account for approximately 20% of the total effect of interventions on increased imports from the US.

Having examined alternative explanations, we then turn to mechanisms. We provide evidence that the increased imports of US products arose through direct government purchases. We find that the effect of interventions on the purchase of US products is increasing in the government's share of GDP. For the countries in the sample with the smallest government share, we find that the effect of interventions on US imports is close to zero. This suggests that essentially all of the effect can be explained by government purchases of US products. As well, for a typical country, government purchases of tradeables is large enough to account for the estimated increase in trade following an intervention. We also find that interventions immediately led to a surge in imports. This provides further evidence for government purchases, which could have responded very quickly to US influence. We also check for additional channels, such as tariff changes or foreign direct investment, but find no evidence that these play an important role.

Our use of CIA interventions to measure changes in US political influence links our study to a small literature that examines other aspects of CIA activities. Most closely related is Berger, Corvalan, Easterly, and Satyanath (2010), who use lower frequency data at five year intervals to examine the effect of interventions on democracy. They find that CIA and KGB interventions have a negative and long-lasting effect on subsequent democracy, a result that dovetails nicely with our finding that US influence was strongest in autocratic regimes. Following an intervention, the US would have had little incentive to promote democracy, since this would have made influence less effective.

Dube, Kaplan, and Naidu (2008) examine the stock prices of US companies in Iran, Guatemala, Cuba, and Chile before and after the CIA-authorized plans for covert coups. They find that the stock returns of companies that were exposed in the foreign-country and well-connected to the

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CIA increased immediately after the authorizations, which provides evidence that top-secret plans were leaked to investors. The focus of their paper complements our analysis here. Since Dube *et al.* (2008) are interested in the effects of top-secret information flows (and not of the interventions themselves), they do not include the period of the actual intervention in their analysis. In contrast, our analysis looks at the consequences of the interventions being successfully carried out.

Our analysis also extends previous theoretical analyses of the interplay between political influence and international trade. The hypothesis that influence and power plays a role in international trade dates back to at least Hirschman (1945). More recently, the theoretical contribution of Antràs and Padro-i-Miquel (2008) examines the welfare impacts when political influence can affect trade and trade policies. Our findings also complement the few existing studies that attempt to empirically estimate the effects of political influence on trade flows. An example is Alexander Yeats' (1990) analysis, showing that among African countries, former colonies pay a 20 to 30% premium on the price of imported steel when importing from their former colonizer.[3]

The next section of the paper describes our data and their sources. Section 3 reports our baseline estimating equations and results. We document that CIA interventions were followed by increased imports of US goods, no increase in exports to the US, and no increase in total trade. We further show that the increase in imports from the US is found among autocracies only. Sections 4 and 5 then turn to the issues of causality and robustness. In section 6, we test for alternative explanations. We show that the findings cannot be explained by decreased trade costs, changing political ideology, or an increase in US loans and grants. In section 7 we turn to specific mechanisms and provide evidence that government purchases play a central role. Section 8 concludes.

2. CIA Intervention Data

As a source of variation in US influence over a country, we rely on historic episodes where the CIA intervened in a foreign country to either install a new leader or to provide support to an existing leader to help maintain the power of the regime. To identify these episodes, we rely on a number of studies examining the history of the Cold War, much of which is based on recently declassified documents. Using these sources, we have constructed an annual data set of interventions un-

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[3]Also related are existing studies that provide evidence for power and influence playing a role in the international arena. For example, Dreher and Jensen (2007) show that IMF conditionality is correlated with whether countries vote in-line with the US in the UN General Assembly. Similarly, Kilby (2009) shows that the World Bank's structural adjustment conditions are less stringent for countries whose voting in the UN is more aligned with the US. Kuziemko and Werker (2006) show that when countries have a seat on the UN security council they receive more foreign aid from the US.

dertaken by the CIA. We also construct analogous measures for Soviet KGB interventions, which we use as a control in the analysis. The most heavily used sources include Blum (2004), Weiner (2007), Westad (2005), Yergin (1991), and the Library of Congress' *Country Studies Series* for the CIA interventions, and Andrew and Mitrokhin (2000, 2005) for KGB interventions. Full details of the data construction and sources are reported in a data appendix that will be posted on the authors' web page upon publication.

Our baseline measure of CIA interventions is an indicator variable that equals one, in a country and year, if the CIA either installed a foreign leader or provided covert support for the regime once in power. We label this variable *US influence*$_{t,c}$. The activities used by the CIA to install and help maintain the power of specific regimes are many and varied. They include the creation and dissemination of (often false) propaganda, usually through radio, television, newspapers and pamphlets. They also included covert political operations, which typically consisted of the provision of funds and expertise for political campaigns. More invasive tactics included the destruction of physical infrastructure and capital, as well as covert paramilitary operations, that included the supply of arms and military equipment, direct involvement in insurgency and counterinsurgency operations, and the coordination of coups and assassinations (Johnson, 1989, 1992).

There are many instances in which the CIA set out to remove an existing leader and install a new leader in power. The CIA-organized coups in Iran in 1953, Guatemala in 1954, and Chile in 1973 are the most well-known examples of such cases. For these interventions, the indicator variable *US influence*$_{t,c}$ takes on the value of one. In other cases, the CIA began to provide support for leaders currently in power. In these cases, the CIA did not engage in activities to install the leader into power, but once in power, at some point, the CIA began to engage in activities to help maintain the power of the regime. Typically, these were covert counter-insurgency operations undertaken by the CIA. We code as one cases in which the leader maintains power with the help of the CIA. A good example of this is the CIA's involvement in Haiti. Paul Magloire, Papa Doc Duvalier, and Baby Doc Duvalier, were not installed by the US, but they were reliant on CIA support to help maintain their power. As a robustness check, we also create a second more narrowly defined measure that codes as zero interventions where the CIA engaged in activities that propped-up a leader it did not originally install. As we show in section 5, the results are robust to using this alternative measure.

Table 1: An example: The history of CIA interventions in Chile.

isocode	year	US influence	Key Historical Events
…	…	...	
CHL	1963	0	
CHL	1964	1	Election; CIA propoganda, funding, etc; Frei wins
CHL	1965	1	Continued support for right wing groups, etc.
CHL	1966	1	…
CHL	1967	1	…
CHL	1968	1	…
CHL	1969	1	…
CHL	1970	1	Salvador Allende wins election
CHL	1971	0	
CHL	1972	0	
CHL	1973	1	CIA planned coup; head of military, Pinochet takes power
CHL	1974	1	…
CHL	1975	1	…
CHL	1976	1	…
CHL	1977	1	…
CHL	1978	1	…
CHL	1979	1	…
CHL	1980	1	…
CHL	1981	1	…
CHL	1982	1	…
CHL	1983	1	…
CHL	1984	1	…
CHL	1985	1	…
CHL	1986	1	…
CHL	1987	1	…
CHL	1988	1	Plebiscite, democratic elections; Pinochet steps down
CHL	1989	0	
…	…	…	

To illustrate the construction of our variable, consider the history of the CIA in Chile. The sequence of CIA interventions is reported in table 1. During the 1964 Chilean elections, the CIA provided covert funding and support for the Christian Democratic Party candidate Eduardo Frei Montalvo. Eduardo Frei won the presidential election in 1964, and continued to receive CIA support while he was in power. In the 1970 election, Salvador Allende, a candidate of a coalition of leftist parties, was elected, and remained in power until the CIA orchestrated coup of 1973. After the coup, Augusto Pinochet took power and was backed by the CIA. Since $US\ influence_{t,c}$ equals one in all periods in which a leader is installed or supported by the CIA, for Chile the variable equals one from 1964 to 1970 when Eduardo Frei was in power. It equals zero in 1971 and 1972, the years when Salvador Allende was in office (since he was not supported or installed by the CIA). It then equals one from 1973 to 1988, the years when Augusto Pinochet, who was installed and

supported by the CIA, was in power.[4]

Our sample of 156 countries includes all countries except the United States and countries that were part of the former Soviet Union.[5] We also exclude from the sample countries whose borders change significantly during the period. This includes Bangladesh, Pakistan, Germany, Vietnam, and Yemen. Among the 156 countries, 50 were subject to at least one CIA intervention between 1947 and 1989.[6]

Figure 1 shows the total number of interventions among all countries in each year between 1947 and 1989. That is, the figure reports the number of countries for which $US\,influence_{t,c} = 1$ in each year. The figure illustrates a number of patterns present in the data. The first is that interventions were common. In an average year between 1947 and 1989, 24 countries were experiencing a CIA intervention. Among the group of countries that experienced an intervention between 1947 and 1989, the typical country experienced 21 years of interventions.

The figure also shows that the total number of interventions increased after 1947, peaked around the 1970s, and then fell until 1989. This is consistent with the history of the CIA. Between 1953 and 1961 covert action increased significantly, with attention focused on political action, particularly support to political figures and political parties. The 1960s witnessed a continued presence of CIA covert activities, although there was a shift towards greater paramilitary activities. The period from 1964 to 1967 is known to have been the high point of CIA covert activities. The post-1967 slow-down was brought about, in part, by the 1967 *Ramparts* magazine article that exposed the CIA's funding of national student groups and other private organizations (Leary, 1984). Consistent with this history, figure 1 shows a leveling off of convert interventions in the late 1960s until the mid-1970s, after which the number falls. The lagged decline after 1967 results from the persistence of interventions. Typically, newly installed or newly supported leaders remained in power, and continued to be supported by the CIA, for their remaining tenure.

An alternative to looking at interventions over time, is to examine the pattern of interventions across countries. The map shown in figure 2 reports, for each country, the fraction of years

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[4]The onset and offset years of CIA intervention episodes could potentially be coded as zero or one, since these are transition years. We have chosen to code these as one throughout. As we discuss in section 5, none of our results depend on the decision.

[5]Our panel is unbalanced, since countries do not enter the sample until they gain independence. In 1947, the sample includes 66 countries. In 1989, the number is 156.

[6]Similarly, 23 countries were subject to at least one KGB intervention. KGB interventions are defined in the analogous manner as for CIA interventions.
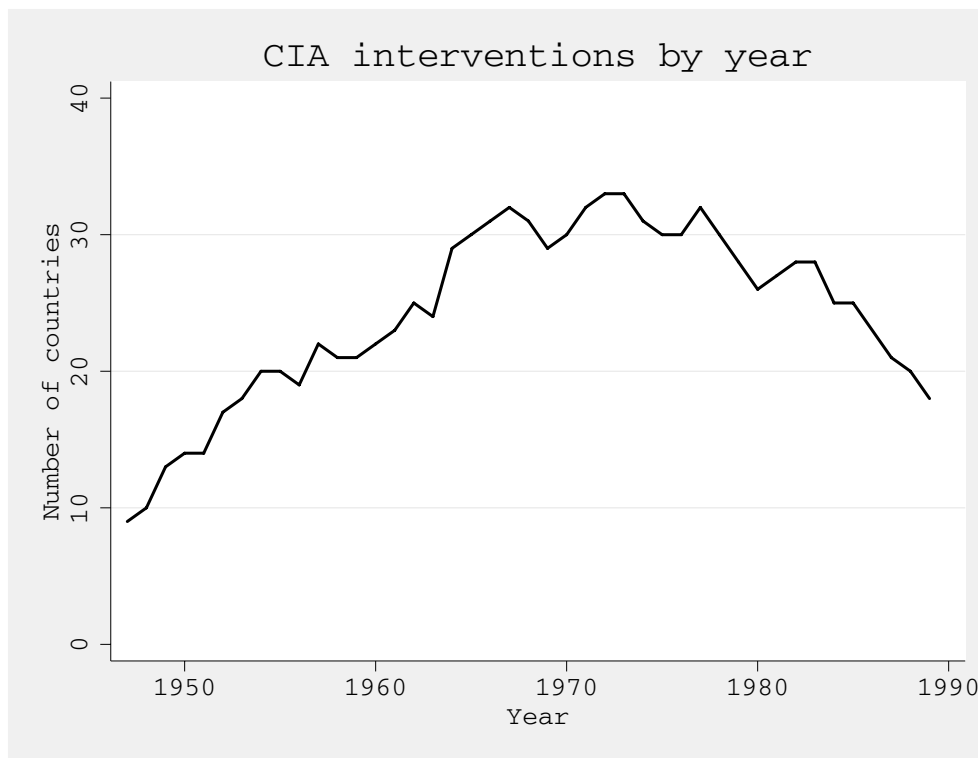
Figure 1: Total number of countries experiencing a successful CIA intervention in each year.

between 1947 and 1989 for which there was a CIA intervention.[7] The cross-country distribution of interventions is consistent with the descriptive history of the CIA during the Cold War era. The CIA intervened most heavily in Latin America, but also in a few European countries - namely, Italy and Greece - as well as in a number of countries in Africa, Asia, and the Middle East.[8]

The map also helps to illustrate exactly what our intervention variable captures and what it does not capture. For example, our intervention variable is zero for Angola throughout the period. This is the case despite the heavy and well-known involvement of the CIA in Angola's civil war (see e.g. Weissman, 1979). The CIA provided covert support for the anticommunist group Union for the Total Independence of Angola (UNITA). However, the group was never successful at gaining power from the Movimento Popular de Libertação de Angola (MPLA). Because the US-backed UNITA forces never gained control of the government, our variable is not coded as one for Angola, despite clear intervention by the CIA in the country. The example illustrates that our intervention measure is not a measure of all CIA meddling or activities in a country. Rather, it is an indicator of

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[7]For countries that did not gain independence until after 1947, we report the fraction of years from independence to 1989 for which there was a CIA intervention.

[8]As shown in the map, Greenland and French Guiana are not in our sample. This is because they are not independent countries.

Figure 2: Map showing the fraction of years between 1947 and 1989 with a CIA intervention.

