

# Supplementary appendix for “The Enforcement of U.S. Economic Sanctions and Global De-Risking Behavior”

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## 1 Introduction

This appendix include supplemental information about the specification and results of our auto-distributed lag (ADL) models, additional models to demonstrate the robustness of our results, and summary statistics.

## 2 Coding sanctions using ICEWS

To convert ICEWS events into early indicators of sanction presence in the (potential) target, we code running counts of code 163: “Impose embargo, boycott, or sanction” for all events in which the source is the U.S. government and the target is the target government. We also code a running count of code 085: “Ease economic sanctions, boycotts, or embargoes.” We consider sanctions to be in place when the running count of impositions is greater than the running count of easing.

The ICEWS algorithm is proprietary, rendering it impossible to know exactly how sanctions are captured. However, a glance at the data suggests that the tally of sanctions imposed reflects SDN entries as well as broader sanctions programs. For example, ICEWS data suggest that sanctions against Mexico accumulate between 2001 and 2018, most likely due to SDN entries associated with the KINGPIN Act. However, ICEWS counts of Mexico sanctions increase from 0 to 15 over this timeframe whereas more than 1,000 entities were added to the SDN list over this time frame. We suspect that ICEWS is capturing media reports on batches of SDN entries rather than individual entries. This coding practice would be useful towards our ends, however, as third-party firm knowledge of U.S. sanctions would likely vary with media attention to new impositions.

## 3 Full tables

Our main tables include a number of lags of explanatory and dependent variables and as such could not easily fit on a single page in the main text. Accordingly, we present the full tables here.

## 4 Selecting the optimal lag length

We specify auto-distributed lag (ADL) models of the following form:

$$y_{i,t} = \theta + \alpha_1 y_{i,t-1} + \dots + \alpha_p y_{i,t-p} + \beta_1 x_{i,t} + \dots + \beta_{1-q} x_{i,t-q} + \gamma_k z_{i,t} + \epsilon_{i,t}$$

Where  $y_{i,t}$  is our dependent variable,  $\theta$  is the constant term,  $\gamma_k$  is the coefficient for each control variable  $z$ , and  $\epsilon_{i,t}$  is the residual. We include  $p$  lags of our dependent variable (with associated  $\alpha$  coefficients) and  $q$  lags as well as the contemporaneous value of a given explanatory variable (with associated  $\beta$  coefficients).

For each of the ADL models presented in the main paper and this appendix, we selected the optimal lag length by comparing the BIC across every combination of lags (up to six) that produce white noise residuals—specifically where we fail to reject the null hypothesis of Breusch–Godfrey tests for serial correlation of orders 1 through 4. We used “for” loops in R to automate this process.

Table A.1: Coefficients and 95 percent confidence intervals for ADL models with heteroskedasticity-consistent standard errors.

	DV = log imports from sanction target		
	Model 1: 500k threshold	Model 2: 1m threshold	Model 3: 25m threshold
LDV <sub>t-1</sub>	0.42*** (0.40, 0.44)	0.42*** (0.40, 0.44)	0.42*** (0.40, 0.44)
LDV <sub>t-2</sub>	0.21*** (0.18, 0.23)	0.21*** (0.18, 0.23)	0.21*** (0.18, 0.23)
LDV <sub>t-3</sub>	0.09*** (0.06, 0.11)	0.09*** (0.06, 0.11)	0.09*** (0.06, 0.11)
LDV <sub>t-4</sub>	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)
LDV <sub>t-5</sub>	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)
LDV <sub>t-6</sub>	0.04*** (0.02, 0.06)	0.04*** (0.02, 0.06)	0.04*** (0.02, 0.06)
LDV <sub>t-7</sub>	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)
Inside penalty <sub>t</sub>	-0.05*** (-0.08, -0.02)	-0.07*** (-0.10, -0.05)	-0.12*** (-0.15, -0.08)
Inside penalty <sub>t-1</sub>	-0.05** (-0.08, -0.02)	-0.04** (-0.07, -0.01)	
Inside penalty <sub>t-2</sub>	-0.07*** (-0.10, -0.04)	-0.08*** (-0.11, -0.05)	
Outside penalty <sub>t</sub>	-0.02*** (-0.03, -0.01)	-0.04*** (-0.05, -0.03)	-0.04*** (-0.05, -0.02)
Outside penalty <sub>t-1</sub>	-0.04*** (-0.05, -0.02)	-0.04*** (-0.05, -0.03)	-0.05*** (-0.06, -0.03)
Outside penalty <sub>t-2</sub>	-0.02*** (-0.03, -0.01)	-0.02*** (-0.03, -0.01)	-0.02*** (-0.03, -0.01)
GDP importer <sub>t</sub>	0.96*** (0.77, 1.15)	0.93*** (0.74, 1.12)	0.90*** (0.71, 1.09)
GDP importer <sub>t-1</sub>	-0.45*** (-0.70, -0.20)	-0.41** (-0.66, -0.16)	-0.34** (-0.59, -0.10)
GDP importer <sub>t-2</sub>	-0.06 (-0.30, 0.18)	-0.04 (-0.29, 0.20)	-0.05 (-0.29, 0.19)
GDP importer <sub>t-3</sub>	0.11 (-0.12, 0.35)	0.01 (-0.23, 0.25)	-0.06 (-0.31, 0.19)
GDP importer <sub>t-4</sub>	-0.50*** (-0.73, -0.26)	-0.40** (-0.63, -0.16)	-0.37** (-0.61, -0.13)
GDP importer <sub>t-5</sub>	-0.18 (-0.41, 0.05)	-0.25* (-0.47, -0.02)	-0.10 (-0.33, 0.12)
GDP importer <sub>t-6</sub>	0.22 (-0.05, 0.48)	0.28* (0.00, 0.55)	0.16 (-0.10, 0.43)
GDP importer <sub>t-7</sub>	0.02 (-0.17, 0.20)	-0.01 (-0.19, 0.17)	-0.02 (-0.20, 0.16)
GDP target <sub>t</sub>	0.56*** (0.29, 0.83)	0.54*** (0.27, 0.81)	0.56*** (0.28, 0.83)
GDP target <sub>t-1</sub>	-0.23 (-0.64, 0.19)	-0.20 (-0.61, 0.20)	-0.20 (-0.60, 0.21)
GDP target <sub>t-2</sub>	-0.29 (-0.60, 0.02)	-0.25 (-0.56, 0.07)	-0.21 (-0.52, 0.10)
GDP target <sub>t-3</sub>	-0.08 (-0.37, 0.21)	-0.17 (-0.47, 0.12)	-0.27 (-0.57, 0.03)
GDP target <sub>t-4</sub>	-0.16 (-0.44, 0.13)	-0.08 (-0.37, 0.22)	-0.07 (-0.36, 0.23)
GDP target <sub>t-5</sub>	0.03 (-0.25, 0.30)	-0.02 (-0.30, 0.25)	0.10 (-0.17, 0.38)
GDP target <sub>t-6</sub>	0.43** (0.11, 0.76)	0.48** (0.15, 0.81)	0.38* (0.05, 0.70)
GDP target <sub>t-7</sub>	-0.13 (-0.38, 0.12)	-0.16 (-0.40, 0.09)	-0.15 (-0.39, 0.10)
OECD importer	0.02 (-0.03, 0.07)	0.02 (-0.04, 0.07)	0.02 (-0.04, 0.07)
OECD target	-0.04 (-0.08, 0.00)	-0.04* (-0.08, -0.00)	-0.04* (-0.08, -0.00)
US ally importer	-0.10** (-0.17, -0.03)	-0.09** (-0.16, -0.02)	-0.13*** (-0.20, -0.07)
US rival importer	-0.22*** (-0.32, -0.12)	-0.22*** (-0.32, -0.12)	-0.21*** (-0.31, -0.11)
US ally target	-0.12*** (-0.17, -0.07)	-0.12*** (-0.17, -0.07)	-0.12*** (-0.17, -0.07)
US rival target	-0.07* (-0.14, -0.01)	-0.09** (-0.15, -0.03)	-0.15*** (-0.21, -0.09)
Dyadic ally	0.11*** (0.05, 0.18)	0.11*** (0.05, 0.18)	0.11*** (0.05, 0.18)
Dyadic rival	-0.48 (-1.01, 0.06)	-0.48 (-1.01, 0.06)	-0.47 (-1.00, 0.06)
Both democracies	0.07*** (0.03, 0.10)	0.07*** (0.03, 0.10)	0.07*** (0.04, 0.10)
Both authoritarian	-0.20 (-0.53, 0.14)	-0.20 (-0.53, 0.13)	-0.21 (-0.55, 0.12)
log Distance	-0.07*** (-0.10, -0.04)	-0.07*** (-0.10, -0.04)	-0.07*** (-0.10, -0.04)
Contiguity	0.25*** (0.16, 0.34)	0.25*** (0.16, 0.35)	0.26*** (0.17, 0.35)
US sanction against importer	-0.02 (-0.06, 0.02)	-0.02 (-0.06, 0.02)	-0.02 (-0.06, 0.02)
Constant	-1.52*** (-1.94, -1.11)	-1.48*** (-1.90, -1.06)	-1.80*** (-2.20, -1.40)
Observations	49058	49058	49058
Adjusted R <sup>2</sup>	0.828	0.828	0.828

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

Table A.2: Coefficients and 95 percent confidence intervals for ADL models with heteroskedasticity-consistent standard errors.

