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Robustness Report on "Commercial Imperialism? Political Influence and Trade during the Cold War", by Daniel Berger, William Easterly, Nathan Nunn and Shanker Satyanath (2013)

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Abstract

[Berger, Easterly, Nunn and Satyanath \(2013\)](#) find that increased US political influence, arising from Cold War interventions, was used to create a larger export market for American products. They find that after CIA interventions, US imports increased dramatically, and the authors rule out other explanations. We first reproduce all regression tables in [Berger et al. \(2013\)](#), and then test for robustness by controlling for imports from other NATO countries and various forms of US aid, sanctions, by multi-way clustering the errors, and by conducting influential analysis. We find that the impact of CIA interventions on US exports is sensitive to additional controls and omitting outliers, although adding in region*year interactive fixed effects tends to strengthen the results. Overall, we find that the paper’s original results are robust with a coefficient in the same direction and significant at 5% in 17% of the robustness checks we ran (although 58% were significant at 10%). We find t/z scores 58% as large as the original study on average.

JEL Classification: D72, F14, F54, N42, N72

Keywords: Cold War, Trade, CIA interventions, Globalization and International Relations

*This robustness report was written as part of a meta-robustness project entitled “The robustness reproducibility of the American Economic Review”. See [Campbell, Brodeur, Dreber, Johannesson, Kopecky, Lusher and Tsoy \(2024\)](#) for more information.

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1 Introduction

[Berger et al. \(2013\)](#) – hereafter, BENS – argue that increased US political influence, arising from Cold War interventions, was used to create a larger export market for American products. Running a panel gravity-type regression, BENS find that US imports increased dramatically (roughly 32% on average) after CIA interventions during the Cold War. Based on this increase in US imports, BENS exclude other potential explanations, and conclude that US influence was used to increase US market share in export markets.

We first computationally reproduce all the regression tables in BENS using the data and code provided by the authors on the AER website. We find that we are able to reproduce all tables exactly. Then we then run a number of robustness checks on what we view as the key benchmark result. These include adding in a control variable for imports from other NATO countries, running a triple difference measuring US imports relative to imports from other NATO countries, multi-way clustering the errors, and including additional control variables such as for US sanctions, US alliances, and direct aid (including for US food aid, export-import loans, and direct economic aid). Note that BENS also include each of these controls, but they control for NATO imports in a slightly different empirical exercise, and the controls for US sanctions, alliances, and aid are included in separate regressions. We test whether they jointly reduce the apparent impact of US interventions. We additionally add in region*year interactive fixed effects and conduct influential analysis by excluding influential outliers according to calculated $dfbetas$.

We find that our added controls prove influential, and that estimation is sensitive to the type of errors estimated and to the omission of a small number of outliers. For example, when multi-way clustering and controlling for imports from other NATO countries, the impact of US interventions no longer has a statistically significant positive impact on US imports at 5% (though it is borderline significant at 10%). When we measure US imports relative to imports from other NATO countries, and

add in additional controls, we find that the effect size falls by about 40%, and the t-values are cut in half from the original specification, with results no longer statistically significant at the 10% level. When we additionally omit some outliers, the point estimate is no longer significant at conventional levels, and the sign on CIA interventions flips and becomes negative. By contrast, adding in region*year interactive FEs tends to strengthen the results.

Overall, the impact of CIA interventions was robust at a 5% confidence level in 17% of the 12 robustness checks we ran. That said, a number of specifications were borderline significant, as 58% of specifications were significant at 10%, and all but one had a coefficient in the same direction as the original study. On average, we find t/z-scores were 58% of the original study, ranging from -9% to 90%. Of the various robustness checks we ran, we prefer those that include the additional controls, perhaps including region*year interactive fixed effects, which yield different results that are alternatively (1) large, positive, and borderline significant at 5% when controlling for NATO imports, (2) about half as large in magnitude, but not significant when running a triple difference of imports from the US relative to imports from NATO, or (3) close to zero and not significant when outliers are excluded. Overall, it appears that US imports did increase after US interventions, but not significantly more than imports from other NATO countries once we include additional controls. We view our influential analysis as providing a caveat to this conclusion.