CIA activities that were successful at either installing a new leader or in maintaining the power of an existing leader.
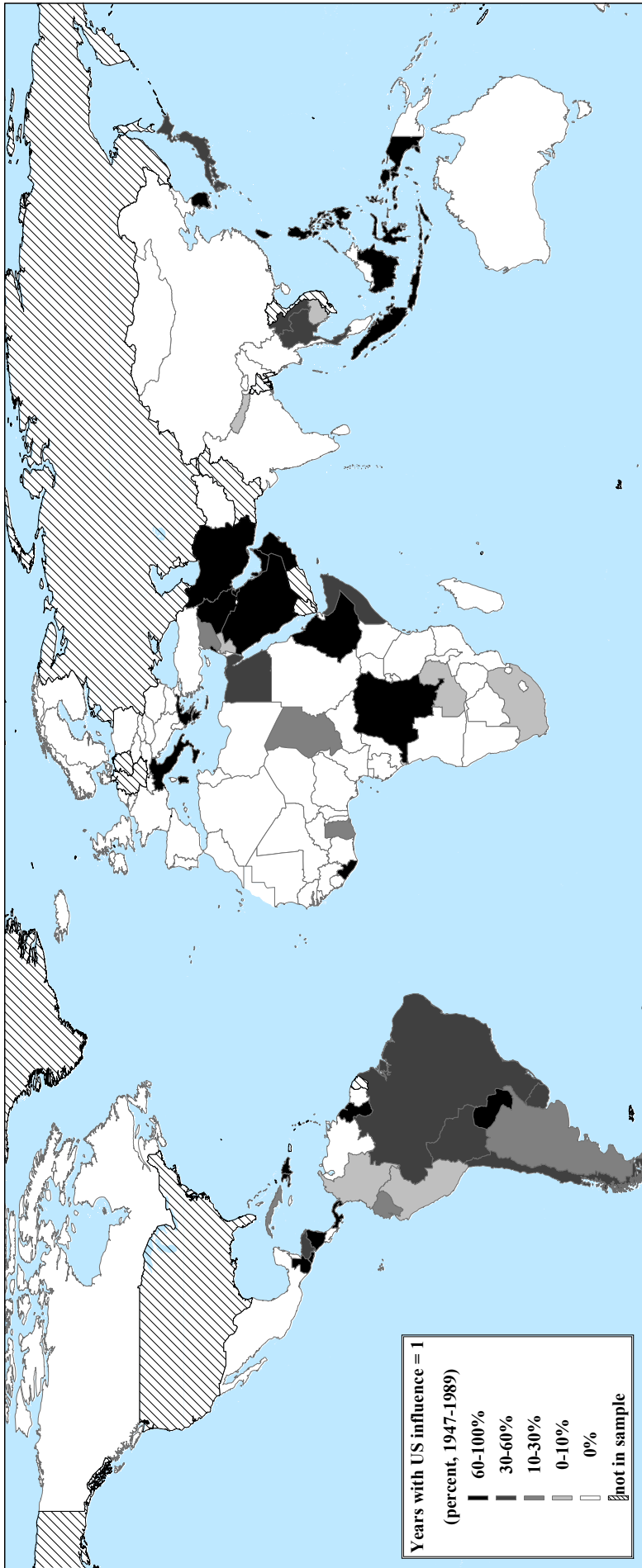
Using CIA covert activities to measure changes in US influence over foreign countries has a number of particularly attractive characteristics. First, because these interventions were covert at the time, they were largely unaffected by US public opinion, and from the opinion of other countries in the international arena. This reduces one source of endogeneity for our measure. Further, because the interventions affect the leader in power, they are significant and plausibly have a significant impact on US influence over the regime.

Our measure of covert CIA interventions that install and/or support foreign regimes can be interpreted as a measure of US "client states" or "puppet leaders", which are well-established subjects of analysis in the qualitative political science literature (e.g., Sylvan and Majeski, 2009). Therefore, an alternative interpretation of our analysis is of the effects of US influence on client states and puppet leaders on bilateral trade flows.

3. Baseline Results

A. *Estimating Equations*

We now turn to our baseline estimates of the economic consequences of US interventions. Our first estimating equation looks at the effects of US interventions on the share of total imports from the US:

$$\ln \frac{m_{t,c}^{US}}{m_{t,c}^{W}} = \alpha_t + \alpha_c + \beta US\,influence_{t,c} + \sum_{n=1}^{N} \gamma_n \ln \frac{m_{t-n,c}^{US}}{m_{t-n,c}^{W}} + X_{t,c}\Gamma + \varepsilon_{t,c} \tag{1}$$

$m_{t,c}^{US}$ denotes country c's imports from the US in year t, $m_{t,c}^{W}$ denotes country c's aggregate imports from all countries.[9] Since the time period being considered is the Cold War, t ranges from 1947 to 1989.

The dependent variable, $\ln \frac{m_{t,c}^{US}}{m_{t,c}^{W}}$, is the natural log of the share of country c's total imports from the US in year t. As we show in Appendix A, the appropriate dependent variable for the theoretically derived estimating equation is the natural log of the import share, rather than the import share itself.[10]

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[9]World imports include imports from all countries, even those that are not observations in the estimating equation e.g., Soviet Union, United States, and countries that experienced significant border changes.

[10]One consequence of this is that a small number of observations, with zero trade flows, are dropped from the sample in our baseline specifications. As we discuss in section 5, alternative estimation techniques that do not omit the zero-trade observations provide qualitatively identical results.

The coefficient of interest is β, the estimated impact of CIA interventions on the log share of imports that are from the US. Because equation (1) includes year fixed effects and country fixed effects, α_t and α_c, our estimating equation takes the form of a difference-in-difference estimation. Because our sample only includes US trade shares (and not a country's trade shares with other countries), country fixed effects are equivalent to country-pair fixed effects. They therefore capture many of the standard country-pair specific measures that are standard in bilateral gravity regressions, such as the geographic distance between trading partners, a common language, a common legal/colonial origins, contiguous borders, etc.

The equation also controls for lags of the dependent variable.[11] This is done to capture the persistence of past trade, which may occur because of the existence of fixed trade costs as in Roberts and Tybout (1997) or through temporally-persistant determinants of trade. Because equation (1) includes time-period fixed effects, country fixed effects, as well as lags of the dependent variable, it suffers from the well-known Nickell (1981) bias. In section 5A, we show that our results are not affected by the bias. This is not surprising given that the Nickell bias converges to zero as the time dimension of the panel increases. Since we have a large number of time periods in our panel (43 years), the actual bias can be shown to be small.

The vector $X_{t,c}$ includes a set of controls that vary across countries and years. We control for Soviet/KGB interventions, measured in the same manner as CIA interventions. We also include two indicator variables that capture a country's openness to foreign trade, since trade openness may affect trade with the US differentially relative to other countries of the world. The first is an indicator variable that equals one if country c is a member of GATT in year t. The second is an indicator variable that equals one if country c had signed the New York Convention by t.[12] We also include controls for the natural log of per capita income, and the natural log of aggregate income. These controls, which are typically included in gravity regressions, may influence the share of imports from the US through scale and/or income effects. They would also have an effect if, for example, the US trades disproportionately more with higher income or larger countries. Given the recent studies by Jones and Olken (2005, 2009) and Duflo and Chattopadhyay (2004) that show that leaders matter, we are also careful to control for leadership turnover and leader tenure. We control

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[11]We choose the number of lags to include by continuing to add lags until they are no longer significant.

[12]The New York Convention is the common name for the 1958 *Convention on the Recognition and Enforcement of Foreign Arbitral Awards*. The agreement ensures that among signatory countries, in cases involving parties from two countries, court rulings and arbitration awards made in one country must be recognized in the other country.

for an indicator variable that equals one if there is a change in leadership, as well as a measure of the tenure of the current leader. Our final control variable is motivated by the findings from Berger *et al.* (2010), showing that interventions had an adverse effect on democracy. We control for the combined Polity measure from the Polity IV Database, which is a variable that takes on integer values ranging from -10 (strong autocracy) to $+10$ (strong democracy). We include fixed effects, one for each value of the polity measure.

The unit of observation in equation (1) is a country and year. An alternative estimation strategy is to estimate a standard bilateral gravity model, where the unit of observation is a directional country-pair in a year, and the dependent variable is the volume of imports from one country to another country. One could then examine whether a US intervention increases the flow of imports from the US to the intervened country. Our equation (1) is constructed to capture this same variation, but the advantage of equation (1) is that it does not include a large number of observations in which the US is not a trading partner. This alternative strategy, even with clustered standard errors, runs the risk of producing downward-biased standard errors (see Bertrand, Duflo, and Mullainathan, 2004). Our estimation strategy aggregates all trade between non-US trade partners to be part of aggregate World trade, which we use to normalize trade flows with the US. The result is that we only have $N \times T$ observations rather than $N(N-1)T$ observations in our sample (where N is the number of countries and T is the number of time periods). As we show in section 5, our results are qualitatively identical if we estimate a bilateral gravity model with all country-pairs.

Our analysis also examines the effect of CIA interventions on the share of the foreign-country's exports that are shipped to the US:

$$\ln \frac{x_{t,c}^{US}}{x_{t,c}^{W}} = \alpha_t + \alpha_c + \beta US\,influence_{t,c} + \sum_{n=1}^{N} \gamma_n \ln \frac{x_{t-n,c}^{US}}{x_{t-n,c}^{W}} + X_{t,c}\Gamma + \varepsilon_{t,c} \qquad (2)$$

where $x_{t,c}^{US}$ indicates exports from country c to the US in year t, and $x_{t,c}^{W}$ denotes exports from country c to all countries in the world in year t. The set of control variables are identical to equation (1).

B. *Estimation Results*

Our core findings can be illustrated if we return to the example of Chile. Figure 3 reports two graphs. The top graph reports the natural log of the share of Chilean imports that are from the
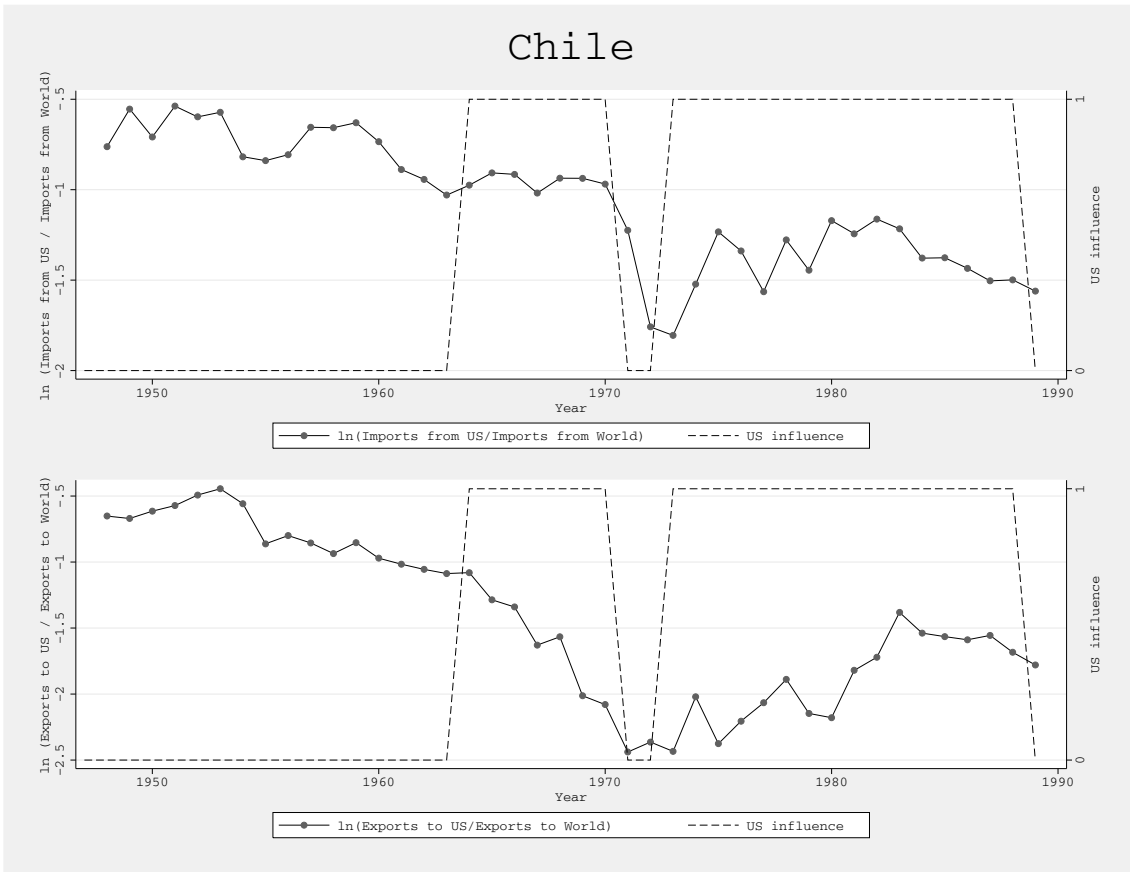
Figure 3: CIA interventions and trade flows for Chile.

US, $\ln \frac{m_{t,c}^{US}}{m_{t,c}^{W}}$, and the CIA intervention variable, *US influence*, annually between 1947 and 1989. The bottom graph reports the natural log of the share of Chilean exports shipped to the US, $\ln \frac{x_{t,c}^{US}}{x_{t,c}^{W}}$, and *US influence*. In the top graph one can see that the US import share stayed stable from 1964 to 1970, when Eduardo Frei was in power and was being supported by the CIA (*US influence* = 1). The bottom graph shows that, unlike imports, exports to the US declined steadily during this period. After 1970, when Salvador Allende took power (*US influence* = 0), imports fell dramatically (top graph), while there is no dramatic change in exports (bottom graph). After Pinochet took power (*US influence* = 1), one observes a larger and more immediate increase for imports than for exports. Overall, figure 3 illustrates that imports from the US tend to be more responsive to CIA interventions than exports to the US.