	DV = log exports to sanction target		
	Model 4: 500k threshold	Model 5: 1m threshold	Model 6: 25m threshold
LDV <sub>t-1</sub>	0.41*** (0.39, 0.43)	0.41*** (0.39, 0.43)	0.41*** (0.39, 0.43)
LDV <sub>t-2</sub>	0.20*** (0.18, 0.22)	0.20*** (0.18, 0.22)	0.20*** (0.18, 0.22)
LDV <sub>t-3</sub>	0.10*** (0.08, 0.12)	0.10*** (0.08, 0.12)	0.10*** (0.08, 0.12)
LDV <sub>t-4</sub>	0.08*** (0.06, 0.09)	0.08*** (0.06, 0.09)	0.08*** (0.06, 0.09)
LDV <sub>t-5</sub>	0.08*** (0.06, 0.10)	0.08*** (0.06, 0.10)	0.08*** (0.06, 0.10)
Inside penalty <sub>t</sub>	-0.08*** (-0.11, -0.04)	-0.09*** (-0.12, -0.05)	-0.06** (-0.10, -0.02)
Outside penalty <sub>t</sub>	-0.01 (-0.02, 0.00)	-0.02** (-0.03, -0.01)	-0.02** (-0.03, -0.01)
GDP exporter <sub>t</sub>	0.69*** (0.40, 0.97)	0.66*** (0.37, 0.95)	0.67*** (0.38, 0.96)
GDP exporter <sub>t-1</sub>	-0.31 (-0.73, 0.11)	-0.27 (-0.69, 0.15)	-0.23 (-0.67, 0.20)
GDP exporter <sub>t-2</sub>	-0.20 (-0.51, 0.12)	-0.17 (-0.48, 0.15)	-0.27 (-0.59, 0.05)
GDP exporter <sub>t-3</sub>	-0.05 (-0.38, 0.27)	-0.16 (-0.49, 0.18)	-0.10 (-0.42, 0.22)
GDP exporter <sub>t-4</sub>	0.05 (-0.26, 0.36)	0.13 (-0.18, 0.44)	0.17 (-0.15, 0.48)
GDP exporter <sub>t-5</sub>	0.02 (-0.28, 0.31)	-0.05 (-0.33, 0.24)	-0.07 (-0.37, 0.22)
GDP exporter <sub>t-6</sub>	0.05 (-0.28, 0.39)	0.16 (-0.19, 0.50)	0.12 (-0.22, 0.45)
GDP exporter <sub>t-7</sub>	-0.06 (-0.30, 0.19)	-0.10 (-0.35, 0.14)	-0.08 (-0.32, 0.16)
GDP target <sub>t</sub>	1.44*** (1.23, 1.66)	1.43*** (1.21, 1.65)	1.44*** (1.22, 1.65)
GDP target <sub>t-1</sub>	-0.62*** (-0.90, -0.34)	-0.60*** (-0.88, -0.32)	-0.56*** (-0.84, -0.28)
GDP target <sub>t-2</sub>	0.05 (-0.16, 0.27)	0.09 (-0.13, 0.31)	-0.00 (-0.22, 0.22)
GDP target <sub>t-3</sub>	-0.64*** (-0.91, -0.38)	-0.73*** (-1.00, -0.45)	-0.69*** (-0.96, -0.42)
GDP target <sub>t-4</sub>	0.04 (-0.21, 0.28)	0.09 (-0.16, 0.34)	0.13 (-0.12, 0.38)
GDP target <sub>t-5</sub>	-0.36** (-0.63, -0.10)	-0.42** (-0.68, -0.16)	-0.45*** (-0.71, -0.18)
GDP target <sub>t-6</sub>	0.04 (-0.28, 0.37)	0.14 (-0.20, 0.48)	0.11 (-0.22, 0.44)
GDP target <sub>t-7</sub>	0.21* (0.01, 0.42)	0.17 (-0.04, 0.37)	0.19 (-0.01, 0.39)
OECD exporter	0.07** (0.02, 0.13)	0.07* (0.01, 0.12)	0.07* (0.01, 0.12)
OECD target	0.10*** (0.05, 0.16)	0.10*** (0.04, 0.15)	0.10*** (0.04, 0.15)
US ally exporter	-0.15*** (-0.21, -0.09)	-0.15*** (-0.21, -0.09)	-0.15*** (-0.22, -0.09)
US rival exporter	-0.20*** (-0.29, -0.11)	-0.20*** (-0.29, -0.11)	-0.20*** (-0.29, -0.11)
US ally target	-0.18*** (-0.26, -0.11)	-0.18*** (-0.26, -0.11)	-0.19*** (-0.26, -0.11)
US rival target	-0.12*** (-0.19, -0.05)	-0.13*** (-0.21, -0.06)	-0.17*** (-0.25, -0.10)
Dyadic ally	0.06 (-0.01, 0.13)	0.06 (-0.01, 0.12)	0.05 (-0.01, 0.12)
Dyadic rival	-0.15 (-0.41, 0.10)	-0.15 (-0.41, 0.10)	-0.15 (-0.40, 0.11)
Both democracies	0.05* (0.01, 0.09)	0.05* (0.01, 0.09)	0.05* (0.01, 0.09)
Both authoritarian	-0.04 (-0.26, 0.17)	-0.04 (-0.26, 0.17)	-0.05 (-0.27, 0.17)
log Distance	-0.16*** (-0.18, -0.13)	-0.15*** (-0.18, -0.13)	-0.15*** (-0.18, -0.13)
Contiguity	0.20*** (0.11, 0.29)	0.20*** (0.11, 0.29)	0.20*** (0.11, 0.30)
US sanction against exporter	-0.03 (-0.07, 0.02)	-0.03 (-0.07, 0.02)	-0.03 (-0.07, 0.02)
Constant	-3.11*** (-3.54, -2.68)	-3.07*** (-3.50, -2.65)	-3.11*** (-3.53, -2.69)
Observations	49058	49058	49058
Adjusted R <sup>2</sup>	0.813	0.813	0.813

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

## 5 Long-run multipliers

Figure 2 in the main paper presents long-run effects along with immediate effects. Whereas immediate effects represent the contemporary coefficient and 95% confidence interval for each explanatory variable. To calculate the LRM, we use the following general formula: for an ADL model with  $p$  lags of the dependent variable (with coefficients  $\alpha_{t-1}$  through  $\alpha_{t-p}$ ) and  $q$  lags of some given explanatory variable (with coefficients  $\beta_{t-0} [= \beta_t]$  through  $\beta_{t-q}$ ), the LRM is calculated as:

$$\frac{\sum_{i=0}^q \beta_{t-i}}{1 - \sum_{j=1}^p \alpha_{t-j}}$$

The variance of the long-run multiplier is cumbersome to calculate given this combination of variables. We use the DeltaMethod command through the Car package in R to produce both the LRM and 95% confidence interval, as presented in Figure 2 in the main text.

## 6 Models sub-sampled by OECD membership

There could be substantial differences between the relatively developed, and generally US-friendly members of the OECD relative to non-members. Though we control for OECD membership of both states in our main models, here we present a more fine-grained analysis that replicates our main models for sub-samples where state 1 either is or is not a member. We produce four tables of results below.

## 7 Models examining only financial sector penalties

We also examined models looking only at US enforcement against firms in the financial sector. To do so, we used updated data from ? that incorporates a sector variable for the target of enforcement actions. Results look similar, though we find weaker evidence with respect to the impact of outside-dyad penalties, particularly in the short run. We also present a replication of our main figure of results. Figure A.1 demonstrate that long-run effects are more consistent with our main findings except in the case of the largest penalties. However, we suspect that weaker results are not due to the fact that financial sector penalties have a weaker signaling effect. Rather, there are relatively few such penalties, resulting essentially in a small-n problem that could be inflating standard errors.

## 8 Models omitting financial sector penalties

Complementing an examination of only financial penalties, we also specified models that omit financial sector penalties. Once again, we find that results are generally consistent with those in the main paper. In fact, results seems somewhat stronger for non-financial sector penalties (see Figure A.2) than for financial sector penalties, at least with respect to inside-dyad penalties. We also find that long-run outside-dyad estimates have much larger confidence intervals here than when examining only outside-dyad penalties. Taken together, these results could suggest that financial sector penalties lead to more vicarious learning. However, it is again important to note that we might just get better estimates in this case (particularly for inside-dyad penalties) because we have more observations that include non-zero values for penalties in non-financial sectors.

Table A.3: Recplication of Table 1 where importer IS an OECD state.