2 Replication

2.1 Regression model

We chose BENS Table 1, column (1) as the main benchmark result we will test robustness for.¹ We adopt the same empirical specification as BENS, using an identical cross-country panel trade regression. The dependent variable is imports

¹We chose this regression as it appears to be a benchmark result.

from the US into country c at time t as a share of GDP. US influence is a dummy variable for CIA interventions that takes on a value of one if, in a given year, the US either installed a foreign leader or provided covert support for the regime in power. $X_{t,c}$ is a vector of other controls.

$$\ln \frac{m_{t,c}^{US}}{Y_{t,c}} = \alpha_t + \alpha_c + \beta USinfluence_{t,c} + X_{t,c}\Gamma + \epsilon_{t,c}$$

In this report, we add additional control variables, clustering by country and year, and adding in country*year interactive fixed effects. We also run a triple difference, using US imports relative to imports from other NATO countries as the dependent variable in the following setup:

$$\ln \frac{m_{t,c}^{US}}{m_{t,c}^{NATO}} = \alpha_t + \alpha_c + \alpha_{region,t} + \beta USinfluence_{t,c} + X_{t,c}\Gamma + \epsilon_{t,c} \quad (2)$$

Where $\frac{m_{t,c}^{US}}{m_{t,c}^{NATO}}$ are imports from the US divided by imports from NATO, and $\alpha_{region,t}$ are region*year interactive FEs. That is, for each region, there is an individual fixed effect for each year.

2.2 Computational Reproduction

We first completed computational reproduction for all the regression tables in this paper, and, using the author-provided data and code, were able to reproduce the original results exactly.² In this note, we simply show the reproduced results of BENS Table 1, column (1) in our own [Table 1](#), column (1). We confirm an impact of US CIA interventions on imports with a coefficient of .28, and a t-score of 2.57. This corresponds to an increase in US imports of 32%.

²Note that this study was not pre-registered. We implemented the computational replication before designing the robustness plan, and our study gives full leeway to the replicators to add more robustness checks after coming in contact with the data and even after. All robustness checks run on the paper's key results are recorded here.

2.3 Robustness Results

2.3.1 OLS and Reduced Form Robustness Checks

Our first robustness test in [Table 1](#), column (2) is to multiway cluster the standard errors, by country and year, in place of the Newey-West standard errors used by BENS. We find that this shrinks the t-value of US intervention by about 10%. In column (3), we include a control for imports from other NATO countries. The coefficient is almost as large, but the effects are now only borderline significant at 5%. In column (4), we include additional control variables which also appeared in various regressions in BENS. These include a dummy for US sanctions and various types of US economic aid. Now, the coefficient drops to .19 and is no longer significant at 5%. Note that while BENS did include these controls, to our knowledge, they did not also control for imports from other NATO countries, or test robustness to alternative forms of clustering in this specification. In column (5), we add in additional controls that appear in BENS Appendix Table 1, including dummy variables for the threat of force, a show of force, and a dummy for being in an alliance with the US. The coefficient on US influence does happen to drop slightly, but is still positive, fairly large, and significant at 10%. The novel contribution is that we include these controls together, whereas BENS test them separately. Our estimated coefficient when combining the controls is smaller and less significant than when including them separately (.15 here vs. .25 in BENS Table 5, column (7) where the aid controls are included, or .238 in Appendix Table 1, column (5) where additional war and alliance controls are included).

Table 1: CIA Interventions & Imports: Add Controls & Clustered Errors

	(1)	(2)	(3)	(4)	(5)
	b/se/t/p	b/se/t/p	b/se/t/p	b/se/t/p	b/se/t/p
US Influence	0.283 (0.11) [2.57] {0.010}	0.283 (0.12) [2.33] {0.025}	0.258 (0.13) [1.98] {0.054}	0.192 (0.10) [1.88] {0.067}	0.146 (0.085) [1.72] {0.093}
ln(NATO Imports)			0.487 (0.081) [5.99] {0.000}	0.504 (0.075) [6.75] {0.000}	0.506 (0.074) [6.81] {0.000}
Sanctions				-0.782 (0.29) [-2.70] {0.010}	-0.652 (0.21) [-3.03] {0.004}
US Economic Aid				0.0335 (0.024) [1.38] {0.176}	0.0269 (0.025) [1.09] {0.282}
US Export-Import loan				0.0377 (0.014) [2.78] {0.008}	0.0324 (0.012) [2.82] {0.007}
US Food Aid				0.0947 (0.029) [3.29] {0.002}	0.0897 (0.030) [2.99] {0.005}
Threat of force					0.955 (1.74) [0.55] {0.586}
Show of force					-0.359 (0.36) [-0.99] {0.329}
Alliance w US					0.785 (0.44) [1.80] {0.079}
Observations	4149	4148	4145	4145	4145
Notes	Reproduction	+Cluster	+Control	+Controls	+Controls