We now document this pattern more formally by estimating equations (1) and (2). Column 1 of table 2 reports estimates of equation (1) for the full sample. The coefficient on the US intervention measure, *US influence*, is positive and statistically significant. The estimated coefficient indicates

Table 2: The effects of US interventions on imports from and exports to the US for autocracies and democracies.

	ln share of imports from the US: ln (Imports from US / Imports from world)			ln share of exports to the US: ln (Exports to US / Exports to world)		
	Full sample	Autocracies	Democracies	Full sample	Autocracies	Democracies
	(1)	(2)	(3)	(4)	(5)	(6)
US influence	0.105***	0.178***	0.021	0.026	0.011	0.018
	(0.029)	(0.050)	(0.026)	(0.046)	(0.080)	(0.041)
Lagged dependent variable (t-1)	0.539***	0.524***	0.555***	0.598***	0.588***	0.539***
	(0.074)	(0.082)	(0.071)	(0.052)	(0.059)	(0.073)
Lagged dependent variable (t-2)	0.228***	0.229**	0.176**	0.119**	0.122**	0.111
	(0.087)	(0.099)	(0.062)	(0.048)	(0.054)	(0.068)
Soviet intervention control	Y	Y	Y	Y	Y	Y
ln per capita income, ln total income	Y	Y	Y	Y	Y	Y
ln total income	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y
GATT and NY convention controls	Y	Y	Y	Y	Y	Y
Polity fixed effects	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y
R-squared	0.88	0.86	0.95	0.87	0.85	0.94
Observations	3,864	2,327	1,439	3,601	2,106	1,401

Notes: The unit of observation is a country *c* in year *t*, where *t* ranges from 1947 to 1989. All regressions include year fixed effects, country fixed effects, a Soviet intervention control, two lags of the dependent variable, ln per capita income, ln total income, an indicator for leader turnover, current leader tenure, an indicator variable for GATT membership, an indicator variable for signing the NY convention, and Polity fixed effects. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

that an intervention increased the share of imports from the US by 10.5 percent. We also examine the effects of CIA interventions on the share of a foreign country's exports shipped to the US by estimating equation (2). The estimates are reported in column 4 of table 2. The coefficient for *US influence* is very small in magnitude and not statistically different from zero. Overall, the estimates from columns 1 and 4 show that although interventions significantly increased the share of a country's imports that are from the US, they had no effects on the share of a country's exports that go to the US. As we will see, this asymmetry is extremely robust.

As an initial test for whether the surge in intervened-country imports from the US arose because of an increase in US influence, we examine the effect of interventions separately for autocracies and democracies. The motivation behind this distinction derives from a straightforward logic that is at the core of a number of models in economics and political science. The best example is Grossman and Helpman's (1994) "Protection for Sale" model. In their model, governments set the level of a socially suboptimal policy, namely trade tariffs. In making their decisions governments trade off the effects of the policy on aggregate welfare against the private benefits that are received from

groups that have political influence. The key parameter affecting the equilibrium policy is a, the weight the government places on aggregate welfare relative to the private benefits the government receives from setting a distortionary policy. In reality the parameter a is determined, in part, by the accountability of the leader to the welfare of its citizens. All else equal, we expect a to be much higher in democracies than autocracies. Empirical estimates of Grossman and Helpman's a parameter across autocracies and democracies provide strong empirical support for this (e.g., Mitra *et al.*, 2002).

Grossman and Helpman's model provides a testable prediction in our setting. We are interested in empirically identifying whether CIA interventions allowed the US to exert greater influence over intervened countries, and whether this was used to persuade foreign leaders to choose policies that benefited the US. This setting is exactly analogous to the Grossman and Helpman scenario, except that the US government takes the place of the private lobbies. In their model, those with the ability to influence policy will be more successful in autocracies where a is low, since the government is less accountable to its citizens. Therefore, if interventions increased the imports of US goods because of US influence, we expect to find larger effects of interventions in autocracies than in democracies.

To test this, we first group our observations (i.e., country-year pairs) into two categories: autocracies and democracies. A country c in year t is defined as being an autocracy if in both year t and year $t-1$ its Polity scores are zero or less. Estimates of equations (1) and (2), with the sample restricted to autocracies only, are reported in columns 2 and 5 of table 2. Column 2 shows that among the sample of autocracies, like the full sample, the estimated effect of US interventions on the share of imports from the US is positive and statistically significant. Further, the estimated magnitude is large. An intervention increases the share of imports that are from the US by 17.8 percent. This is much larger than the average increase for the full sample, which is 10.5 percent. The effect of interventions on the share of exports to the US continues to be close to zero.

Democracies are defined as observations with a Polity score greater than zero in year t and $t-1$.[13] Estimates of equations (1) and (2), with the sample restricted to democracies, are reported in columns 3 and 6 of table 2. The results show that unlike our full sample of observations and our subsample of autocracies, we cannot reject a zero relationship between US interventions and the

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[13]The democracy and autocracy categories are not mutually exclusive. A small number of observations are democratic in year t and autocratic in $t-1$, or vice versa. These observations are not included in either sample.

share of imports from the US.[14] Therefore, consistent with the influence hypothesis, interventions only have an effect on the share of imports from the US in regimes where the leader is less accountable to its citizens and has more ability to choose policies freely.

To gain a better understanding of the increased share of imports from the US, we separately examine the effect of interventions on imports from the US, and on total imports from all countries. We re-estimate equations (1) and (2) with either log imports (from the US or the world), or log exports (to the US or the world) as the dependent variable. Estimates are reported in table 3. Columns 1–2 report estimates when the dependent variable is the natural log of imports from the US, while in columns 3–4, the dependent variable is the natural log of total imports from all countries. The results show that following an intervention there is an increase in the volume of imports from the US and no change in total imports. Therefore, the increased share of imports from the US arose from a shift away from imports from other countries' towards imports from the US. In other words, the increased share of imports from the US was a result of trade diversion, and not trade creation. According to the estimates from columns 1–2, a US intervention increased the volume of US imports in that year by 12.9% for the full sample, and 18.6% for autocracies. These increases are similar to the shares estimates from table 2. Columns 5–8 report the estimated effects of interventions on exports. The estimates provide no evidence that CIA interventions affected exports to the US or to the world. These results are consistent with the findings from table 2.

To provide the reader with a better sense of the implied magnitudes of the estimates, we undertake two counterfactual exercises.[15] For intervened countries, we can ask how different imports from the US would have been absent any covert CIA interventions.[16] Figure 4a reports, for Chile, the actual and counterfactual value of log imports from the US in each year using the estimates from column 1 of table 3.[17] Following the CIA interventions, which began in 1964, counterfactual and actual imports diverge significantly. By 1988, the final period of the CIA intervention episode, actual imports from the US totaled 1.0 billion US dollars, while the counterfactual value of imports is estimated to be only 574 million US dollars, just over half of the actual value.

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[14]This finding parallels the finding from Jones and Olken (2005) that leader deaths have larger macroeconomic effects in autocracies than in democracies. As well, MacGillivray and Smith (2004) provide empirical evidence showing that leadership turnover has little effect in democracies, but has a strong adverse effect on the volume of trade in autocracies.

[15]Since we have not yet addressed the issue of causality, we take these counterfactuals as illustrative only. We consider potential omitted factors and the selection of CIA interventions in the following section.

[16]See Appendix B for the details behind the counterfactual calculations.

[17]The vertical axis reports the natural log of Chilean imports from the US (measured in millions of nominal US dollars).

Table 3: The effects of US interventions on imports and exports.

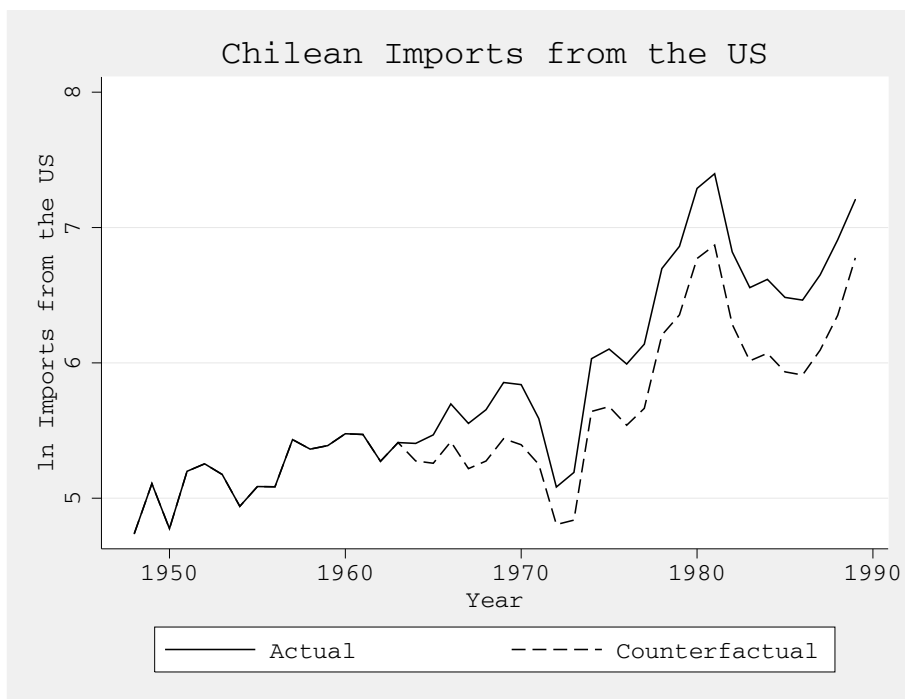|	ln imports from the US		ln imports from the world		ln exports to the US		ln exports to the world	
	Full sample	Autocracies	Full sample	Autocracies	Full sample	Autocracies	Full sample	Autocracies
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
US influence	0.129***	0.186***	0.025	-0.007	0.065	0.051	0.018	-0.018
	(0.032)	(0.054)	(0.021)	(0.037)	(0.048)	(0.089)	(0.020)	(0.035)
Lagged dependent variable (*t*-1)	0.619***	0.590***	0.795***	0.751***	0.616***	0.597***	0.794***	0.736***
	(0.072)	(0.081)	(0.071)	(0.088)	(0.050)	(0.056)	(0.047)	(0.050)
Lagged dependent variable (*t*-2)	0.152*	0.168*	-0.113**	-0.132**	0.139***	0.142***	-0.026	-0.015
	(0.078)	(0.089)	(0.048)	(0.059)	(0.047)	(0.053)	(0.028)	(0.034)
Soviet intervention control	Y	Y	Y	Y	Y	Y	Y	Y
ln per capita income, ln total income	Y	Y	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y	Y	Y
GATT and NY convention controls	Y	Y	Y	Y	Y	Y	Y	Y
Polity fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.97	0.94	0.98	0.97	0.95	0.93	0.99	0.98
Observations	3,864	2,327	4,083	2,542	3,601	2,106	4,079	2,537

Notes: The unit of observation is a country *c* in year *t*, where *t* ranges from 1947 to 1989. All regressions include year fixed effects, country fixed effects, a Soviet intervention control, two lags of the dependent variable, ln per capita income, ln total income, an indicator for leader turnover, current leader tenure, an indicator variable for GATT membership, an indicator variable for signing the NY convention, and Polity fixed effects. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

Our second calculation quantifies the impact of CIA interventions from the US perspective. For each intervened country, we first calculate its counterfactual imports from the US. We then construct a counterfactual measure of total US exports to all countries by aggregating each country's counterfactual imports from the US. The counterfactual measure of aggregate US exports, as well as actual US exports, are reported in figure 4b. Although CIA interventions had a large impact on trade flows from the perspective of intervened countries, the impact of interventions on US total exports was not particularly large. In 1965, at the height of CIA activity, US exports totalled 25.1 billion dollars. According to the counterfactual calculations, without any covert CIA activities, total US exports would have been 22.8 billion dollars.[18]

4. Causality: The Selection of Interventions

There are a number of reasons why one cannot take our estimates of β from equations (1) and (2) as causal estimates of the effects of US influence on trade. Although our difference-in-difference estimating equations, which include both country fixed effects and time period fixed effects, control for country-specific time-invariant factors and time-specific country-invariant factors that

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[18]The 25.1 billion dollar figure for 1965 is slightly lower than the official figure reported by the U.S. Census Bureau which is 26.5 billion. The difference can be explained by the fact that our total does not include trade with the Soviet Union. It also omits trade with countries that are not included in the sample because of significant border changes. This includes Bangladesh, Pakistan, Germany, Yugoslavia, Yemen, and Vietnam.

(a) Chilean imports from the US.
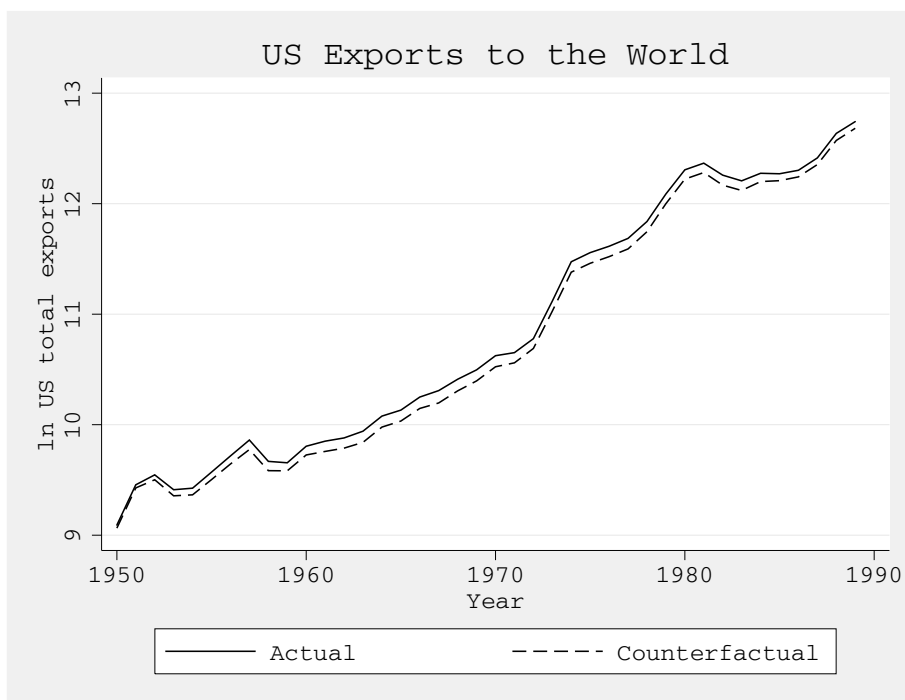
(b) US exports to the world.