	DV = log imports from sanction target		
	Model 1: 500k threshold	Model 2: 1m threshold	Model 3: 25m threshold
LDV <sub>t-1</sub>	0.44*** (0.38, 0.50)	0.44*** (0.38, 0.50)	0.44*** (0.38, 0.50)
LDV <sub>t-2</sub>	0.22*** (0.17, 0.28)	0.22*** (0.17, 0.28)	0.22*** (0.17, 0.28)
LDV <sub>t-3</sub>	0.11*** (0.05, 0.17)	0.11*** (0.05, 0.17)	0.11*** (0.05, 0.17)
LDV <sub>t-4</sub>	0.09*** (0.05, 0.14)	0.09*** (0.05, 0.14)	0.09*** (0.05, 0.14)
LDV <sub>t-5</sub>	0.02 (-0.02, 0.06)	0.02 (-0.02, 0.06)	0.02 (-0.02, 0.06)
Inside penalty - 500k <sub>t</sub>	-0.01 (-0.03, 0.01)		
Outside penalty - 500k <sub>t</sub>	-0.01** (-0.02, -0.00)		
Inside penalty - 1m <sub>t</sub>		-0.01 (-0.03, 0.01)	
Outside penalty - 1m <sub>t</sub>		-0.01*** (-0.02, -0.01)	
Inside penalty - 25m <sub>t</sub>			0.00 (-0.02, 0.03)
Outside penalty - 25m <sub>t</sub>			-0.01** (-0.02, -0.00)
GDP importer <sub>t</sub>	0.67*** (0.38, 0.95)	0.58*** (0.28, 0.89)	0.62*** (0.32, 0.92)
GDP importer <sub>t-1</sub>	-0.53*** (-0.82, -0.24)	-0.45** (-0.76, -0.14)	-0.49** (-0.79, -0.18)
GDP target <sub>t</sub>	0.64*** (0.39, 0.88)	0.62*** (0.38, 0.87)	0.63*** (0.38, 0.88)
GDP target <sub>t-1</sub>	-0.29 (-0.66, 0.09)	-0.29 (-0.67, 0.08)	-0.26 (-0.64, 0.12)
GDP target <sub>t-2</sub>	-0.36 (-0.73, 0.01)	-0.33 (-0.70, 0.04)	-0.41* (-0.78, -0.04)
GDP target <sub>t-3</sub>	-0.05 (-0.39, 0.30)	-0.06 (-0.40, 0.29)	-0.03 (-0.37, 0.31)
GDP target <sub>t-4</sub>	0.04 (-0.29, 0.37)	0.07 (-0.26, 0.40)	0.13 (-0.19, 0.45)
GDP target <sub>t-5</sub>	0.16 (-0.08, 0.39)	0.13 (-0.09, 0.35)	0.09 (-0.13, 0.31)
US ally importer	-0.07* (-0.13, -0.01)	-0.07* (-0.13, -0.01)	-0.07* (-0.13, -0.01)
US rival importer	0.01 (-0.03, 0.06)	0.01 (-0.03, 0.06)	0.01 (-0.03, 0.06)
US ally target	-0.09* (-0.17, -0.00)	-0.09* (-0.17, -0.01)	-0.09* (-0.17, -0.01)
US rival target	0.06** (0.02, 0.11)	0.07** (0.02, 0.11)	0.06** (0.02, 0.11)
Dyadic ally	-0.18 (-0.39, 0.04)	-0.18 (-0.39, 0.03)	-0.18 (-0.39, 0.03)
Dyadic rival	-0.09*** (-0.13, -0.05)	-0.09*** (-0.13, -0.05)	-0.09*** (-0.13, -0.04)
OECD target	0.10*** (0.06, 0.14)	0.10*** (0.06, 0.14)	0.10*** (0.06, 0.14)
Both democracies	-0.11*** (-0.14, -0.08)	-0.11*** (-0.14, -0.08)	-0.11*** (-0.14, -0.08)
Both authoritarian	0.07 (-0.00, 0.13)	0.07 (-0.00, 0.14)	0.07 (-0.00, 0.14)
log Distance	-0.00 (-0.05, 0.04)	-0.00 (-0.05, 0.04)	-0.00 (-0.05, 0.04)
Contiguity	-2.23*** (-2.87, -1.60)	-2.25*** (-2.88, -1.62)	-2.27*** (-2.90, -1.65)
Observations	14612	14612	14612
Adjusted R <sup>2</sup>	0.891	0.891	0.891

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

Table A.4: Replication of Table 1 where importer is NOT an OECD state.

	DV = log imports from sanction target		
	Model 1: 500k threshold	Model 2: 1m threshold	Model 3: 25m threshold
LDV <sub>t-1</sub>	0.43*** (0.40, 0.45)	0.43*** (0.40, 0.45)	0.43*** (0.40, 0.45)
LDV <sub>t-2</sub>	0.21*** (0.18, 0.23)	0.21*** (0.18, 0.23)	0.21*** (0.18, 0.23)
LDV <sub>t-3</sub>	0.10*** (0.08, 0.13)	0.10*** (0.08, 0.13)	0.10*** (0.07, 0.13)
LDV <sub>t-4</sub>	0.07*** (0.04, 0.09)	0.07*** (0.04, 0.09)	0.07*** (0.04, 0.09)
LDV <sub>t-5</sub>	0.09*** (0.07, 0.11)	0.09*** (0.07, 0.11)	0.09*** (0.07, 0.11)
Inside penalty - 500k <sub>t</sub>	-0.18*** (-0.22, -0.13)		
Outside penalty - 500k <sub>t</sub>	-0.02** (-0.03, -0.01)		
Outside penalty - 500k <sub>t-1</sub>	-0.03*** (-0.05, -0.02)		
Outside penalty - 500k <sub>t-2</sub>	-0.02*** (-0.03, -0.01)		
Inside penalty - 1m <sub>t</sub>		-0.22*** (-0.28, -0.16)	
Outside penalty - 1m <sub>t</sub>		-0.04*** (-0.05, -0.03)	
Outside penalty - 1m <sub>t-1</sub>		-0.04*** (-0.05, -0.02)	
Outside penalty - 1m <sub>t-2</sub>		-0.02*** (-0.03, -0.01)	
Inside penalty - 25m <sub>t</sub>			-0.34*** (-0.44, -0.23)
Outside penalty - 25m <sub>t</sub>			-0.04*** (-0.06, -0.03)
Outside penalty - 25m <sub>t-1</sub>			-0.06*** (-0.07, -0.04)
Outside penalty - 25m <sub>t-2</sub>			-0.03*** (-0.04, -0.02)
GDP importer <sub>t</sub>	1.00*** (0.79, 1.21)	0.98*** (0.76, 1.19)	0.95*** (0.73, 1.16)
GDP importer <sub>t-1</sub>	-0.48*** (-0.75, -0.21)	-0.46*** (-0.73, -0.19)	-0.41** (-0.68, -0.14)
GDP importer <sub>t-2</sub>	-0.04 (-0.30, 0.21)	0.00 (-0.26, 0.26)	-0.01 (-0.27, 0.25)
GDP importer <sub>t-3</sub>	0.15 (-0.12, 0.41)	0.03 (-0.24, 0.31)	-0.02 (-0.29, 0.26)
GDP importer <sub>t-4</sub>	-0.60*** (-0.86, -0.35)	-0.51*** (-0.76, -0.25)	-0.52*** (-0.78, -0.25)
GDP importer <sub>t-5</sub>	-0.21 (-0.46, 0.04)	-0.29* (-0.54, -0.04)	-0.17 (-0.42, 0.08)
GDP importer <sub>t-6</sub>	0.28 (-0.01, 0.58)	0.36* (0.06, 0.67)	0.27 (-0.03, 0.57)
GDP importer <sub>t-7</sub>	0.04 (-0.17, 0.24)	0.01 (-0.19, 0.21)	0.03 (-0.17, 0.23)
GDP target <sub>t</sub>	0.68*** (0.33, 1.04)	0.69*** (0.34, 1.04)	0.67*** (0.32, 1.03)
GDP target <sub>t-1</sub>	-0.33 (-0.87, 0.21)	-0.35 (-0.88, 0.19)	-0.36 (-0.88, 0.17)
GDP target <sub>t-2</sub>	-0.24 (-0.65, 0.17)	-0.20 (-0.62, 0.21)	-0.15 (-0.56, 0.26)
GDP target <sub>t-3</sub>	-0.26 (-0.63, 0.10)	-0.35 (-0.73, 0.03)	-0.41* (-0.80, -0.03)
GDP target <sub>t-4</sub>	-0.03 (-0.39, 0.34)	0.05 (-0.32, 0.43)	0.03 (-0.35, 0.40)
GDP target <sub>t-5</sub>	-0.02 (-0.38, 0.33)	-0.09 (-0.44, 0.26)	0.06 (-0.29, 0.41)
GDP target <sub>t-6</sub>	0.48* (0.06, 0.90)	0.55* (0.13, 0.97)	0.46* (0.05, 0.88)
GDP target <sub>t-7</sub>	-0.11 (-0.44, 0.21)	-0.13 (-0.45, 0.19)	-0.14 (-0.45, 0.18)
US rival importer	-0.19*** (-0.29, -0.09)	-0.19*** (-0.29, -0.09)	-0.19*** (-0.29, -0.09)
US ally target	-0.18*** (-0.24, -0.12)	-0.18*** (-0.24, -0.12)	-0.18*** (-0.24, -0.11)
US rival target	-0.05 (-0.13, 0.02)	-0.06 (-0.14, 0.02)	-0.08 (-0.15, 0.00)
Dyadic ally	0.41*** (0.23, 0.59)	0.41*** (0.23, 0.59)	0.41*** (0.22, 0.59)
Dyadic rival	-0.57 (-1.21, 0.07)	-0.57 (-1.21, 0.07)	-0.57 (-1.21, 0.07)
OECD target	-0.02 (-0.07, 0.03)	-0.03 (-0.08, 0.02)	-0.03 (-0.08, 0.02)
Both democracies	0.09*** (0.05, 0.13)	0.09*** (0.04, 0.13)	0.08*** (0.04, 0.13)
Both authoritarian	-0.22 (-0.57, 0.12)	-0.22 (-0.56, 0.12)	-0.23 (-0.57, 0.12)
log Distance	-0.09*** (-0.13, -0.06)	-0.09*** (-0.13, -0.05)	-0.09*** (-0.13, -0.05)
Contiguity	0.34*** (0.22, 0.46)	0.34*** (0.23, 0.46)	0.35*** (0.23, 0.47)
US sanction against importer	-0.04 (-0.09, 0.01)	-0.04 (-0.09, 0.01)	-0.04 (-0.09, 0.01)
Constant	-1.87*** (-2.37, -1.37)	-1.81*** (-2.32, -1.30)	-2.04*** (-2.53, -1.55)
Observations	37662	37662	37662
Adjusted R <sup>2</sup>	0.802	0.802	0.802

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

Table A.5: Replication of Table 2 where exporter IS an OECD state.