Notes: This table first replicates Table 1, column (1) of BENS (other controls omitted here for space) in column (1), using Newey-West standard errors. The rest of the columns use errors clustered by country and year. The dependent variable in the first four columns is log imports from the US over GDP. In column (5), the dependent variable is log imports from the US normalized by log imports from other NATO countries. The sample includes 133 countries from 1947 to 1989.

2.3.2 Robustness: A Triple Difference and Additional Fixed Effects

In [Table 2](#), column (1), we adopt a triple difference from [Equation 2](#), and take US imports relative to imports from other NATO countries as the dependent variable. This is potentially an important robustness check, because if imports increased just as much from other NATO countries as they did from the US, then it might be, for example, that CIA interventions were correlated with a range of policies that might have favored trade with capitalist western countries in general vs. the US specifically. We find that the coefficient on US influence is still fairly large at .15, though not quite significant at 10%. In column (2), we include additional controls and find a decline in the magnitude and significance of US influence.

Next, [Table 2](#) column (3), we add region*year FEs to the baseline specification with additional controls, using a UN classification of world sub-regions.³ We find that the results get a bit stronger, as we estimate a coefficient of .20, with a t-value of 2.5 and statistically significant at 5%. In column (4), we add in additional controls, and our coefficient shrinks slightly, with significance at 10%. In column (5), we add in region*year FEs to the triple difference specification using US imports relative to imports from other NATO countries as the dependent variable, and we find that US influence is not significant.

³One can find this sub-region classification [here](#).

Table 2: Robustness: Using Relative Imports & Regional FEs

	(1)	(2)	(3)	(4)	(5)
	b/se/t/p	b/se/t/p	b/se/t/p	b/se/t/p	b/se/t/p
US Influence	0.146 (0.12) [1.23] {0.225}	0.105 (0.10) [1.03] {0.309}	0.200 (0.081) [2.48] {0.017}	0.156 (0.084) [1.86] {0.070}	0.100 (0.097) [1.03] {0.309}
Sanctions	-0.779 (0.31) [-2.51] {0.016}	-0.642 (0.24) [-2.64] {0.012}	-0.672 (0.24) [-2.83] {0.007}	-0.576 (0.19) [-3.10] {0.004}	-0.560 (0.21) [-2.73] {0.009}
US Economic Aid	0.0238 (0.026) [0.91] {0.367}	0.0284 (0.025) [1.14] {0.263}	0.0714 (0.024) [2.97] {0.005}	0.0726 (0.024) [3.06] {0.004}	0.0851 (0.021) [4.03] {0.000}
US Exp.-Imp. loan	0.0198 (0.015) [1.35] {0.183}	0.0151 (0.013) [1.17] {0.247}	0.0340 (0.011) [2.96] {0.005}	0.0307 (0.011) [2.92] {0.006}	0.0136 (0.011) [1.30] {0.201}
US Food Aid	0.128 (0.033) [3.86] {0.000}	0.122 (0.034) [3.54] {0.001}	0.127 (0.037) [3.43] {0.001}	0.126 (0.036) [3.55] {0.001}	0.127 (0.037) [3.40] {0.001}
Threat of force		0.594 (1.79) [0.33] {0.742}		0.941 (1.58) [0.59] {0.556}	0.611 (1.66) [0.37] {0.715}
Show of force		-0.434 (0.34) [-1.26] {0.214}		-0.124 (0.34) [-0.37] {0.713}	-0.278 (0.32) [-0.86] {0.397}
Alliance w US		0.804 (0.45) [1.78] {0.082}		0.716 (0.45) [1.61] {0.115}	0.763 (0.46) [1.66] {0.105}
ln(NATO Imports)			0.530 (0.082) [6.46] {0.000}	0.536 (0.084) [6.41] {0.000}	
Observations	4145	4145	4056	4056	4056
Dep.Var.	Rel.Imports	Rel.Imports	Imports	Imports	Rel.Imports
Added FEs	No	No	+Reg*Yr.FEs	+Reg*Yr.FEs	+Reg*Yr.FEs