Figure 4: Actual and counterfactual trade flows.

Table 4: Controlling for the selection of interventions.

	ln share of imports from the US				ln imports from the US			
	Full sample		Autocracies		Full sample		Autocracies	
	5-year pre-trends	5-year pre-intervention FEs	5-year pre-trends	5-year pre-intervention FEs	5-year pre-trends	5-year pre-intervention FEs	5-year pre-trends	5-year pre-intervention FEs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
US influence	0.120***	0.103***	0.217***	0.176***	0.146***	0.115***	0.236***	0.176***
	(0.031)	(0.033)	(0.052)	(0.056)	(0.035)	(0.040)	(0.058)	(0.066)
Five year pre-trend of dependent variable	Y	N	Y	N	Y	N	Y	N
Five year pre-intervention fixed effect	N	Y	N	Y	N	Y	N	Y
Lagged dependent variables	Y	Y	Y	Y	Y	Y	Y	Y
Soviet intervention control	Y	Y	Y	Y	Y	Y	Y	Y
ln per capita income, ln total income	Y	Y	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y	Y	Y
GATT and NY convention controls	Y	Y	Y	Y	Y	Y	Y	Y
Polity fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.88	0.88	0.84	0.86	0.97	0.97	0.94	0.94
Observations	3,377	3,864	2,027	2,327	3,377	3,864	2,027	2,327

Notes: The unit of observation is a country *c* in year *t,* where *t* ranges from 1947 to 1989. All regressions include year fixed effects, country fixed effects, a Soviet intervention control, two lags of the dependent variable, ln per capita income, ln total income, an indicator for leader turnover, current leader tenure, an indicator variable for GATT membership, an indicator for signing the NY convention, and Polity fixed effects. Odd numbered columns control for 5 year pre-trends of the dependent variable (log changes in the dependent variable between periods *t*-1 and *t*-6). Even numbered columns include an indicator variable that equals one if period *t* is within 5 years prior to an intervention. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

may potentially bias our estimates of interest, there remains the possibility of bias resulting from omitted country- and time-varying factors. In our setting, the primary concern is that there may be selection in the targeting of CIA interventions (e.g., Aidt and Albornoz, 2010). Of particular concern is the possibility that interventions may have been more likely when a country had recently experienced a decline in its imports of US products. This is an example of the famous "Ashenfelter dip"(Ashenfelter, 1978, Ashenfelter and Card, 1985). The presence of pre-intervention dips in US imports will bias our estimated effects of interventions on US trade upwards.

We undertake a number of strategies to reduce potential bias that may arise from the endogeneity of interventions. Our first strategy controls for pre-trends in the dependent variable. By doing this, we are hoping to capture the 'dips' in imports, which are a source of bias. Estimates controlling for five-year pre-trends (i.e., $\ln m_{t-1,c}^{US} - \ln m_{t-6,c}^{US}$) are reported in the odd numbered columns of table 4. In all specifications, the coefficients for *US influence* are statistically significant, and the point estimates change little. The results are also similar if we use alternative intervals to measure the pre-trends e.g., three-years windows. They are also similar whether or not we control for the lagged dependent variables, which are correlated with the pre-trends.

Our second strategy is to include a pre-intervention fixed effect in the estimating equation.

Table 5: Controlling for the selection of the onset of interventions.

	ln share of imports from the US				ln imports from the US			
	Full sample		Autocracies		Full sample		Autocracies	
	5-year pre-onset FEs	Sanction & war controls	5-year pre-onset FEs	Sanction & war controls	5-year pre-onset FEs	Sanction & war controls	5-year pre-onset FEs	Sanction & war controls
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
US influence	0.104***	0.099***	0.169***	0.157***	0.123***	0.122***	0.167***	0.153***
	(0.030)	(0.029)	(0.051)	(0.048)	(0.033)	(0.032)	(0.056)	(0.052)
Pre-intervention onset fixed effects	Y	N	Y	N	Y	N	Y	N
Sanction and war fixed effects	N	Y	N	Y	N	Y	N	Y
Lagged dependent variables	Y	Y	Y	Y	Y	Y	Y	Y
Soviet intervention control	Y	Y	Y	Y	Y	Y	Y	Y
ln per capita income, ln total income	Y	Y	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y	Y	Y
GATT and NY convention controls	Y	Y	Y	Y	Y	Y	Y	Y
Polity fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.88	0.88	0.86	0.86	0.97	0.97	0.94	0.94
Observations	3,864	3,864	2,327	2,327	3,864	3,864	2,327	2,327

Notes: The unit of observation is a country c in year t, where t ranges from 1947 to 1989. All regressions include year fixed effects, country fixed effects, a Soviet intervention control, two lags of the dependent variable, ln per capita income, ln total income, an indicator for leader turnover, current leader tenure, an indicator variable for GATT membership, an indicator for signing the NY convention, and Polity fixed effects. The odd numbered columns control for an indicator variable that equals one if period t is within 5 years before the onset of an intervention episode. The even numbered columns include indicator variables that equals one if country c is at war with the US in period t, and if the US has placed a sanction against US exports to country c in year t. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

Specifically, we control for an indicator variable that equals one if the observation (country c in period t) is between 1 and 5 years prior to an intervention. The fixed effects capture average differences (which may affect the dependent variable) that exist in the periods prior to an intervention. Results controlling for a 5-year pre-intervention fixed effect are reported in the even numbered columns of table 4. The results remain robust to this control.[19]

Our third strategy controls for the selection-bias that arises from the endogeneity of the *onset* of interventions, rather than the endogeneity of all intervention periods. It may be that the beginning of an intervention episode is the only decision that is affected by selection. To account for this possibility, we control for an indicator variable that equals one if the observation is between 1 and 5 years prior to the onset of an intervention episode. This specification assumes that there was selection in the decision to begin an intervention episode, but not in subsequent periods of an intervention episode. Estimation results are reported in the odd numbered columns of table 5. The results remain robust to this alternative control.

The final strategy we undertake is to control for variables that measure poor foreign relations with the US. This is the most likely factor, affecting both affecting imports from the US and the

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[19]Again, the results are similar if we choose windows other than five years.

onset of CIA interventions. We measure poor relations using two indicator variables that capture the existence of US sanctions and US warfare against foreign countries. The sanctions indicator variable equals one if in period t, the US has placed an sanction against US exports to country c. The war indicator variable equals one if the US is at war with country c in year t.[20] As reported in the even numbered columns of table 5, the results remain robust to these controls.

5. Robustness and Sensitivity Analysis

A. *Robustness to Alternative Specifications*

In the analysis, we have chosen to use a stringent and demanding specification that includes country fixed effects, time period fixed effects, and lags of the dependent variable. It is well-known that in specifications with fixed effects and lagged dependent variables, there is the potential for a Nickell (1981) bias to affect the coefficients of interest. It is importance to recognize, however, that this is a bias (not an inconsistency) that converges to zero as the total number of time periods increases. The number of years included in our panel is much greater than the environments that have typically been associated with the Nickel bias. To obtain a more concrete sense of the magnitude of the bias in our panel, consider the formula for the bias originally derived by Nickell (1981). For an equation without covariates the formula is given by $\text{plim}_{N \to \infty}(\hat{\gamma} - \gamma) \simeq \frac{-(1+\gamma)}{T-1}$, where γ is the relationship between the dependent varable in period t and the dependent variable in period $t-1$. In our setting, $T = 43$ and $\hat{\gamma} \approx 0.56$. Assume that $\gamma = .60$. Then, the bias is equal to $\frac{-(1+.60)}{42} = -0.038$. In addition, this is an upper bound, since the bias is strictly lower when there are covariates.

We also test for the potential importance of the Nickell bias in our results by estimating alternative specifications that do not suffer from the bias. We estimate a specification that does not control for country and time-period fixed effects, and only controls for lags of the dependent variable. We also estimate standard difference-in-difference estimating equations without lags of the dependent variable.[21] We also estimate these regressions controlling for linear and non-linear country-specific

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[20]The sanctions data are from Hufbauer, Schott, Elliott, and Oegg (2009), and the conflict data are from Barbieri, Keshk, and Pollins (2008).

[21]Angrist and Pischke (2009, p. 246) suggest that these two alternatives give bounds on the treatment effect, since the lagged dependent variable specification estimates a treatment effect that is too small if the true model is fixed effects, while fixed effect specification estimates a treatment effect that is too large if the true model is the lagged dependent variable.

time trends. The results using these alternative specifications, which we do not report here for brevity, are qualitatively identical to the estimates from our baseline equations.[22]

Our baseline estimating equations are derived from a log-linearization of the theoretically derived gravity model.[23] One consequence of the log-linearization is that zero trade observations are dropped from the sample. Although, the number of observations dropped for this reason is very small (only 306 of 4,170 potential observations), we check that our omission of these observations is not significantly affecting our results. We pursue two strategies to assess the importance of the omission of zero trade flows from our analysis. The first is to re-estimate equation (1) with the share of imports from the US, rather than the log share of imports from the US, as the dependent variable. The second is to use the Poisson pseudo-maximum-likelihood (PPML) estimator suggested by Santos Silva and Tenreyro (2006). Because PPML does not use a log-linearized estimating equation, all observations are used, even ones with zero trade. We find that these alternative specifications yield results that are very similar to the baseline estimates.

B. *Robustness to Alternative Intervention Measures*

A potential concern is measurement error in our CIA intervention variable. One source of error arises from the fact that our data are measured at annual frequencies, while in reality CIA activities occurred in continuous time. This results in some imprecision when coding $US\,influence_{t,c}$. For example, in the case of Chile, since Salvador Allende won the election on September 4, 1970, it is unclear whether to code $US\,influence_{t,c}$ as one or zero for Chile in 1970. The rule we follow in constructing our baseline measure is to include the years of the onset and offset of interventions as being an intervention year. Therefore, since 1970 is an offset year of the CIA's support of Eduardo Frei, it is coded as one. We have checked that none of our results depend on this decision. Choosing instead to code onset- and offset-intervention years as zero yields results that are virtually identical to what we report here.

We have also conducted a number of robustness checks for alternative plausible codings of our intervention variable. For eleven interventions, a case could be made for coding the intervention as a non-intervention, and for two non-interventions a case could be made for coding the non-intervention as an intervention. A full description of these observations is provided in the online

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[22]All unreported results are available from the authors upon request.
[23]Details of this are provided in Appendix A.

data appendix. We test the robustness of our findings to these observations and find that our results are robust to all plausible and internally consistent alternative codings.

We also test the robustness of our estimates to an alternative, more narrow measure of CIA interventions. Unlike our baseline variable *US influence*$_{t,c}$, the alternative measure only takes on the value of one if at the beginning of the CIA intervention episode, a new leader was installed by the CIA. This definition excludes interventions where the CIA began to support a leader that was not installed by the CIA. Using this alternative measure yields estimates that are qualitatively identical to the results using the baseline intervention measure. We continue to find that interventions increase the share of imports from the US, the effect is larger for autocracies, and interventions have no effect on the share of a country's exports to the US. The magnitudes of the coefficient estimates are also similar to the baseline estimates.

C. *Estimates using all Bilateral Country-Pairs*

In our baseline estimating equations, the unit of observation is a country in a year, and the dependent variable is a measure of the country's trade with the US – either the log of the share of imports from the US or the log of the value of imports from the US. An alternative strategy is to examine trade between all countries, not just trade between all countries and the US. Testing for the importance of CIA interventions in this setting results in the following estimating equation:

$$
\begin{aligned}
\ln m_{t,c,e} \;=\;& \alpha_t + \alpha_{c,e} + \beta_1 US\,influence_{t,c} + \beta_2 US\,influence_{t,c} \times I_e^{US} \\
& + \gamma_n \sum_{n=1}^{N} \ln m_{t-n,c,e} + X_{t,c}\Gamma + X_{t,e}\Omega + \varepsilon_{t,c,e}
\end{aligned} \tag{3}
$$

where, as before, t indexes years, c now indexes importers, and e indexes exporters. The dependent variable is the natural log of imports shipped by country e into country c in year t. The equation controls for time period fixed effects α_t, and country-pair fixed effects $\alpha_{c,e}$, which absorb standard gravity controls, like bilateral distance, common language, a common legal origin, a contiguous border, etc. As before, the equation also includes lags of the dependent variable, and importer covariates, $X_{t,c}$. It also includes exporter covariates, $X_{t,e}$.