	DV = log exports to sanction target		
	Model 4: 500k threshold	Model 5: 1m threshold	Model 6: 25m threshold
LDV <sub>t-1</sub>	0.67*** (0.60, 0.73)	0.67*** (0.60, 0.73)	0.56*** (0.49, 0.62)
LDV <sub>t-2</sub>	0.05 (-0.03, 0.13)	0.05 (-0.03, 0.13)	0.09* (0.01, 0.18)
LDV <sub>t-3</sub>	0.11*** (0.05, 0.17)	0.11*** (0.06, 0.17)	0.14*** (0.07, 0.21)
LDV <sub>t-4</sub>	-0.01 (-0.06, 0.04)	-0.01 (-0.06, 0.04)	-0.04 (-0.11, 0.04)
LDV <sub>t-5</sub>	0.01 (-0.07, 0.09)	0.01 (-0.07, 0.09)	0.02 (-0.07, 0.10)
LDV <sub>t-6</sub>	-0.03 (-0.08, 0.02)	-0.03 (-0.08, 0.02)	-0.01 (-0.06, 0.05)
LDV <sub>t-7</sub>	0.06 (-0.01, 0.13)	0.06 (-0.01, 0.13)	0.09* (0.01, 0.16)
LDV <sub>t-8</sub>	0.03 (-0.01, 0.07)	0.03 (-0.01, 0.07)	
Inside penalty 500k <sub>t</sub>	-0.12*** (-0.19, -0.06)		
Inside penalty 500k <sub>t-1</sub>	0.05*** (0.02, 0.08)		
Inside penalty 500k <sub>t-2</sub>	-0.11** (-0.18, -0.04)		
Outside penalty 500k <sub>t</sub>	-0.12*** (-0.18, -0.05)		
Outside penalty 500k <sub>t-1</sub>	0.06*** (0.02, 0.09)		
Outside penalty 500k <sub>t-2</sub>	-0.12*** (-0.19, -0.05)		
Inside penalty 1m <sub>t</sub>		-0.01 (-0.03, 0.01)	
Outside penalty 1m <sub>t</sub>		-0.01* (-0.02, -0.00)	
Outside penalty 1m <sub>t-1</sub>		0.01 (-0.00, 0.02)	
Outside penalty 1m <sub>t-2</sub>		-0.02* (-0.03, -0.00)	
Inside penalty 25m <sub>t</sub>			0.00 (-0.02, 0.03)
Inside penalty 25m <sub>t-1</sub>			0.03* (0.01, 0.06)
Inside penalty 25m <sub>t-2</sub>			0.02 (-0.01, 0.04)
Outside penalty 25m <sub>t</sub>			-0.01 (-0.02, 0.01)
Outside penalty 25m <sub>t-1</sub>			0.02 (-0.00, 0.04)
Outside penalty 25m <sub>t-2</sub>			-0.00 (-0.01, 0.01)
GDP exporter <sub>t</sub>	0.45* (0.06, 0.83)	0.47* (0.11, 0.83)	0.49** (0.14, 0.84)
GDP exporter <sub>t-1</sub>	-0.07 (-0.47, 0.33)	-0.15 (-0.56, 0.26)	-0.13 (-0.62, 0.36)
GDP exporter <sub>t-2</sub>	-0.59* (-1.05, -0.12)	-0.49* (-0.92, -0.06)	-0.61** (-1.04, -0.19)
GDP exporter <sub>t-3</sub>	-0.08 (-0.46, 0.30)	-0.09 (-0.46, 0.29)	0.24 (-0.28, 0.76)
GDP exporter <sub>t-4</sub>	0.86*** (0.36, 1.35)	0.77** (0.31, 1.24)	0.58** (0.18, 0.97)
GDP exporter <sub>t-5</sub>	-0.62* (-1.13, -0.10)	-0.55* (-0.99, -0.11)	-0.29 (-0.64, 0.07)
GDP exporter <sub>t-6</sub>	0.63* (0.15, 1.11)	0.68** (0.23, 1.13)	0.48* (0.01, 0.95)
GDP exporter <sub>t-7</sub>	-0.05 (-0.78, 0.68)	-0.16 (-0.82, 0.50)	-0.63** (-1.01, -0.25)
GDP exporter <sub>t-8</sub>	-0.43 (-1.09, 0.23)	-0.40 (-1.05, 0.24)	
GDP target <sub>t</sub>	1.02*** (0.87, 1.18)	1.03*** (0.87, 1.19)	0.97*** (0.81, 1.13)
GDP target <sub>t-1</sub>	-0.70*** (-0.91, -0.49)	-0.71*** (-0.92, -0.49)	-0.47*** (-0.67, -0.28)
GDP target <sub>t-2</sub>	-0.07 (-0.23, 0.08)	-0.08 (-0.24, 0.08)	-0.11 (-0.28, 0.06)
GDP target <sub>t-3</sub>	-0.34*** (-0.52, -0.16)	-0.34*** (-0.52, -0.16)	-0.38*** (-0.57, -0.19)
GDP target <sub>t-4</sub>	0.23** (0.06, 0.41)	0.21* (0.04, 0.38)	0.13 (-0.03, 0.29)
GDP target <sub>t-5</sub>	-0.03 (-0.16, 0.11)	-0.01 (-0.15, 0.13)	-0.07 (-0.27, 0.13)
GDP target <sub>t-6</sub>			0.08 (-0.05, 0.20)
GDP target <sub>t-7</sub>	-0.03 (-0.09, 0.03)	-0.03 (-0.09, 0.02)	-0.07* (-0.14, -0.00)
US ally exporter	0.00 (-0.04, 0.04)	0.00 (-0.04, 0.04)	0.02 (-0.02, 0.07)
US ally target	-0.23*** (-0.29, -0.16)	-0.24*** (-0.30, -0.17)	-0.19*** (-0.26, -0.12)
US rival target	0.07*** (0.03, 0.11)	0.07*** (0.03, 0.11)	0.09*** (0.05, 0.14)
Dyadic ally	0.06 (-0.02, 0.14)	0.06 (-0.02, 0.14)	0.07 (-0.03, 0.18)
Dyadic rival	-0.05** (-0.09, -0.01)	-0.05** (-0.09, -0.01)	-0.07** (-0.11, -0.03)
OECD target	0.01 (-0.02, 0.04)	0.01 (-0.02, 0.04)	0.04* (0.01, 0.07)
Both democracies	-0.09*** (-0.13, -0.05)	-0.09*** (-0.13, -0.05)	-0.15*** (-0.20, -0.09)
log Distance	0.13** (0.05, 0.21)	0.13** (0.05, 0.21)	0.15*** (0.08, 0.23)
Contiguity	0.04** (0.01, 0.08)	0.04** (0.01, 0.07)	0.04* (0.01, 0.07)
US sanction against exporter	0.62 (-0.43, 1.68)	-1.19*** (-1.80, -0.59)	-1.27*** (-1.82, -0.71)
Observations	8075	8075	10007
Adjusted R <sup>2</sup>	0.942	0.942	0.929

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

Table A.6: Replication of Table 2 where exporter is NOT an OECD state.