Notes: Errors are clustered by country and year. The dependent variable in the first and fourth columns is log imports from the US relative to imports from other NATO countries. In columns (2) and (3), the dependent variable is log imports from the US over GDP. The first two columns include region*year interactive FEs. Column (3) uses the same specification as PENS Table 1, column (1) but omits outliers with dfbeta statistics larger than .031. Column (4) also omits observations with dfbeta statistics larger than .031. The sample includes 133 countries from 1947 to 1989.

2.3.3 Influential Analysis

In [Table 3](#), we estimate the *dfbeta* statistics for each observation for three separate regressions, and then purge the outliers with a (standard) cutoff of $2/\sqrt{N} = 2/\sqrt{4149} = .031$. In column (1), we run the original benchmark specification from PENS Table 1 column (1), and, purging the outliers, we find that the initial coefficient of .28 is much reduced to .11, and only borderline significant at 10%. In the next column, we return to the triple difference setup with additional controls, exclude outliers with *dfbeta* statistics greater than .031, and now find that even the sign on US influence flips, and is not significant. In column (3), we add in region*year FEs and the rest of our controls, and once again get a positive coefficient, albeit not significant.

Table 3: Robustness: Influential Analysis

	(1)	(2)	(3)
	b/se/t/p	b/se/t/p	b/se/t/p
US Influence	0.108 (0.064) [1.69] {0.098}	-0.0163 (0.073) [-0.22] {0.826}	0.0503 (0.048) [1.04] {0.305}
Sanctions		-0.547 (0.22) [-2.51] {0.016}	-0.342 (0.14) [-2.44] {0.019}
US Economic Aid		0.00930 (0.019) [0.48] {0.632}	0.0505 (0.013) [3.96] {0.000}
US Exp.-Imp. loan		0.00652 (0.012) [0.55] {0.587}	0.0113 (0.0084) [1.35] {0.185}
US Food Aid		0.122 (0.024) [5.01] {0.000}	0.104 (0.024) [4.42] {0.000}
Threat of force			0 (0.000000100) [0] {1.000}
Show of force			-0.208 (0.13) [-1.63] {0.112}
Alliance w US			0.349 (0.13) [2.65] {0.011}
Observations	4008	3969	3798
Dep.Var.	Imports	Rel.Imports	Rel.Imports
Added FEs	No	No	+Reg*Yr.FEs

Notes: Errors are clustered by country and year. For each regression, we have omitted outliers with $dfbeta$ statistics larger than .031. Column (1) runs the same specification as PENS Table 1, column (1), with log imports from the US over GDP as the dependent variable. Columns (2) and (3) use log imports from the US relative to imports from other NATO countries. Column (3) also includes region*year interactive FEs. The sample includes 133 countries from 1947 to 1989.

3 Conclusion

Overall, we find that the positive impact of institutional ownership on innovation is robust at a 5% confidence level in 17% of the 12 robustness checks we ran. On average, we find that t/z-scores were 58% of the original study, ranging from -.09 to .9. While it is clear that the results are sensitive in some specifications, interpreting these results is a bit tricky. The finding that US exports didn't increase more than exports from other NATO countries raises the possibility, for example, that US interventions increased exports due to a general reorientation of policies toward the west and away from the Soviet Union. One may note that the original logic for the conclusion that political influence was used to boost US exports was that other likely factors could be ruled out by showing that controlling for them did not kill the significance of US interventions. One might criticize this logic on the grounds that not all plausible factors, such as clandestine military aid, can be controlled for. What we do show is that other plausible factors can reduce the significance of US interventions on US imports, but this does not necessarily prove that interventions were not, for example, done to boost US imports but either failed in their purpose, or indirectly boosted imports from other NATO countries by roughly as much once known forms of aid are controlled for.

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