As in equation (1), we include *US influence*$_{t,c}$, which equals one if the importing country c experienced a CIA intervention in year t. Because we now include all country-pairs in the sample, we allow the effect of an interventions on imports to differ depending on whether the imports are from the US or not. We allow for this differential effect by also including *US influence*$_{t,c} \times I_e^{US}$ in

Table 6: Results using the full sample of bilateral country-pairs.

	ln imports		ln (imports / world imports)		ln exports		ln (exports / world exports)	
	Full sample	Autocracies	Full sample	Autocracies	Full sample	Autocracies	Full sample	Autocracies
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
US influence	0.002	-0.035**	0.005	-0.028*	0.018	0.018	0.003	-0.014
	(0.010)	(0.016)	(0.010)	(0.016)	(0.010)	(0.018)	(0.010)	(0.017)
US influence × US exporter	0.137***	0.211**	0.124**	0.207**				
	(0.056)	(0.084)	(0.055)	(0.082)				
US influence × US importer					0.065	0.139	0.039	0.133
					(0.059)	(0.095)	(0.058)	(0.095)
Two lags of dependent variable	Y	Y	Y	Y	Y	Y	Y	Y
ln per capita income (importer and exporter)	Y	Y	Y	Y	Y	Y	Y	Y
ln total income (importer and exporter)	Y	Y	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure (importer and exporter)	Y	Y	Y	Y	Y	Y	Y	Y
GATT and NY convention (importer and exporter)	Y	Y	Y	Y	Y	Y	Y	Y
Polity fixed effects (importer and exporter)	Y	Y	Y	Y	Y	Y	Y	Y
Soviet intervention controls	Y	Y	Y	Y	Y	Y	Y	Y
Country-pair fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.91	0.89	0.90	0.88	0.91	0.88	0.90	0.88
Observations	170,575	84,605	170,575	84,605	170,309	80,120	170,309	80,120

Notes: The unit of observation is a country-pair in year *t*, where *t* ranges from 1947 to 1989. All regressions include year fixed effects, country-pair fixed effects, a Soviet intervention control, ln importer per capita income, ln exporter per capita income, ln importer total income, ln importer total income, an indicator for importer leader turnover, an indicator for exporter leader turnover, importer current leader tenure, exporter current leader tenure, indicator variable for the importer being a GATT member, indicator variable for the exporter being a GATT member, indicator variable for the importer signing the NY convention, an indicator variable for the exporter signing the NY convention, importer Polity fixed effects, and exporter Polity fixed effects. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

the estimating equation, where I_e^{US} is an indicator variable that equals one if the exporting country is the US. The interaction captures the differential effect of interventions on imports from the US relative to the average effect of interventions on imports from other countries.

We also examine the effect of US interventions in country c on exports from country c to importing countries, which we index by m:

$$
\begin{aligned}
\ln x_{t,c,m} = {} & \alpha_t + \alpha_{c,m} + \beta_1 \, US \, influence_{t,c} + \beta_2 \, US \, influence_{t,c} \times I_m^{US} \\
& + \sum_{n=1}^{N} \gamma_n \ln x_{t-n,c,m} + X_{t,c}\Gamma + X_{t,m}\Omega + \varepsilon_{t,c,m}
\end{aligned}
\tag{4}
$$

Estimation results are reported in table 6. Columns 1–4 report estimates of equation (3) and columns 5–8 report estimates of (4). The odd numbered columns include all countries in the sample, while the even numbered columns only include autocratic importers (in columns 2 and 4) or autocratic exporters (in columns 6 and 8). In columns 1, 2, 5 and 6 the dependent variable is the natural log of the value of trade, while in 3, 4, 7 and 8, the dependent variable is the natural log of the world trade share. Estimates of equations (3) and (4) provide results that are qualitatively identical to the baseline estimates. Although US interventions did not increase in imports from non-US countries, they did cause a significant increase in imports from the US. The effects are

more pronounced if we restrict the sample to autocratic importers. The estimates also show that interventions did not have an effect on exports to the US or other countries.

6. Testing Alternative Explanations

A. *Trade Costs Explanation*

To this point, we have documented a robust relationship between CIA interventions and increased imports from the US. We have interpreted this as evidence of the effect of US influence, gained through covert CIA interventions, on the sale of US products in the intervened country. An alternative explanation for the increase in foreign-country imports from the US is a decrease in bilateral trading costs between the US and the intervened country. To distinguish between these two mechanisms, we move to the industry level and examine which industries experienced the greatest surge in imports from the US following an intervention. If the increase in imports from the US arose because of a decrease in trading costs between the foreign country and the US, then the increase in shipments from the US should have been in industries in which the US had a comparative advantage. With a movement towards free trade, countries increasingly export the goods that they have a relative cost advantage in producing and import the goods they have a relative disadvantage in producing. This logic of comparative advantage is central to standard models of international trade ranging from the textbook Ricardian or Heckscher-Ohlin models of trade to more recent models of comparative advantage with firm heterogeneity (e.g., Bernard, Redding, and Schott, 2007).

Testing this prediction of the trade costs explanation requires a measure of US competitiveness across industries and time periods. For this we use Balassa's (1965) measure of revealed comparative advantage (RCA). The measure, which captures the degree of specialization of a country in a particular industry, is given by:

$$RCA_{t,c,i} = \frac{x_{t,c,i}}{\sum_c x_{t,c,i}} \Big/ \frac{\sum_i x_{t,c,i}}{\sum_i \sum_c x_{t,c,i}}$$

where $x_{t,c,i}$ denotes the aggregate exports of country c in industry i and year t. The RCA measure is a ratio of two ratios. The first ratio, the numerator, is country c's share of world exports *in industry i*. The second ratio, the denominator, is country c's share of world exports *in all industries*. That is, RCA compares the country's share of global exports in industry i to the share for all industries. If the ratio is above one, then the country captures a greater share of global exports in industry i than

Table 7: US revealed comparative advantage (RCA) in 1962.

Low RCA industries			High RCA Industries		
US RCA in 1962	sitc2	Industry description	US RCA in 1962	sitc2	Industry description
0.043	11	Beverages	0.909	81	Sanitary, plumbing, heating and lighting fixtures
0.065	07	Coffee, tea, cocoa, spices and manufactures thereof	0.910	88	Photographic apparatus, optical goods, watches
0.083	03	Fish and fish preparations	1.003	43	Animal and vegetable oils and fats, processed
0.101	06	Sugar, sugar preparations and honey	1.137	42	Fixed vegetable oils and fats
0.108	85	Footwear	1.155	62	Rubber manufactures, nes
0.146	00	Live animals	1.203	52	Crude chemicals from coal, petroleum and gas
0.227	91	Scrap and waste	1.207	69	Manufactures of metal, nes
0.308	33	Petroleum and petroleum products	1.263	54	Medicinal and pharmaceutical products
0.314	63	Wood and cork manufactures excluding furniture	1.294	55	Perfume materials, and toilet and cleansing products
0.377	01	Meat and meat preparations	1.335	57	Explosives and pyrotechnic products
0.386	84	Clothing	1.343	76	Telecommunications and sound recording apparatus
0.415	24	Wood, lumber and cork	1.373	77	Electrical machinery, apparatus and appliances nes
0.442	34	Gas, natural and manufactured	1.547	78	Road vehicles
0.456	65	Textile yarn, fabrics, made up articles, etc.	1.555	51	Chemical elements and compounds
0.468	02	Dairy products and eggs	1.562	09	Miscellaneous food preparations
0.469	68	Non ferrous metals	1.598	89	Miscellaneous manufactured articles, nes
0.471	29	Crude animal and vegetable materials, nes	1.626	22	Oil seeds, oil nuts and oil kernels
0.503	64	Paper, paperboard and manufactures thereof	1.650	72	Electrical machinery, apparatus and appliances
0.510	28	Metalliferous ores and metal scrap	1.654	35	Machinery, except electrical
0.538	66	Non metallic mineral manufactures, nes	1.669	74	General industrial machinery, equipment and parts
0.545	67	Iron and steel	1.685	58	Artificial resins and plastic materials, etc.
0.559	83	Travel goods, handbags and similar articles	1.701	75	Office machines and automatic data process. equip.
0.579	05	Fruit and vegetables	1.788	71	Machinery, other than electric
0.619	25	Pulp and paper	1.877	12	Tobacco and tobacco manufactures
0.645	21	Hides, skins and fur skins, undressed	1.927	04	Cereals and cereal preparations
0.723	27	Crude fertilizers and crude minerals, nes	1.976	41	Animal oils and fats
0.736	82	Furniture	1.977	73	Transport equipment
0.740	61	Leather, leather manuf. Nes, and dressed fur skins	2.058	59	Chemical materials and products, nes
0.740	23	Crude rubber including synthetic and reclaimed	2.207	87	Professional, scientific and controlling instruments
0.778	26	Textile fibres, not manufactured, and waste	2.240	32	Coal, coke and briquettes
0.800	08	Feed stuff for animals excluding unmilled cereals	2.435	79	Other transport equipment
0.819	53	Dyeing, tanning and colouring materials	3.133	95	Firearms of war and ammunition
0.836	56	Fertilizers, manufactured			

it does on average. This is then taken as an indicator that the country has a comparative advantage in producing in industry i. If the ratio is less than one, then the country captures less of the world export share in industry i than it does on average.

To provide a reader with a sense of the constructed RCA measures, table 7 reports the RCA measure for the US in 1962 for all 2-digit SITC (Standard International Trade Classification) industries. Overall, the measures are consistent with intuition. The US has low relative export shares in low-end manufacturing industries like beverages, footwear, and textiles, and high export shares in high-end industries like transport equipment, scientific equipment, chemicals, and firearms.

We use the RCA measures to test whether following an intervention the increase in imports was greatest in the industries in which the US had a comparative advantage. We test this with the following estimating equation:

$$\ln m_{t,c,i}^{US} = \alpha_t + \alpha_c + \alpha_i + \beta_1 US\,influence_{t,c} + \beta_2 US\,influence_{t,c} \times US\,RCA_{t,i}$$

$$+\beta_3 \textit{US influence}_{t,c} \times \textit{Importer RCA}_{t,c,i} + \beta_4 \textit{US RCA}_{t,i} + \beta_5 \textit{Importer RCA}_{t,c,i}$$

$$+ \sum_{n=1}^{N} \gamma_n \ln m_{t-n,c,i}^{US} + X_{t,c} \Gamma + \varepsilon_{t,c,i} \tag{5}$$

In equation (5) the unit of observation is a year t, a country c, and an industry i. The dependent variable is the natural log of imports into country c in industry i from the United States. The regression includes year fixed effects, country fixed effects, and industry fixed effects, as well as the full set of covariates. As before, $\textit{US influence}_{t,c}$ is our measure of CIA interventions. We now allow the effect of an intervention to differ across industries depending on whether the importing country has a comparative advantage in industry i and depending on whether the US has a comparative advantage in industry i. The variables $\textit{Importer RCA}_{t,c,i}$ and $\textit{US RCA}_{t,i}$ measure each country's comparative advantage in the production of good i in year t.[24] If the increase in imports is from a decrease in transactions costs, then we expect $\beta_2 > 0$. The increase in US imports should have been greater in industries in which the US had a comparative advantage. As predicted by standard models of international trade, increased integration should have caused countries to specialize in (and export more of) the products that they were relatively good at producing.

If the increase in trade did not arise because of comparative advantage, then we no longer expect $\beta_2 > 0$. There is no reason to expect the increase to necessarily be greater in industries in which the US had a comparative advantage. Instead, the US may have pushed to sell goods which it was only marginally competitive in producing, and otherwise would have had difficulty selling. In this case we expect $\beta_2 \leq 0$. Therefore, the estimated coefficient for β_2 provides a test between the trade costs and influence explanations.

Estimates of equation (5) are reported in table 8. Columns 1–6 report estimates for the full sample, while columns 7–12 report estimates for autocracies only. To be as conservative as possible, we cluster all standard errors at the country-year level. We also report estimates with industries defined by the 2-digit, 3-digit and 4-digit SITC classifications. In all specifications, the estimated coefficients for $\textit{US influence} \times \textit{US RCA}$ is negative and statistically significant, indicating that interventions increased imports more in industries in which the US had a comparative *dis*advantage, not comparative advantage in producing. This finding is in contrast to what is expected if the

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[24]To allow an easy interpretation of the magnitudes of the estimated effects, we have normalized $\textit{US RCA}_{t,i}$ and $\textit{Importer RCA}_{t,c,i}$ to lie between zero and one by subtracting the minimum value of the variable and then dividing by the maximum value.

Table 8: Testing the trade costs explanation using revealed comparative advantage.

	Full sample						Autocracies only					
	SITC 2-digit industries		SITC 3-digit industries		SITC 4-digit industries		SITC 2-digit industries		SITC 3-digit industries		SITC 4-digit industries	
	ln imports from the US	ln share of imports from the US	ln imports from the US	ln share of imports from the US	ln imports from the US	ln share of imports from the US	ln imports from the US	ln share of imports from the US	ln imports from the US	ln share of imports from the US	ln imports from the US	ln share of imports from the US
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
US influence	0.067**	0.059**	0.100***	0.066***	0.103***	0.058***	0.168***	0.107***	0.210***	0.094***	0.222***	0.081***
	(0.034)	(0.024)	(0.031)	(0.017)	(0.031)	(0.015)	(0.059)	(0.039)	(0.058)	(0.029)	(0.061)	(0.025)
US influence × US RCA	**-0.114***	**-0.219***	**-0.232***	**-0.301***	**-0.134***	**-0.242***	**-0.379***	**-0.410***	**-0.571***	**-0.419***	**-0.460***	**-0.262***
	(0.064)	**(0.056)**	**(0.069)**	**(0.059)**	**(0.067)**	**(0.056)**	**(0.088)**	**(0.079)**	**(0.105)**	**(0.092)**	**(0.106)**	**(0.090)**
US RCA	0.919***	0.913***	1.791***	1.387***	1.452***	1.333***	1.040***	1.139***	1.759***	1.285***	1.590***	1.260***
	(0.099)	(0.081)	(0.096)	(0.074)	(0.078)	(0.060)	(0.165)	(0.147)	(0.167)	(0.133)	(0.168)	(0.122)
US influence × Importer RCA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Importer RCA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Four lags of dependent variable	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Soviet intervention control	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Importer RCA and interaction	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ln income per capita, ln total income	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GATT and NY convention controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Polity fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.91	0.81	0.88	0.80	0.88	0.81	0.88	0.76	0.84	0.74	0.84	0.74
Clusters (country-year pairs)	2,517	2,517	2,442	2,442	2,367	2,367	1,556	1,556	1,496	1,496	1,442	1,442
Observations	95,178	95,178	226,822	226,822	341,056	341,056	47,543	47,543	96,294	96,294	120,800	120,800

Notes: The unit of observation is a country *c* in year *t* in an SITC industry *i*, where *t* ranges from 1962 to 1989. All regressions include year fixed effects, country fixed effects, industry fixed effects, a Soviet intervention control, four lags of the dependent variable, importer RCA, importer RCA interacted with *US influence*, ln per capita income, ln total income, an indicator for leader turnover, current leader tenure, an indicator variable for GATT membership, an indicator variable for signing the NY convention, and Polity fixed effects. Coefficients are reported with standard errors clustered at the country-year level in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

increase in trade were from a decrease in bilateral trading costs between the US and the intervened country.[25]

A potential criticism of the RCA measure is that it does not distinguish between a country's exports to developed countries (DCs) and its exports to less developed countries (LDCs). If the two groups of countries represent different markets, then the US may specialize either in products to serve the LDC markets or products to serve DCs. Since the market size of LDCs is much smaller than of DCs, when the US serves the LDC market, its share of total world exports may be low, and therefore its measure of RCA is also low. If interventions decreased bilateral trade costs between the US and the intervened LDC, then this may have caused greater specialization in the export of LDC products, and as a result, imports from the US increased most in industries with low measures of US RCA.