	DV = log exports to sanction target		
	Model 4: 500k threshold	Model 5: 1m threshold	Model 6: 25m threshold
LDV <sub>t-1</sub>	0.39*** (0.37, 0.41)	0.39*** (0.37, 0.41)	0.39*** (0.37, 0.41)
LDV <sub>t-2</sub>	0.19*** (0.17, 0.22)	0.18*** (0.16, 0.21)	0.18*** (0.16, 0.21)
LDV <sub>t-3</sub>	0.09*** (0.07, 0.11)	0.09*** (0.06, 0.11)	0.09*** (0.06, 0.11)
LDV <sub>t-4</sub>	0.06*** (0.04, 0.08)	0.05*** (0.03, 0.08)	0.05*** (0.03, 0.08)
LDV <sub>t-5</sub>	0.05*** (0.03, 0.07)	0.04*** (0.02, 0.07)	0.05*** (0.02, 0.07)
LDV <sub>t-6</sub>	0.05*** (0.04, 0.07)	0.06*** (0.04, 0.08)	0.06*** (0.04, 0.08)
LDV <sub>t-7</sub>	0.04*** (0.02, 0.05)	0.02** (0.01, 0.04)	0.02** (0.01, 0.04)
LDV <sub>t-8</sub>		0.04*** (0.02, 0.05)	0.04*** (0.02, 0.05)
Inside penalty 500k <sub>t</sub>	-0.04 (-0.14, 0.05)		
Inside penalty 500k <sub>t-1</sub>	-0.04 (-0.16, 0.07)		
Inside penalty 500k <sub>t-2</sub>	-0.16* (-0.28, -0.03)		
Outside penalty 500k <sub>t</sub>	-0.01 (-0.03, 0.00)		
Outside penalty 500k <sub>t-1</sub>	-0.03*** (-0.05, -0.01)		
Outside penalty 500k <sub>t-2</sub>	-0.02*** (-0.04, -0.01)		
Inside penalty 1m <sub>t</sub>		-0.23*** (-0.33, -0.14)	
Outside penalty 1m <sub>t</sub>		-0.04*** (-0.05, -0.02)	
Outside penalty 1m <sub>t-1</sub>		-0.03*** (-0.04, -0.01)	
Outside penalty 1m <sub>t-2</sub>		-0.02* (-0.03, -0.00)	
Inside penalty 25m <sub>t</sub>			-0.21** (-0.37, -0.06)
Outside penalty 25m <sub>t</sub>			-0.04** (-0.06, -0.01)
Outside penalty 25m <sub>t-1</sub>			-0.04*** (-0.06, -0.02)
GDP exporter <sub>t</sub>	0.58*** (0.26, 0.90)	0.58** (0.21, 0.95)	0.54** (0.16, 0.92)
GDP exporter <sub>t-1</sub>	-0.20 (-0.69, 0.29)	-0.17 (-0.73, 0.38)	-0.10 (-0.66, 0.45)
GDP exporter <sub>t-2</sub>	-0.22 (-0.62, 0.17)	-0.31 (-0.77, 0.15)	-0.25 (-0.70, 0.20)
GDP exporter <sub>t-3</sub>	0.08 (-0.29, 0.46)	0.10 (-0.31, 0.51)	-0.10 (-0.50, 0.31)
GDP exporter <sub>t-4</sub>	-0.18 (-0.54, 0.17)	-0.15 (-0.54, 0.25)	-0.06 (-0.44, 0.33)
GDP exporter <sub>t-5</sub>	-0.07 (-0.40, 0.26)	-0.13 (-0.51, 0.26)	0.07 (-0.28, 0.42)
GDP exporter <sub>t-6</sub>	0.16 (-0.22, 0.54)	0.30 (-0.11, 0.72)	0.12 (-0.28, 0.52)
GDP exporter <sub>t-7</sub>	0.06 (-0.22, 0.34)	0.10 (-0.42, 0.61)	0.02 (-0.48, 0.53)
GDP exporter <sub>t-8</sub>		-0.14 (-0.49, 0.21)	-0.07 (-0.42, 0.28)
GDP target <sub>t</sub>	1.49*** (1.21, 1.78)	1.58*** (1.27, 1.89)	1.55*** (1.23, 1.88)
GDP target <sub>t-1</sub>	-0.58** (-0.96, -0.20)	-0.61** (-1.06, -0.17)	-0.51* (-0.96, -0.06)
GDP target <sub>t-2</sub>	-0.06 (-0.38, 0.27)	0.03 (-0.34, 0.40)	0.07 (-0.30, 0.45)
GDP target <sub>t-3</sub>	-0.43* (-0.79, -0.08)	-0.48* (-0.85, -0.10)	-0.70*** (-1.06, -0.34)
GDP target <sub>t-4</sub>	-0.07 (-0.40, 0.26)	-0.04 (-0.39, 0.30)	0.00 (-0.33, 0.34)
GDP target <sub>t-5</sub>	-0.61*** (-0.95, -0.26)	-0.31* (-0.56, -0.06)	-0.25* (-0.49, -0.01)
GDP target <sub>t-6</sub>	0.14 (-0.30, 0.59)		
GDP target <sub>t-7</sub>	0.27* (0.00, 0.55)		
US rival exporter	-0.26*** (-0.35, -0.16)	-0.22*** (-0.32, -0.12)	-0.21*** (-0.31, -0.11)
US ally target	-0.21*** (-0.30, -0.12)	-0.25*** (-0.35, -0.15)	-0.26*** (-0.36, -0.16)
US rival target	-0.10* (-0.20, -0.01)	-0.23*** (-0.33, -0.12)	-0.28*** (-0.39, -0.17)
Dyadic ally	0.26* (0.04, 0.48)	0.29* (0.05, 0.53)	0.29* (0.05, 0.53)
Dyadic rival	-0.23 (-0.52, 0.06)	-0.13 (-0.42, 0.16)	-0.12 (-0.42, 0.17)
OECD target	0.08* (0.01, 0.15)	0.17*** (0.09, 0.24)	0.16*** (0.08, 0.24)
Both democracies	0.05 (-0.01, 0.10)	0.05 (-0.01, 0.11)	0.06 (-0.01, 0.12)
Both authoritarian	-0.02 (-0.24, 0.19)	-0.00 (-0.32, 0.32)	-0.02 (-0.35, 0.31)
log Distance	-0.15*** (-0.19, -0.12)	-0.11*** (-0.15, -0.06)	-0.11*** (-0.15, -0.06)
Contiguity	0.21*** (0.09, 0.33)	0.22** (0.07, 0.37)	0.23** (0.08, 0.38)
US sanction against exporter	-0.04 (-0.10, 0.01)	-0.03 (-0.10, 0.04)	-0.03 (-0.10, 0.03)
Constant	-2.72*** (-3.30, -2.15)	-2.88*** (-3.54, -2.22)	-3.20*** (-3.82, -2.58)
Observations	37662	30027	30027
Adjusted R <sup>2</sup>	0.781	0.781	0.781

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

Table A.7: Replication of Table 1 including only financial sanctions.

	DV = log imports from sanction target		
	Model 1: 500k threshold	Model 2: 1m threshold	Model 3: 25m threshold
LDV <sub>t-1</sub>	0.42*** (0.40, 0.44)	0.42*** (0.40, 0.44)	0.42*** (0.40, 0.44)
LDV <sub>t-2</sub>	0.21*** (0.18, 0.23)	0.21*** (0.18, 0.23)	0.21*** (0.18, 0.23)
LDV <sub>t-3</sub>	0.09*** (0.06, 0.11)	0.09*** (0.06, 0.11)	0.09*** (0.06, 0.11)
LDV <sub>t-4</sub>	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)
LDV <sub>t-5</sub>	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)
LDV <sub>t-6</sub>	0.04*** (0.02, 0.05)	0.04*** (0.02, 0.05)	0.04*** (0.02, 0.05)
LDV <sub>t-7</sub>	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)
Inside penalty <sub>t</sub>	-0.07*** (-0.10, -0.04)	-0.08*** (-0.12, -0.05)	-0.06** (-0.11, -0.02)
Outside penalty <sub>t</sub>	-0.02 (-0.04, 0.01)	0.00 (-0.02, 0.02)	-0.02 (-0.06, 0.01)
Outside penalty <sub>t-1</sub>	0.01 (-0.01, 0.04)	-0.04*** (-0.05, -0.02)	0.01 (-0.02, 0.04)
Outside penalty <sub>t-2</sub>	0.02* (0.00, 0.03)	-0.03*** (-0.03, -0.02)	0.02 (-0.00, 0.04)
Outside penalty <sub>t-3</sub>	0.00 (-0.01, 0.02)	-0.02*** (-0.04, -0.01)	0.00 (-0.02, 0.02)
Outside penalty <sub>t-4</sub>	-0.02** (-0.04, -0.01)		-0.04** (-0.06, -0.01)
Outside penalty <sub>t-5</sub>	-0.03*** (-0.05, -0.02)		-0.04*** (-0.05, -0.02)
GDP importer <sub>t</sub>	0.88*** (0.68, 1.07)	0.86*** (0.67, 1.06)	0.88*** (0.68, 1.07)
GDP importer <sub>t-1</sub>	-0.35** (-0.60, -0.10)	-0.32* (-0.57, -0.07)	-0.34** (-0.59, -0.09)
GDP importer <sub>t-2</sub>	-0.03 (-0.27, 0.21)	-0.05 (-0.29, 0.20)	-0.04 (-0.28, 0.20)
GDP importer <sub>t-3</sub>	-0.07 (-0.32, 0.19)	-0.05 (-0.30, 0.20)	-0.06 (-0.31, 0.19)
GDP importer <sub>t-4</sub>	-0.30* (-0.55, -0.04)	-0.32* (-0.57, -0.07)	-0.28* (-0.54, -0.03)
GDP importer <sub>t-5</sub>	-0.28* (-0.54, -0.01)	-0.16 (-0.40, 0.09)	-0.28* (-0.55, -0.01)
GDP importer <sub>t-6</sub>	0.21 (-0.07, 0.50)	0.05 (-0.20, 0.31)	0.20 (-0.08, 0.48)
GDP importer <sub>t-7</sub>	0.04 (-0.15, 0.22)	0.09 (-0.09, 0.26)	0.04 (-0.15, 0.22)
GDP target <sub>t</sub>	0.52*** (0.24, 0.80)	0.52*** (0.24, 0.80)	0.53*** (0.25, 0.81)
GDP target <sub>t-1</sub>	-0.18 (-0.60, 0.24)	-0.16 (-0.58, 0.26)	-0.18 (-0.59, 0.24)
GDP target <sub>t-2</sub>	-0.22 (-0.53, 0.09)	-0.24 (-0.55, 0.07)	-0.22 (-0.53, 0.09)
GDP target <sub>t-3</sub>	-0.25 (-0.55, 0.06)	-0.25 (-0.56, 0.06)	-0.26 (-0.56, 0.05)
GDP target <sub>t-4</sub>	0.01 (-0.30, 0.32)	-0.01 (-0.31, 0.30)	0.02 (-0.29, 0.32)
GDP target <sub>t-5</sub>	-0.04 (-0.35, 0.26)	0.06 (-0.22, 0.35)	-0.04 (-0.35, 0.27)
GDP target <sub>t-6</sub>	0.39* (0.04, 0.74)	0.24 (-0.07, 0.56)	0.38* (0.03, 0.72)
GDP target <sub>t-7</sub>	-0.09 (-0.34, 0.16)	-0.03 (-0.27, 0.22)	-0.08 (-0.33, 0.17)
OECD importer	0.01 (-0.04, 0.06)	0.01 (-0.04, 0.06)	0.01 (-0.04, 0.06)
OECD target	-0.05* (-0.09, -0.01)	-0.05* (-0.09, -0.01)	-0.05* (-0.09, -0.01)
US ally importer	-0.11** (-0.18, -0.04)	-0.14*** (-0.21, -0.07)	-0.12** (-0.19, -0.05)
US rival importer	-0.22*** (-0.32, -0.12)	-0.21*** (-0.31, -0.11)	-0.21*** (-0.31, -0.11)
US ally target	-0.12*** (-0.17, -0.07)	-0.12*** (-0.18, -0.07)	-0.12*** (-0.17, -0.07)
US rival target	-0.13*** (-0.19, -0.07)	-0.15*** (-0.21, -0.08)	-0.15*** (-0.21, -0.08)
Dyadic ally	0.11*** (0.05, 0.18)	0.11*** (0.05, 0.17)	0.11*** (0.05, 0.18)
Dyadic rival	-0.48 (-1.01, 0.06)	-0.48 (-1.01, 0.06)	-0.47 (-1.01, 0.06)
Both democracies	0.07*** (0.03, 0.10)	0.07*** (0.04, 0.10)	0.07*** (0.04, 0.10)
Both authoritarian	-0.20 (-0.54, 0.13)	-0.21 (-0.54, 0.13)	-0.21 (-0.54, 0.13)
log Distance	-0.07*** (-0.10, -0.04)	-0.07*** (-0.10, -0.04)	-0.07*** (-0.10, -0.04)
Contiguity	0.26*** (0.17, 0.35)	0.26*** (0.17, 0.35)	0.26*** (0.17, 0.35)
US sanction against importer	-0.02 (-0.06, 0.02)	-0.02 (-0.06, 0.02)	-0.02 (-0.06, 0.02)
Constant	-2.28*** (-2.72, -1.84)	-1.87*** (-2.28, -1.47)	-2.20*** (-2.63, -1.77)
Observations	49058	49058	49058
Adjusted R <sup>2</sup>	0.828	0.828	0.828

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

Table A.8: Replication of Table 2 including only financial sanctions.

	DV = log exports to sanction target		
	Model 4: 500k threshold	Model 5: 1m threshold	Model 6: 25m threshold
LDV <sub>t-1</sub>	0.41*** (0.39, 0.43)	0.41*** (0.39, 0.43)	0.41*** (0.39, 0.43)
LDV <sub>t-2</sub>	0.20*** (0.18, 0.22)	0.20*** (0.18, 0.22)	0.20*** (0.18, 0.22)
LDV <sub>t-3</sub>	0.10*** (0.08, 0.12)	0.10*** (0.08, 0.12)	0.10*** (0.08, 0.12)
LDV <sub>t-4</sub>	0.08*** (0.06, 0.09)	0.08*** (0.06, 0.09)	0.08*** (0.06, 0.09)
LDV <sub>t-5</sub>	0.08*** (0.06, 0.10)	0.08*** (0.06, 0.10)	0.08*** (0.06, 0.10)
Inside penalty <sub>t</sub>	-0.07** (-0.12, -0.03)	-0.08*** (-0.12, -0.04)	-0.03 (-0.07, 0.01)
Outside penalty <sub>t</sub>	0.02 (-0.00, 0.04)	0.01 (-0.01, 0.03)	-0.01 (-0.03, 0.00)
Outside penalty <sub>t-1</sub>	-0.01 (-0.03, 0.01)	-0.02** (-0.03, -0.01)	
Outside penalty <sub>t-2</sub>	-0.01* (-0.02, -0.00)	-0.02*** (-0.03, -0.01)	
Outside penalty <sub>t-3</sub>	-0.03*** (-0.04, -0.02)	-0.03*** (-0.04, -0.01)	
GDP exporter <sub>t</sub>	0.53*** (0.23, 0.84)	0.53*** (0.23, 0.83)	0.69*** (0.40, 0.97)
GDP exporter <sub>t-1</sub>	-0.11 (-0.57, 0.34)	-0.13 (-0.59, 0.32)	-0.28 (-0.71, 0.16)
GDP exporter <sub>t-2</sub>	-0.28 (-0.64, 0.09)	-0.23 (-0.60, 0.14)	-0.24 (-0.56, 0.09)
GDP exporter <sub>t-3</sub>	-0.09 (-0.45, 0.27)	-0.11 (-0.47, 0.25)	-0.06 (-0.39, 0.26)
GDP exporter <sub>t-4</sub>	0.10 (-0.25, 0.45)	0.12 (-0.23, 0.47)	0.17 (-0.17, 0.51)
GDP exporter <sub>t-5</sub>	-0.04 (-0.35, 0.27)	-0.12 (-0.43, 0.20)	-0.08 (-0.38, 0.22)
GDP exporter <sub>t-6</sub>	-0.01 (-0.35, 0.33)	0.06 (-0.26, 0.39)	0.02 (-0.30, 0.35)
GDP exporter <sub>t-7</sub>	0.10 (-0.15, 0.35)	0.08 (-0.17, 0.32)	-0.03 (-0.26, 0.21)
GDP target <sub>t</sub>	1.29*** (1.06, 1.52)	1.30*** (1.07, 1.53)	1.46*** (1.25, 1.68)
GDP target <sub>t-1</sub>	-0.46** (-0.75, -0.17)	-0.49*** (-0.78, -0.20)	-0.60*** (-0.88, -0.32)
GDP target <sub>t-2</sub>	-0.01 (-0.25, 0.23)	0.04 (-0.20, 0.28)	-0.00 (-0.22, 0.22)
GDP target <sub>t-3</sub>	-0.65*** (-0.94, -0.36)	-0.67*** (-0.96, -0.38)	-0.65*** (-0.93, -0.38)
GDP target <sub>t-4</sub>	0.09 (-0.18, 0.36)	0.11 (-0.16, 0.38)	0.13 (-0.14, 0.40)
GDP target <sub>t-5</sub>	-0.42** (-0.70, -0.15)	-0.49*** (-0.77, -0.22)	-0.44** (-0.71, -0.17)
GDP target <sub>t-6</sub>	-0.05 (-0.38, 0.29)	0.03 (-0.30, 0.36)	0.01 (-0.31, 0.33)
GDP target <sub>t-7</sub>	0.37*** (0.16, 0.58)	0.35*** (0.14, 0.55)	0.25* (0.05, 0.45)
OECD exporter	0.04 (-0.02, 0.09)	0.04 (-0.02, 0.09)	0.07* (0.02, 0.12)
OECD target	0.06* (0.01, 0.12)	0.06* (0.00, 0.12)	0.10*** (0.05, 0.16)
US ally exporter	-0.17*** (-0.23, -0.10)	-0.17*** (-0.24, -0.11)	-0.16*** (-0.22, -0.10)
US rival exporter	-0.21*** (-0.30, -0.12)	-0.21*** (-0.30, -0.12)	-0.19*** (-0.28, -0.10)
US ally target	-0.18*** (-0.26, -0.11)	-0.18*** (-0.26, -0.11)	-0.19*** (-0.26, -0.11)
US rival target	-0.17*** (-0.24, -0.10)	-0.18*** (-0.25, -0.11)	-0.18*** (-0.25, -0.10)
Dyadic ally	0.05 (-0.02, 0.11)	0.04 (-0.03, 0.11)	0.05 (-0.02, 0.12)
Dyadic rival	-0.16 (-0.42, 0.09)	-0.16 (-0.42, 0.09)	-0.15 (-0.40, 0.11)
Both democracies	0.04 (-0.00, 0.08)	0.04 (-0.00, 0.08)	0.05* (0.01, 0.09)
Both authoritarian	-0.02 (-0.25, 0.20)	-0.02 (-0.25, 0.20)	-0.05 (-0.27, 0.17)
log Distance	-0.15*** (-0.18, -0.13)	-0.15*** (-0.18, -0.13)	-0.15*** (-0.18, -0.13)
Contiguity	0.22*** (0.12, 0.31)	0.22*** (0.13, 0.31)	0.20*** (0.11, 0.29)
US sanction against exporter	-0.02 (-0.06, 0.02)	-0.02 (-0.06, 0.02)	-0.03 (-0.07, 0.01)
Constant	-3.10*** (-3.55, -2.64)	-2.97*** (-3.41, -2.53)	-3.13*** (-3.55, -2.70)
Observations	49058	49058	49058
Adjusted R <sup>2</sup>	0.813	0.813	0.813