According to this explanation, the failure of the test results because we are incorrectly measuring RCA. Rather than measuring US RCA for exports to the entire world, we should be constructing a measure of RCA based on US exports to LDCs only. We check for this possibility by

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[25]The total effect of *US influence* on imports from the US is given by $\beta_1 + \beta_2 \, US \, RCA_{t,i} + \beta_3 \, Importer \, RCA_{t,c,i}$. Examining this, we find that for nearly all observations (countries, years, and industries), the total effect of *US influence* is greater than or equal to zero. That is, CIA interventions had a non-negative effect on the purchase of US products in nearly every industry, and the effects were greatest in industries in which the US was globally least competitive.

constructing alternative measures of RCA that are calculated using only the share of exports to LDCs rather than the share of exports globally.[26] Because of space constraints we do not report the estimates here. However, we find that the results are nearly identical using this alternative measure of RCA. In all specifications the coefficient for $US\,influence_{t,c} \times US\,RCA_{t,i}$ is negative and statistically significant, and the magnitudes are close to those reported in table 8.

Overall, the results provide evidence against the hypothesis that the increase in US imports following an intervention was the result of a decrease in trade costs between the US and the intervened country.

B. *Political Ideology Explanation*

It is possible that countries prefer to import goods from countries with political ideologies more aligned to their own.[27] If this is the case, then the increase in imports from the US may be explained by a change in the ideology of the intervened country following an intervention. Under this explanation, the increase in imports from the US arises not because of US influence, but because the new regime has an ideology that is more aligned with the US. Imports from all ideologically similar countries increased, and the US just happens to be one of these countries.

To test this possibility, we use voting information from the UN general assembly to construct a measure of the similarity of countries' ideologies and preferences. We take the voting position of the US as a references point. Define $d_{t,c}$ to be the sum of the vote distance between country c and the US for all votes in year t, where a vote in opposition to the US is given a distance of 1, and a vote with the US is given a distance of 0.[28] Also define d_t^{max} to be the maximum sum of vote distances possible in year t. We then construct the following measure of country c's voting similarity with the US in year t:

$$V_{t,c}^{US} \equiv 1 - \frac{d_{t,c}}{d_t^{max}}$$

The measure ranges from 0 to 1, and increases with voting similarity with the US.

We use $V_{t,c}^{US}$ to test whether following US interventions, imports from countries that were ideologically similar to the US also increased. We test this by returning to our imports estimating

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[26] We define the LDC market to be countries other than Australia, Belgium, Canada, Switzerland, West Germany, Denmark, Great Britain, Italy, France, Finland, Japan, Luxembourg, Norway, Netherlands, New Zealand, Portugal, Spain, and Sweden.

[27] Evidence for this during the post-Cold War period has been provided by Gupta and Yu (2009).

[28] See Gartzke (2006) for details. The measure we use ignores abstentions. An alternative is to code a value of 2 for votes against the US, a value of 1 for abstentions, and zero for votes with the US. Using this alternative coding yields qualitatively identical results to what we report here.

equation with all bilateral observations, equation (3). But, we now allow the effect of interventions to differ systematically depending on the political ideology of the exporter. This is done by including an interaction of $V_{t,e}^{US}$ and $US\,influence_{t,c}$ in the estimating equation:

$$
\begin{aligned}
\ln m_{t,c,e} \quad = \quad & \alpha_t + \alpha_{c,e} + \beta_1 US\,influence_{t,c} + \beta_2 US\,influence_{t,c} \times I_e^{US} + \beta_3 US\,influence_{t,c} \times V_{t,e}^{US} \\
& + \beta_4 V_{t,e}^{US} + \sum_{n=1}^{N} \gamma_n \ln m_{t-n,c,e} + X_{t,c}\Gamma + X_{t,e}\Omega + \varepsilon_{t,c,e} \qquad\qquad (6)
\end{aligned}
$$

Equation (6) tests whether imports from countries that were ideologically similar to the US also increased following CIA interventions. If the ideology explanation is correct, then we expect β_3 to be positive and significant. We are also interested in how the estimated impact of interventions on imports from the US, β_2, is affected when we control for $US\,influence_{t,c} \times V_{t,e}^{US}$.

Estimation results are reported in the first four columns of table 9. The estimates of β_2 remain robust to the inclusion of the new interaction term. They remain positive and significant, and their magnitudes barely change.[29] The estimates also show that following an intervention, imports from countries ideologically close to the US did not increase.

The remaining columns of table 9 report results using an alternative measure of country e's alignment with the US. Rather than using UN voting data, we measure $V_{t,e}^{US}$ with an indicator variable that equals one if country e was an original 1949 member of NATO. The results are similar using the alternative measure. There is no increase in imports from non-US NATO countries following CIA interventions, and the estimated effect of CIA interventions on foreign-country imports from the US remains robust.

Overall, the data do not support the hypothesis that the increase in US imports arose because the newly installed leaders were more pro-Western or pro-Capitalist. The increase in imports was US specific, and there was no increase in imports from countries that were ideologically similar to the US.

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[29]The coefficients in columns 1–4 of table 9 can be compared to columns 1–4 of table 6. The only difference between the two estimates, besides the inclusion of $V_{t,e}^{US}$ and $US\,influence_{t,c} \times V_{t,e}^{US}$, is a slightly different number of observations because of missing voting data.

Table 9: Testing the political ideology explanation.

	ln imports		ln (imports / world imports)		ln imports		ln (imports / world imports)	
	All	Autocracies	All	Autocracies	All	Autocracies	All	Autocracies
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
US influence	-0.028	-0.035	0.041	-0.069*	-0.002	-0.046***	0.005	-0.033*
	(0.030)	(0.043)	(0.030)	(0.043)	(0.011)	(0.018)	(0.011)	(0.017)
US influence × US exporter	0.130**	0.208**	0.138**	0.191**	0.122**	0.180**	0.126**	0.194**
	(0.058)	(0.086)	(0.057)	(0.084)	(0.059)	(0.086)	(0.058)	(0.085)
US influence × US alignment of exporter	0.043	0.006	-0.041	0.060				
	(0.036)	(0.050)	(0.035)	(0.050)				
US influence × Original NATO member					0.020	0.042	-0.003	0.018
					(0.021)	(0.031)	(0.021)	(0.030)
US alignment of exporter	Y	Y	Y	Y	N	N	N	N
Two lags of dependent variable	Y	Y	Y	Y	Y	Y	Y	Y
ln per capita income (importer and exporter)	Y	Y	Y	Y	Y	Y	Y	Y
ln total income (importer and exporter)	Y	Y	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure (importer and exporter)	Y	Y	Y	Y	Y	Y	Y	Y
GATT and NY convention (importer and exporter)	Y	Y	Y	Y	Y	Y	Y	Y
Polity fixed effects (importer and exporter)	Y	Y	Y	Y	Y	Y	Y	Y
Soviet intervention control	Y	Y	Y	Y	Y	Y	Y	Y
Country-pair fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.91	0.89	0.90	0.88	0.91	0.89	0.90	0.88
Observations	159,338	79,047	159,338	79,047	170,575	84,605	170,575	84,605

Notes: The unit of observation is a country-pair in year *t*, where *t* ranges from 1947 to 1989. All regressions include year fixed effects, country-pair fixed effects, a full set of Soviet intervention controls, ln importer per capita income, ln exporter per capita income, ln importer total income, ln importer total income, an indicator for importer leader turnover, an indicator for exporter leader turnover, importer current leader tenure, exporter current leader tenure, indicator variable for the importer being a GATT member, indicator variable for the exporter being a GATT member, indicator variable for the importer signing the NY convention, and an indicator variable for the exporter signing the NY convention, importer Polity fixed effects, and exporter Polity fixed effects. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

C. *US Loans and Grants Explanation*

If interventions were followed by an increase in US foreign aid, particularly tied or conditional aid, then this may be an alternative explanation for why interventions increased imports from the US.[30] To examine this empirically, we use data on the value of US foreign aid received by each country.[31] The aid data are disaggregated into economic aid (which includes grants and concessional loans), military aid (which includes grants, concessional loans, and training), and food aid. As a test of whether the increase in US imports is explained by an increase in US foreign aid, we check whether US foreign aid increased following CIA interventions, and if the changes in aid are able to account for the increase in US imports that followed CIA interventions.

The results are reported in table 10, which reports estimates of our baseline estimating equation (1), but with measures of US loans and grants as the dependent variable. Columns 1 and 5 report estimates when the dependent variable is the natural log of the dollar value of US economic aid

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[30]The fact that US imports increased most in low US RCA industries suggests that if this explanation is correct, then the provision of grants and loans were used to promote US sales in industries in which US firms were less competitive. This would also be an interesting and important finding.

[31]The data are from the U.S. Agency for International Development's (USAID) *U.S. Overseas Loans and Grants, Obligations and Loan Authorizations* annual report, also known simply as the "Green Book".

Table 10: The effect of interventions on US loans and grants.

	Full sample				Autocracies only			
	Economic aid	Military aid	Food aid	Ex-Im Bank loans	Economic aid	Military aid	Food aid	Ex-Im Bank loans
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
US influence	0.348***	0.383***	0.221**	0.318*	0.556***	0.665***	0.427***	0.559**
	(0.109)	(0.112)	(0.105)	(0.183)	(0.151)	(0.176)	(0.152)	(0.223)
Two lags of dependent variable	Y	Y	Y	Y	Y	Y	Y	Y
Soviet intervention controls	Y	Y	Y	Y	Y	Y	Y	Y
ln per capita income, ln total income	Y	Y	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y	Y	Y
GATT, NY convention controls	Y	Y	Y	Y	Y	Y	Y	Y
Polity fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.87	0.87	0.83	0.48	0.84	0.86	0.79	0.50
Observations	3,779	3,779	3,779	3,779	2,243	2,243	2,243	2,243

Notes: The unit of observation is a country c in year t, where t ranges from 1947 to 1989. All regressions include year fixed effects, country fixed effects, a Soviet intervention control, two lags of the dependent variable, ln per capita income, ln total income, an indicator for leader turnover, current leader tenure, an indicator variable for GATT membership, an indicator variable for signing the NY convention, and Polity fixed effects. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

provided to country c in year t. Columns 2 and 6 report results for military aid, and columns 3 and 7 report results for food aid. The results show that all forms of US aid tended to increase following CIA interventions. We also examine loans given by the US Export-Import Bank (Ex-Im Bank). The mandate of the Bank is to provide loans to foreign firms wanting to import US products. Because the Bank only provides loans that would not be provided by private lenders, they enable foreign customers to purchase US goods, thereby increasing US exports. Columns 4 and 8 of table 10 show that Ex-Im Bank loans also increased following CIA interventions.

Table 11 reports estimates that test whether the increase in foreign aid is able to account for the increase in US imports following an intervention. We do this by estimating (1) while controlling for the amount of US loans and grants received by a country in a year. Our baseline estimates without additional controls are reported in columns 1 and 6. In columns 2 and 7, we include the measures of economic and military aid. Economic aid enters with positive and significant coefficients, while military aid enters with positive, but insignificant coefficients. This suggests that part of US economic aid is used to purchase US products, which is unsurprising considering that US economic aid is often tied to purchases from US producers. The insignificant coefficient for military aid is not surprising, since much of military aid goes to supporting overseas US personnel, and these goods are not included in IMF DOT statistics (International Monetary Fund, 1993). Columns 3 and 8 control for food aid, and columns 4 and 9 control for Ex-Im Bank loans. Both

Table 11: Accounting for US loans and grants.

	ln share of imports from the US									
	Full sample					Autocracies only				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
US influence	0.104***	0.087***	0.094***	0.102***	0.084***	0.174***	0.148***	0.158***	0.167***	0.138***
	(0.029)	(0.028)	(0.028)	(0.028)	(0.028)	(0.049)	(0.047)	(0.490)	(0.048)	(0.047)
ln (1+US economic aid)		0.019***			0.013***		0.030***			0.022***
		(0.004)			(0.004)		(0.007)			(0.007)
ln (1+US military aid)		0.000			0.000		0.002			0.002
		(0.003)			(0.003)		(0.006)			(0.006)
ln (1+US food aid)			0.021***		0.014***			0.028***		0.016***
			(0.004)		(0.004)			(0.006)		(0.006)
ln (1+Ex-Im Bank loans)				0.004**	0.004**				0.010***	0.010***
				(0.002)	(0.002)				(0.003)	(0.003)
Two lags of dependent variable	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Soviet intervention controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ln per capita income, ln total incon	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GATT, NY convention controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Polity fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.88	0.88	0.88	0.88	0.88	0.86	0.86	0.86	0.86	0.86
Observations	3,780	3,780	3,780	3,780	3,780	2,244	2,244	2,244	2,244	2,244

Notes: The unit of observation is a country c in year t, where t ranges from 1947 to 1989. All regressions include year fixed effects, country fixed effects, a Soviet intervention control, two lags of the dependent variable, ln per capita income, ln total income, an indicator for leader turnover, current leader tenure, an indicator variable for GATT membership, an indicator variable for signing the NY convention, and Polity fixed effects. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

variables enter with positive and significant coefficients.