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

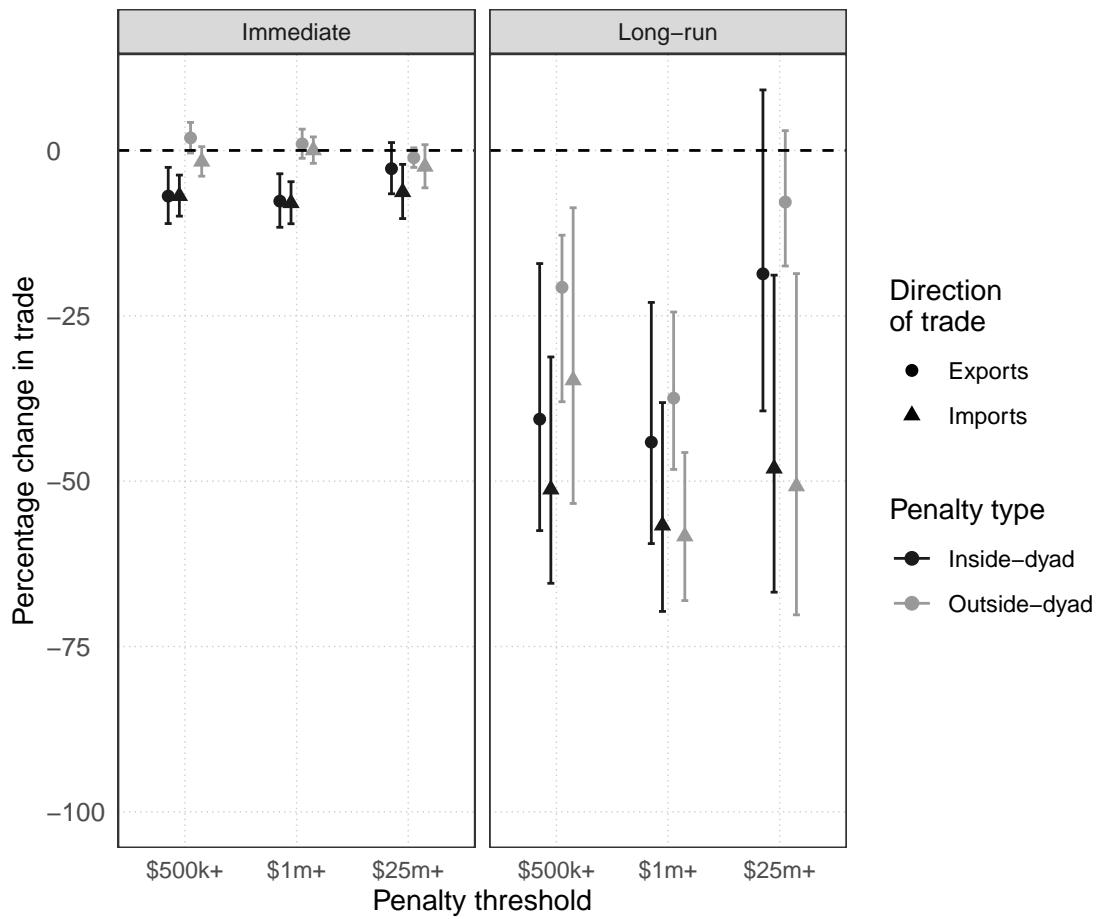


Figure A.1: Replication of main results looking only at financial sector penalties

Table A.9: Replication of Table 1 excluding financial sanctions.

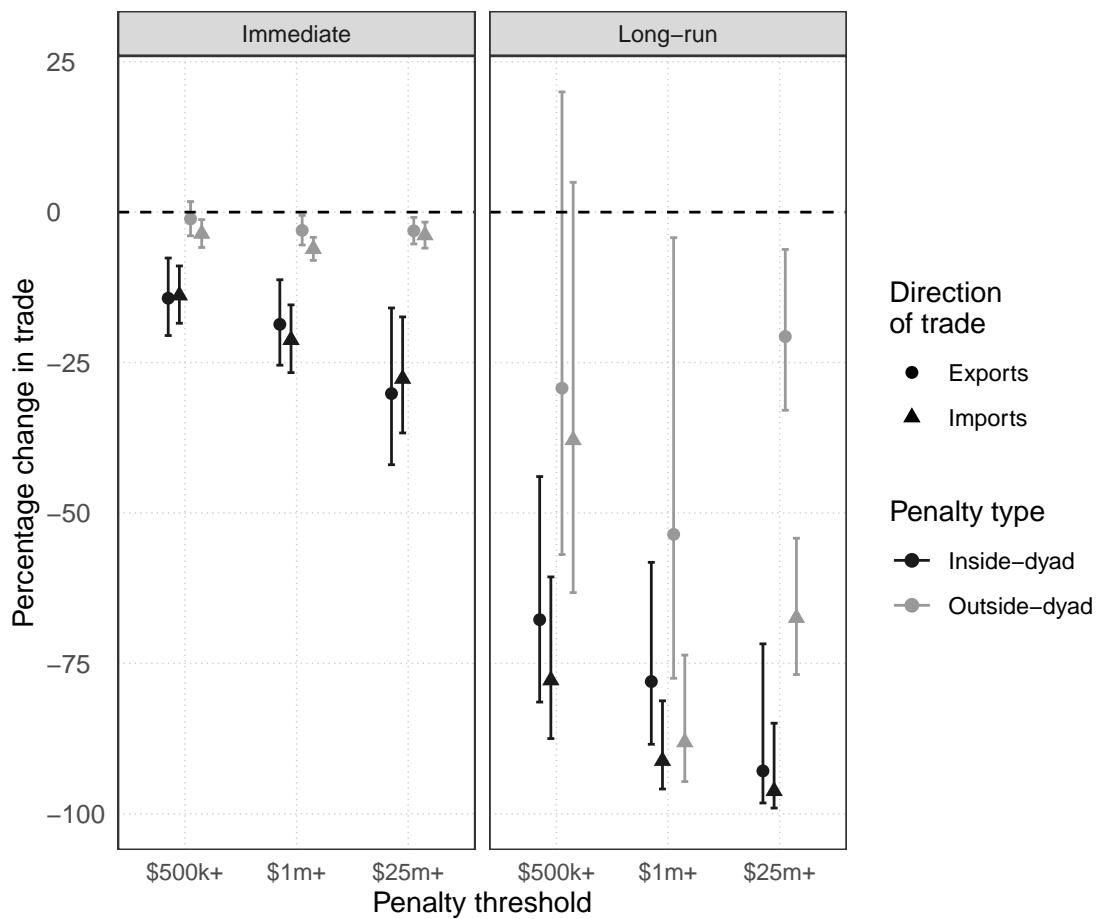
	DV = log imports from sanction target		
	Model 1: 500k threshold	Model 2: 1m threshold	Model 3: 25m threshold
LDV <sub>t-1</sub>	0.42*** (0.40, 0.44)	0.42*** (0.40, 0.44)	0.42*** (0.40, 0.44)
LDV <sub>t-2</sub>	0.21*** (0.18, 0.23)	0.21*** (0.18, 0.23)	0.21*** (0.18, 0.23)
LDV <sub>t-3</sub>	0.09*** (0.06, 0.11)	0.09*** (0.06, 0.11)	0.09*** (0.06, 0.11)
LDV <sub>t-4</sub>	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)
LDV <sub>t-5</sub>	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)
LDV <sub>t-6</sub>	0.04*** (0.02, 0.06)	0.04*** (0.02, 0.06)	0.04*** (0.02, 0.05)
LDV <sub>t-7</sub>	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)	0.05*** (0.03, 0.07)
Inside penalty <sub>t</sub>	-0.15*** (-0.20, -0.09)	-0.24*** (-0.31, -0.17)	-0.32*** (-0.46, -0.19)
Outside penalty <sub>t</sub>	-0.04** (-0.06, -0.01)	-0.06*** (-0.08, -0.04)	-0.04*** (-0.06, -0.02)
Outside penalty <sub>t-1</sub>	0.01 (-0.01, 0.04)	-0.05*** (-0.08, -0.03)	-0.07*** (-0.09, -0.04)
Outside penalty <sub>t-2</sub>	-0.01 (-0.03, 0.02)	-0.05** (-0.07, -0.02)	-0.00 (-0.03, 0.02)
Outside penalty <sub>t-3</sub>	0.06*** (0.03, 0.08)	-0.05*** (-0.07, -0.02)	
Outside penalty <sub>t-4</sub>	-0.07*** (-0.09, -0.05)		
Outside penalty <sub>t-5</sub>	0.92*** (0.73, 1.11)	0.99*** (0.80, 1.18)	0.94*** (0.75, 1.13)
GDP importer <sub>t</sub>	-0.38** (-0.64, -0.13)	-0.48*** (-0.73, -0.23)	-0.41** (-0.65, -0.16)
GDP importer <sub>t-1</sub>	-0.00 (-0.25, 0.24)	-0.02 (-0.24, 0.20)	-0.11 (-0.32, 0.10)
GDP importer <sub>t-2</sub>	-0.11 (-0.36, 0.14)	0.07 (-0.17, 0.31)	0.12 (-0.10, 0.35)
GDP importer <sub>t-3</sub>	-0.21 (-0.47, 0.04)	-0.36** (-0.62, -0.11)	-0.39** (-0.64, -0.15)
GDP importer <sub>t-4</sub>	-0.34* (-0.61, -0.08)	-0.26 (-0.52, 0.01)	-0.30* (-0.57, -0.04)
GDP importer <sub>t-5</sub>	0.30* (0.02, 0.59)	0.21 (-0.07, 0.49)	0.21 (-0.07, 0.50)
GDP importer <sub>t-6</sub>	-0.05 (-0.24, 0.13)	-0.03 (-0.22, 0.16)	0.05 (-0.14, 0.23)
GDP importer <sub>t-7</sub>	0.53*** (0.25, 0.82)	0.64*** (0.37, 0.92)	0.56*** (0.29, 0.82)
GDP target <sub>t</sub>	-0.17 (-0.59, 0.25)	-0.29 (-0.71, 0.12)	-0.21 (-0.60, 0.18)
GDP target <sub>t-1</sub>	-0.18 (-0.49, 0.14)	-0.24 (-0.53, 0.05)	-0.30* (-0.57, -0.02)
GDP target <sub>t-2</sub>	-0.34* (-0.64, -0.04)	-0.16 (-0.46, 0.14)	-0.10 (-0.37, 0.18)
GDP target <sub>t-3</sub>	0.07 (-0.23, 0.38)	-0.05 (-0.36, 0.26)	-0.05 (-0.35, 0.24)
GDP target <sub>t-4</sub>	-0.09 (-0.40, 0.22)	-0.02 (-0.33, 0.29)	-0.09 (-0.40, 0.21)
GDP target <sub>t-5</sub>	0.46** (0.11, 0.80)	0.39* (0.05, 0.73)	0.42* (0.07, 0.77)
GDP target <sub>t-6</sub>	-0.15 (-0.39, 0.10)	-0.13 (-0.38, 0.13)	-0.08 (-0.33, 0.17)
GDP target <sub>t-7</sub>	0.02 (-0.03, 0.07)	0.03 (-0.02, 0.08)	0.01 (-0.04, 0.07)
OECD importer	-0.04 (-0.08, 0.01)	-0.03 (-0.07, 0.02)	-0.05* (-0.09, -0.01)
OECD target	-0.13*** (-0.19, -0.06)	-0.13*** (-0.19, -0.06)	-0.13*** (-0.20, -0.07)
US ally importer	-0.21*** (-0.31, -0.11)	-0.21*** (-0.31, -0.11)	-0.21*** (-0.31, -0.11)
US rival importer	-0.12*** (-0.17, -0.07)	-0.12*** (-0.18, -0.07)	-0.12*** (-0.17, -0.07)
US ally target	-0.09** (-0.16, -0.03)	-0.13*** (-0.19, -0.07)	-0.14*** (-0.20, -0.07)
US rival target	0.11*** (0.05, 0.17)	0.11*** (0.05, 0.18)	0.11*** (0.05, 0.17)
Dyadic ally	-0.48 (-1.01, 0.06)	-0.47 (-1.00, 0.06)	-0.48 (-1.01, 0.06)
Dyadic rival	0.07*** (0.04, 0.10)	0.08*** (0.04, 0.11)	0.07*** (0.04, 0.10)
Both democracies	-0.21 (-0.54, 0.13)	-0.22 (-0.55, 0.12)	-0.20 (-0.54, 0.13)
Both authoritarian	-0.07*** (-0.10, -0.04)	-0.07*** (-0.10, -0.04)	-0.07*** (-0.10, -0.04)
log Distance	0.25*** (0.16, 0.34)	0.25*** (0.16, 0.34)	0.26*** (0.17, 0.35)
Contiguity	-0.02 (-0.06, 0.02)	-0.02 (-0.06, 0.02)	-0.02 (-0.06, 0.02)
US sanction against importer	-2.15*** (-2.61, -1.69)	-1.69*** (-2.11, -1.27)	-2.24*** (-2.64, -1.85)
Observations	49058	49058	49058
Adjusted R <sup>2</sup>	0.828	0.828	0.828