Lastly, in the columns 5 and 9, we simultaneously control for all measures of US loans and grants. Controlling for the variables together has the largest impact on the estimated coefficient for *US influence*. However, the size of the declines is modest. The coefficient magnitudes are reduced by about 20% for both the full sample and the subsample of autocracies. The results suggest that although increases in US loans and grants are able to explain some of the effect of interventions on imports from the US, it is a modest proportion of the total. This is consistent with the fact that foreign aid flows are not large enough to account for the observed increase in imports from the US. The ratio of US total aid to US imports is 0.15 for the median observation in the sample. Therefore, even if an intervention-induced increase in US aid was transformed one-for-one into imports (which in reality is far from true), a CIA intervention would need to increase aid by 127% to increase imports by 19% ($127\% \times 0.15 = 19\%$), which is the estimated impact of an intervention from column 2 of table 3. The estimated effects of interventions on US aid found in columns 5–8 of

table 10 are much lower than this, ranging instead from 40 to 65%.[32]

7. Underlying Mechanisms

In this section, we examine evidence for the mechanisms underlying the increase in imports from the US following CIA interventions. There are a number of ways in which US influence could be used to increase the foreign sale of US products. First, the foreign government could be influenced to directly purchase US products. Second, the government could be influenced to alter domestic policies, which create an incentive for individuals to purchase more US products. One such policy is regulations against foreign direct investment (FDI). If US influence was used to allow greater foreign investment in the intervened country, particularly US investment, then this may have translated into greater imports of US products, since US-owned firms tend to import more from the US. The other policy is tariffs and other trade barriers. If following an intervention, tariffs were reduced, particularly tariffs that protected against competition from US producers, then this could have resulted in increased imports from the US. We consider each of these three mechanisms. As we show below, we find evidence that the full effect can be explained by an increase in foreign-government purchases of US products. We do not find evidence that US FDI or tariffs play a role.

It is well-established that government purchases are highly discriminatory, with producers chosen based on a number of other criterion besides lowest costs (see e.g., Baldwin, 1970, Lowinger, 1976, Audet, 2002). As a share of GDP, government purchases have typically been around 20 percent of GDP for industrialized nations and 15 percent for developing nations (Baldwin, 1970, p. 58, Audet, 2002). Included in these purchases are compensation to employees. Removing these, and focusing only on purchases of goods, the figures become 10.3 and 8.8 percent, respectively (Audet, 2002). These figures can be compared to the predicted intervention-induced increase in imports based on our estimates. According to the estimates from column 1 of table 3, the average observation in the sample experienced an increase in US imports equal to 8.5 percent of GDP. (For the median observation, the figure is 7.7 percent.) Therefore, from a purely quantitative standpoint,

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[32]An explanation, similar to the US loans and grants explanation, is that the US may have sold goods at a discount to intervened countries. If the demand for US products was sufficiently elastic, then this could explain the increase in the total value of US imports. Using unit value data from Feenstra (1997), we have examined the prices of imports from the US, and find that they are not affected by CIA interventions.

Table 12: The government purchases mechanism.

| | ln share of imports from the US | | | | ln imports from the US | | | |
| | Full sample | | Autocracies | | Full sample | | Autocracies | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
US influence	0.128***	-0.067	0.219***	-0.112	0.111***	-0.084	0.194***	-0.106
	(0.031)	(0.059)	(0.057)	(0.096)	(0.035)	(0.067)	(0.062)	(0.106)
US influence × Gov't expenditure share		0.971***		1.515***		0.976***		1.387***
		(0.313)		(0.471)		(0.355)		(0.502)
Government expenditure share	N	Y	N	Y	N	Y	N	Y
Two lags of dependent variable	Y	Y	Y	Y	Y	Y	Y	Y
Soviet intervention control	Y	Y	Y	Y	Y	Y	Y	Y
ln per capita income, ln total income	Y	Y	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y	Y	Y
GATT and NY convention controls	Y	Y	Y	Y	Y	Y	Y	Y
Polity fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.91	0.91	0.89	0.89	0.97	0.98	0.96	0.96
Observations	3,339	3,339	1,919	1,919	3,339	3,339	1,919	1,919

Notes: The unit of observation is a country c in year t, where t ranges from 1947 to 1989. All regressions include year fixed effects, country fixed effects, a Soviet intervention control, two lags of the dependent variable, ln per capita income, ln total income, government expenditure share, an indicator for leader turnover, current leader tenure, an indicator variable for GATT membership, an indicator variable for signing the NY convention, and Polity fixed effects. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

the purchase of goods by governments is large enough to potentially account for the observed increase in imports from the US following a CIA intervention.

We explicitly test for this mechanism by examining whether the estimated impact of CIA interventions on imports from the US is stronger in countries where the government controls a greater share of the economy, which we measure using the share of government expenditures in GDP, taken from the Penn World Tables Mark 6.2. Estimation results are reported in table 12. Because data on government expenditure share are unavailable for all countries, and are only available from 1950 onwards, the sample size is reduced to 3,339 observations in the full sample, and 1,919 observations in the subsample of autocracies. The odd numbered columns of the table reproduce the baseline estimates with the smaller sample sizes. The even numbered columns report estimates that allow the effect of CIA interventions to differ depending on the government's share of GDP. As shown, the interaction between *US influence* and the government expenditure share is positive and statistically significant in every specification.

To get a sense of the magnitude of the heterogeneity, first note that the government expenditure share ranges from .03 (i.e., 3%) to .73, and has a mean value of .21. Consider the estimation results for the full sample with the log of the US import share as the dependent variable (reported in columns 1 and 2). For the mean observation in the sample, the estimated effect of CIA interventions on the share of imports from the US is $-.067 + .21 \times .971 = .137$. This is very close to the

estimated coefficient of .128 from column 1, where the effect is constrained to be the same for all observations. For the observation with the lowest government share, the estimated effect is $-.067 + .03 \times .971 = -.038$, which is not statistically different from zero. For the observation with the highest government share, the estimated effect is $-.067 + .73 \times .971 = .642$. Therefore, there is substantial heterogeneity in the effects of CIA interventions. The effect of an intervention ranges from essentially zero to an increase of 64 percent.

The coefficient for *US influence* is also of interest. It provides the estimated effect of US interventions for a hypothetical country with zero government expenditure. The coefficient reports the estimated effect of interventions after shutting down the channel that works through the government. Although this interpretation relies strongly on the structural form of the estimating equation, it is still informative. In all four estimates, the estimated coefficient is not statistically different from zero, suggesting that there is no additional effects of interventions other than through government expenditures.

Overall, the estimates of table 12 indicate that a large portion, and possibly all, of the effect of CIA interventions worked through foreign government purchases. We now turn to the possibility that the effects of US interventions worked through tariffs or FDI. Using data from the BEA we examine whether interventions were followed by increases in US FDI in the intervened country. The estimates, using a number of different measures of outward US FDI, are reported in table 13. Although five of the six specifications report a positive coefficient for US interventions, none of the coefficients are statistically significant. This provides weak or no support for the notion that CIA interventions result in a subsequent increase in US FDI.

An ideal test of the tariff channel would rely on annual industry-level ad valorem tariffs for all countries. Unfortunately, these data are decades from being constructed. Instead, we pursue an alternative strategy using information from the *International Customs Journal* published by the International Customs Tariff Bureau (BITD). The BITD, which was established in 1890, translates and publishes countries' tariff schedules on a continuous basis. When a country significantly changes its tariff structure, a new 'volume' is published for the country. If minor changes to the tariff structure are made, then a 'supplement' to the most recent volume is published. We take the publication of a new volume as an indicator of a significant change in a country's tariff structure.

Using this information, we examine whether US interventions had a greater impact on US

Table 13: CIA interventions and US outward FDI.

	Full sample			Autocracies only		
	Number of foreign affiliates	Foreign affiliate sales	Foreign affiliate employment	Number of foreign affiliates	Foreign affiliate sales	Foreign affiliate employment
	(1)	(2)	(3)	(4)	(5)	(6)
US influence	0.001	0.105	0.006	-0.027	0.035	0.043
	(0.051)	(0.116)	(0.055)	(0.083)	(0.156)	(0.066)
Lags of the dependent variable	Y	Y	Y	Y	Y	Y
ln per capita income	Y	Y	Y	Y	Y	Y
ln total income	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y
Soviet intervention controls	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y
R-squared	0.90	0.86	0.86	0.86	0.77	0.80
Observations	2,475	2,475	2,475	1,562	1,562	1,562

Notes: The unit of observation is a an autocratic country c, in year t, where t ranges from 1947 to 1989. The dependent variables are measured as the natural log of one plus their value. All regressions include year fixed effects, country fixed effects, two lags of the dependent variable, ln per capita income, ln total income, an indicator for leader turnover, current leader tenure, a GATT membership indicator, an indicator for signing the NY Convention, and Polity fixed effects. Coefficients are reported with standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

imports after a revision to the intervened-country's tariff schedule. If interventions affected US imports through tariff changes, then we should observe that during an intervention episode, the greatest effects occur in the years after the tariffs were altered. We check for this by constructing a variable that equals one for intervention years that follow a change in the tariff structure that occurred during the intervention episode, where an intervention episode is defined as continuous years of intervention.

The variable can be illustrated by returning to the example of Chile. Consider the intervention episode, lasting from 1964 to 1970, when Eduardo Frei was backed by the CIA. The first change in the tariff structure during this period was in 1967. Therefore, the new variable takes on the value of one from 1967 to 1970. These are the years during the intervention episode that followed a restructuring of industry tariffs.

The estimates are reported in table 14. Columns 1 and 4 first estimate whether US interventions increased the probability of a change in the tariff structure.[33] The estimates provide no evidence of this. The remaining columns in the table report estimates of our baseline estimating equations including the new post-tariff change intervention variable. The estimates show no evidence that within intervention episodes, the periods after a tariff change experienced a greater increase in US

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[33]We estimate a linear probability model. Logit and Probit models provide qualitatively identical estimates.

Table 14: Interventions, tariff changes, and US imports.

	Full sample			Autocracies only		
	Tariff change indicator	ln imports from US	ln US import share	Tariff change indicator	ln imports from US	ln US import share
	(1)	(2)	(3)	(4)	(5)	(6)
US influence	0.031	0.184***	0.145***	0.011	0.236***	0.214***
	(0.030)	(0.051)	(0.045)	(0.038)	(0.071)	(0.062)
US influence × Post tariff change		-0.065	-0.059		-0.068	-0.047
		(0.045)	(0.037)		(0.069)	(0.056)
Two lags of dependent variable	Y	Y	Y	Y	Y	Y
ln per capita income	Y	Y	Y	Y	Y	Y
ln total income	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y
GATT and NY convention controls	Y	Y	Y	Y	Y	Y
Polity fixed effects	Y	Y	Y	Y	Y	Y
Soviet intervention control	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y
R-squared	0.16	0.97	0.88	0.14	0.94	0.85
Observations	2715	3592	3592	1,622	2,087	2,087

Notes: The unit of observation is a country *c* in year *t*, where *t* ranges from 1947 to 1989. All regressions include year fixed effects, country fixed effects, a Soviet intervention control, two lags of the dependent variable, ln per capita income, ln total income, an indicator for leader turnover, current leader tenure, an indicator variable for GATT membership, an indicator variable for signing the NY convention, and Polity fixed effects. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

imports. In none of the specifications is the post-tariff change intervention variable positive.

A. *Additional Evidence from Timing*

The evidence reported to this point suggests that most, if not all, of the increase in foreign-country imports from the US arose through government purchases, and not through government policies that affected tariffs or FDI. In this section, we undertake an additional test, based on the timing of the effects of interventions, which allows us to further assess these findings. Among the channels we have considered, government procurement of foreign products can respond most quickly to US influence. Foreign governments can immediately switch to the purchase of US products. Other mechanisms, like tariffs and FDI, require a change in government policies, and this takes time. Further, these mechanisms also require that private actors in the economy respond to the changed policies, which also takes time. Therefore, the speed at which interventions cause an increase in imports from the US provides evidence about the underlying causal mechanism. If US influence immediately increased imports from the US, then this is added evidence for the government procurement channel.

We undertake two strategies to examine timing. The first is to disaggregate *US influence* into

Table 15: Timing and the effects of US interventions.

	ln share of imports from the US				ln imports from the US			
	Full sample		Autocracies		Full sample		Autocracies	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
US influence (onset year)	0.191**		0.330***		0.174**		0.330**	
	(0.075)		(0.121)		(0.088)		(0.143)	
US influence (intermediate year)	0.097***		0.167***		0.125***		0.176***	
	(0.029)		(0.050)		(0.033)		(0.055)	
US influence (offset year)	0.177***		0.247**		0.175**		0.256**	
	(0.053)		(0.101)		(0.069)		(0.130)	
US influence		0.140***		0.176***		0.154***		0.206***
		(0.042)		(0.060)		(0.046)		(0.066)
US influence × intervention year		-0.006		-0.001		-0.005		-0.005
		(0.005)		(0.007)		(0.005)		(0.008)
US influence × intervention year^2		0.000		0.000		0.000		0.000
		(0.001)		(0.001)		(0.001)		(0.001)
Lagged dependent variables	Y	Y	Y	Y	Y	Y	Y	Y
Soviet intervention control	Y	Y	Y	Y	Y	Y	Y	Y
ln per capita income, ln total income	Y	Y	Y	Y	Y	Y	Y	Y
Leader turnover, leader tenure	Y	Y	Y	Y	Y	Y	Y	Y
GATT and NY convention controls	Y	Y	Y	Y	Y	Y	Y	Y
Polity fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Country fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.88	0.88	0.86	0.86	0.97	0.97	0.94	0.94
Observations	3,864	3,864	2,327	2,327	3,864	3,864	2,327	2,327

Notes: The unit of observation is a country c in year t, where t ranges from 1947 to 1989. All regressions include year fixed effects, country fixed effects, a Soviet intervention control, two lags of the dependent variable, ln per capita income, ln total income, an indicator for leader turnover, current leader tenure, an indicator variable for GATT membership, an indicator for signing the NY convention, and Polity fixed effects. The odd numbered columns control for an indicator variable that equals one if period t is within 5 years before the onset of an intervention episode. The even numbered columns include indicator variables that equals one if country c is at war with the US in period t, and if the US has placed a sanction against US exports to country c in year t. Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5 and 10% levels.

three variables. The first is an indicator variable that equals one in the first year of an intervention episode, *US influence (onset year)*. The second is an indicator for the last year of the episode, *US influence (offset year)*. The third is an indicator for interventions in the years between the onset and offset years, *US influence (intermediate year)*. We include the three variables in the estimating equations rather than *US influence*. By doing this, we are able to identify which interventions have the largest effects on trade. The results are reported in the odd numbered columns of table 15. The estimates suggest that interventions, even in their first year, have large effects. In other words, US influence immediately causes an increased purchase of US products. Moreover, the effect of the interventions does not appear to change over the tenure of the intervention episode. In all four specifications, standard *F*-tests cannot reject the null hypothesis that the coefficients for the three intervention variables are equal.

The second strategy we employ allows the effect of *US influence* to differ depending on the number of previous consecutive periods of intervention years experienced by the country. This tests explicitly whether, during an intervention episode, a year of intervention begins to have a

stronger or weaker impact on trade over time. In practice, we interact *US influence* with how many years into the intervention episode period t is, and with this measure squared (this allows the differential effect to be non-linear).[34] The results are reported in the even numbered columns of table 15. Again, there is no evidence of a differential effect of an intervention depending on the number of previous intervention years.

8. Conclusions

Our analysis has provided evidence that increased political influence, arising from CIA interventions during the Cold War, was used by the US to create a larger foreign market for its products. We show that following CIA interventions, foreign-country imports from the US increased dramatically. Further, the increase was greatest in industries in which the US was the least competitive in producing, and there was no similar increase in US purchases of intervened-country exports.

The empirical analysis first addressed the issue of causality by explicitly correcting for the potential endogeneity of CIA interventions. We did this by controlling for pre-trends in the dependent variable, pre-intervention fixed effects, and for observable factors potentially correlated with the onset of CIA interventions and trade flows.

We then turned to alternative explanations for the increase in imports from the US. We showed that the surge in US imports cannot be explained by decreased trade costs. A testable implication of the trade costs explanation is that the increase in US imports should have been concentrated in industries in which the US had a comparative advantage. We showed that instead, the increase was greatest in industries in which the US had a comparative *dis*advantage. We then tested the hypothesis that the increase in US imports arose because the newly installed leaders were more ideologically aligned with the US, being more pro-capitalist and more pro-Western. The US-specific increase in imports that we identify may have been part of a more general increase in imports from all countries that were more ideologically aligned with the new regime. We showed that the data do not support this explanation. We observe no increase in imports from non-US countries with similar ideologies, measured using either voting behavior in the UN general assembly or NATO membership. The last alternative explanation we considered was that the increase in US imports arose because the US provided more loans and grants to the new regime. This would have enabled, and encouraged, intervened countries to import more US products. We tested for this and found

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[34]We reach the same conclusion if we restrict the interaction to be linear.

that although loans and grants, measured by economic aid, military aid, food aid, and Ex-Im Bank loans, did increase following an intervention, they 4are only able to account for, at most, 20% of the observed increase in imports from the US.

We then turned to the channels underlying the relationship between CIA interventions and imports from the US. We provided evidence that most, and possibly all, of the effect arose through government purchases. Following CIA interventions, the government was influenced to directly purchase US products, and this influence was greatest for products in which US producers were uncompetitive in producing.

Appendix A.   Relationship Between the Theoretically Derived Gravity Model and the Estimating Equations

This section explicitly derives the relationship between our estimating equations and the theoretically derived gravity model from Anderson and van Wincoop (2003). Consider the equation for the theoretically derived gravity model with symmetric trade costs (e.g., Anderson and van Wincoop, 2003):

$$m_{t,c,e} = \frac{Y_{t,c}Y_{t,e}}{Y_t^W}\left[\frac{\tau_{t,c,e}}{P_{t,c}P_{t,e}}\right]^{1-\sigma} \tag{A 1}$$

where $m_{t,c,e}$ denotes imports into country c from exporter e in year t. $Y_{t,c}$ is total GDP of the importing country c in year t, $Y_{t,e}$ is total GDP of the exporting country e in year t, and Y_t^W is world GDP in year t. The parameter σ is the elasticity of substitution between all goods. $\tau_{t,c,e}$ measures bilateral trade related costs when shipping goods from e to c, and $P_{t,c}$ and $P_{t,e}$ are multilateral resistance terms for countries c and e, respectively. These are complex non-linear functions of the full set of bilateral cost terms $\{\tau_{t,c,e}\}$. See equation (12) of Anderson and van Wincoop (2003) for derivation and a general discussion.

Our estimating equations can be derived from equation (A 1). First consider equation (1) where the dependent variable is imports from the US into country c in year t. Let Y_t^{US} denote US income, P_t^{US} denote the multilateral resistance term for the US, and $\tau_{t,c}^{US}$ denote trade frictions between the US and country c. Then country c's imports in year t that are from the US is given by:

$$m_{t,c}^{US} = \frac{Y_{t,c}Y_t^{US}}{Y_t^W}\left[\frac{\tau_{t,c}^{US}}{P_{t,c}P_t^{US}}\right]^{1-\sigma} \tag{A 2}$$

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Taking natural logs gives:

$$\ln m_{t,c}^{US} = \ln Y_{t,c} + \ln \frac{Y_t^{US}}{Y_t^W} - (1-\sigma) \ln P_t^{US} + (1-\sigma) \ln \frac{\tau_{t,c}^{US}}{P_{t,c}} \tag{A 3}$$

Equation (A 3) is the theoretical counterpart to the variant of estimating equation (1) where the dependent variable is the natural log of imports from the US. The first term in the estimating equation, $\ln Y_{t,c}$, is controlled for explicitly in (1) by the natural log of country c's year t total income. The second term in equation (A 3), $\ln \frac{Y_t^{US}}{Y_t^W} - (1-\sigma) \ln P_t^{US}$, is absorbed by the year fixed effects in equation (1). The final term $(1-\sigma) \ln \frac{\tau_{t,c}^{US}}{P_{t,c}}$ is the channel through which the CIA intervention variable, $US\,influence_{t,c}$, affects trade flows. Therefore, the coefficient β in (1) captures the reduced-form effect of CIA interventions on trade through both country c's trade costs with the US, $\tau_{t,c}^{US}$, and through its trade costs with all other countries, $P_{t,c}$. The additional control variables in equation (1) are included to control for additional factors that may also affect the costs of trading with the US and other countries, and therefore may also influence $\frac{\tau_{t,c}^{US}}{P_{t,c}}$.

Unlike the famous border effect setting, our variable of interest $US\,influence_{t,c}$ not only directly affects trade frictions between c and the US, but also frictions between country c and other (non-US) exporters e. US interventions, for example, affected the "costs" of a country's trade with the Soviet Union, communist or socialist countries, and even neutral countries. As a result, we are not able to separately identify the effect of interventions on $\tau_{t,c}^{US}$ and $P_{t,c}$. Instead we are only able to identify the reduced form impact of CIA interventions on the relative costs of trading with the US, $\frac{\tau_{t,c}^{US}}{P_{t,c}}$. Given that we are not interested in estimating the structural parameter $\tau_{t,c}^{US}$, we do not have to worry about separately identifying the parameter from the multilateral resistance term as in Anderson and van Wincoop (2003). Therefore, our estimating equation does not control explicitly for the multilateral resistance term.

Next consider equation (1) (where the dependent variable is the natural log of the share of total imports that are from the US). To see the relationship with equation (A 1), first note that world imports are given by:

$$m_{t,c}^W = \sum_e \frac{Y_{t,c} Y_{t,e}}{Y_t^W} \left[\frac{\tau_{t,c,e}}{P_{t,c} P_{t,e}} \right]^{1-\sigma} = \frac{Y_{t,c}}{Y_t^W P_{t,c}^{1-\sigma}} \sum_e Y_{t,e} \left[\frac{\tau_{t,c,e}}{P_{t,e}} \right]^{1-\sigma} \tag{A 4}$$

Dividing (A 2) by (A 4) gives:

$$\frac{m_{t,c}^{US}}{m_{t,c}^W} = \frac{Y_t^{US}}{(P_t^{US})^{1-\sigma}} \left\{ \frac{(\tau_{t,c}^{US})^{1-\sigma}}{\sum_e Y_{t,e} \left[\frac{\tau_{t,c,e}}{P_{t,e}} \right]^{1-\sigma}} \right\}$$

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Taking natural logs gives:

$$\ln \frac{m_{t,c}^{US}}{m_{t,c}^{W}} = \ln \frac{Y_t^{US}}{(P_t^{US})^{1-\sigma}} + \ln \left\{ \frac{(\tau_{t,c}^{US})^{1-\sigma}}{\sum_e Y_{t,e} \left[\frac{\tau_{t,c,e}}{P_{t,e}}\right]^{1-\sigma}} \right\}$$

The first term is captured by the time period fixed effects in equation (1). The second term is the channel through which CIA interventions are expected to affect the natural log of the US import share. As above, our estimates capture the reduced form effects of CIA interventions on the composite term $\frac{(\tau_{t,c}^{US})^{1-\sigma}}{\sum_e Y_{t,e} \left[\frac{\tau_{t,c,e}}{P_{t,e}}\right]^{1-\sigma}}$. Again, because we are uninterested in identifying the effect of CIA interventions on the structural parameters, $\{\tau_{t,c,e}\}$, our estimating equations do not separately control for the multilateral resistance terms of Anderson and van Wincoop (2003). Instead, we estimate the full reduced form effect of CIA interventions on trade with the US.

Appendix B. Calculating Counterfactual Trade Flows

Recall that γ_1 and γ_2 are coefficients for the one- and two-year lags of the dependent variables, and β is the coefficient for *US influence*. Counterfactual measures are denoted by an overline. We use the following to construct counterfactual imports from the US had no interventions taken place, $\overline{\ln m_{t,c}^{US}}$:

$$\overline{\ln m_{t,c}^{US}} = \ln m_{t,c}^{US} - \beta \, US \, influence - \gamma_1 (\ln m_{t-1,c}^{US} - \overline{\ln m_{t-1,c}^{US}}) - \gamma_2 (\ln m_{t-2,c}^{US} - \overline{\ln m_{t-2,c}^{US}}) \qquad \text{(A 5)}$$

The first term subtracted from $\ln m_{t,c}^{US}$ is the adjusted to actual trade flows for the direct effect of an intervention in period t on imports from the US in the same period. The second term adjusts for the persistent effect of an intervention in period $t-1$ on imports in period t. This works through the impact that lagged trade has on current trade. The third term is the adjustment for the effect of intervention in period $t-2$ on trade in period t.

The calculations are made recursively beginning in 1947, the first period of the sample. For these observations the last two terms of (A 5) are equal to zero. The calculations are then made for 1948, which use the calculated counterfactual trade flows from 1947. In 1948 the second term in (A 5) is non-zero, while the third term is zero. The 1949 calculation uses the counterfactual trade flows from 1947 and 1948. The procedure is continued until the final year 1989.

Appendix C.   Data Appendix

We use trade data from two different sources. When we are only concerned with total value of annual bilateral trade across all industries, we use trade data from the Correlates of War (COW) Project (Barbieri *et al.*, 2008), which reports aggregate bilateral trade flows (measured in millions of nominal US dollars) annually between 1870 and 2006. The data are originally from the International Monetary Fund's Direction of Trade Statistics. Data on trade flows at the industry level are taken from the United Nations' Comtrade Database. Unlike the aggregate-level COW trade data, the Comtrade data only begin in 1962. Our industry-level analysis therefore only examines interventions between 1962 to 1989.

Data on real per capita income and aggregate GDP are from Maddison (2003). The figures are given in 1990 International Geary-Khamis dollars. The controls for leadership turnover and leadership tenure are from Bueno de Mesquita, Smith, Siverson, and Morrow (2004). Our democracy fixed effects are constructed from the revised Polity2 measure from the Polity IV Database. The variable is a composite measure that is increasing in the extent of institutionalized democracy in a regime. The measure ranges from -10 (strongly autocratic) to $+10$ (strongly democratic).

The GATT membership indicator variable is constructed from the date countries signed the GATT. This information is available from the WTO's web page: `www.wto.org/english/theWTO_e/gattmem_e.htm`. Similarly, the New York Convention indicator variable is constructed using the date the country ratified the convention. The information is from the United Nations Commission on International Trade Law (UNCITRAL): `www.uncitral.org/uncitral/en/uncitral_texts/arbitration/NYConvention_status.html`. Information on country voting patterns in the UN General Assembly are from Gartzke (2006). Sanctions data are from Hufbauer *et al.* (2009), and the conflict data are from Barbieri *et al.* (2008).

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