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

Table A.10: Replication of Table 2 excluding financial sanctions.

	DV = log exports to sanction target		
	Model 4: 500k threshold	Model 5: 1m threshold	Model 6: 25m threshold
LDV <sub>t-1</sub>	0.41*** (0.39, 0.43)	0.41*** (0.39, 0.43)	0.41*** (0.39, 0.43)
LDV <sub>t-2</sub>	0.20*** (0.18, 0.22)	0.20*** (0.18, 0.22)	0.20*** (0.18, 0.22)
LDV <sub>t-3</sub>	0.10*** (0.08, 0.12)	0.10*** (0.08, 0.12)	0.10*** (0.08, 0.12)
LDV <sub>t-4</sub>	0.08*** (0.06, 0.09)	0.08*** (0.06, 0.09)	0.08*** (0.06, 0.09)
LDV <sub>t-5</sub>	0.08*** (0.06, 0.10)	0.08*** (0.06, 0.10)	0.08*** (0.06, 0.10)
Inside penalty <sub>t</sub>	-0.15*** (-0.23, -0.08)	-0.21*** (-0.29, -0.12)	-0.36*** (-0.54, -0.17)
Outside penalty <sub>t</sub>	-0.01 (-0.04, 0.02)	-0.03* (-0.06, -0.01)	-0.03** (-0.05, -0.01)
Outside penalty <sub>t-1</sub>	-0.03** (-0.05, -0.01)	-0.03* (-0.06, -0.01)	
Outside penalty <sub>t-2</sub>	-0.01 (-0.04, 0.02)	-0.02 (-0.06, 0.01)	
Outside penalty <sub>t-3</sub>	0.01 (-0.02, 0.03)	-0.02 (-0.04, 0.01)	
GDP exporter <sub>t</sub>	0.68*** (0.38, 0.98)	0.67*** (0.37, 0.97)	0.69*** (0.41, 0.98)
GDP exporter <sub>t-1</sub>	-0.29 (-0.75, 0.16)	-0.32 (-0.78, 0.13)	-0.33 (-0.75, 0.09)
GDP exporter <sub>t-2</sub>	-0.29 (-0.65, 0.08)	-0.20 (-0.55, 0.14)	-0.20 (-0.51, 0.12)
GDP exporter <sub>t-3</sub>	0.10 (-0.24, 0.43)	0.06 (-0.29, 0.40)	0.02 (-0.30, 0.34)
GDP exporter <sub>t-4</sub>	0.10 (-0.24, 0.45)	0.03 (-0.32, 0.38)	-0.07 (-0.40, 0.25)
GDP exporter <sub>t-5</sub>	-0.23 (-0.57, 0.10)	-0.16 (-0.50, 0.17)	0.05 (-0.24, 0.34)
GDP exporter <sub>t-6</sub>	0.09 (-0.26, 0.45)	0.13 (-0.23, 0.49)	0.11 (-0.23, 0.44)
GDP exporter <sub>t-7</sub>	0.04 (-0.21, 0.28)	-0.01 (-0.26, 0.25)	-0.07 (-0.31, 0.17)
GDP target <sub>t</sub>	1.41*** (1.18, 1.64)	1.44*** (1.22, 1.67)	1.43*** (1.21, 1.64)
GDP target <sub>t-1</sub>	-0.59*** (-0.88, -0.30)	-0.66*** (-0.95, -0.36)	-0.63*** (-0.91, -0.35)
GDP target <sub>t-2</sub>	-0.02 (-0.26, 0.21)	0.03 (-0.19, 0.25)	0.05 (-0.17, 0.27)
GDP target <sub>t-3</sub>	-0.53*** (-0.80, -0.26)	-0.53*** (-0.81, -0.25)	-0.55*** (-0.81, -0.29)
GDP target <sub>t-4</sub>	0.12 (-0.15, 0.39)	0.02 (-0.25, 0.30)	-0.08 (-0.33, 0.17)
GDP target <sub>t-5</sub>	-0.59*** (-0.89, -0.29)	-0.52*** (-0.82, -0.23)	-0.36** (-0.62, -0.10)
GDP target <sub>t-6</sub>	0.05 (-0.31, 0.40)	0.09 (-0.27, 0.45)	0.13 (-0.20, 0.46)
GDP target <sub>t-7</sub>	0.33** (0.12, 0.54)	0.29** (0.08, 0.50)	0.18 (-0.02, 0.39)
OECD exporter	0.06* (0.01, 0.12)	0.06* (0.01, 0.11)	0.06* (0.01, 0.12)
OECD target	0.09** (0.03, 0.14)	0.09** (0.03, 0.14)	0.09** (0.03, 0.15)
US ally exporter	-0.17*** (-0.23, -0.11)	-0.17*** (-0.23, -0.10)	-0.17*** (-0.23, -0.11)
US rival exporter	-0.20*** (-0.29, -0.11)	-0.20*** (-0.29, -0.11)	-0.20*** (-0.29, -0.11)
US ally target	-0.19*** (-0.26, -0.11)	-0.19*** (-0.26, -0.11)	-0.18*** (-0.26, -0.11)
US rival target	-0.13*** (-0.21, -0.06)	-0.15*** (-0.22, -0.08)	-0.16*** (-0.23, -0.09)
Dyadic ally	0.05 (-0.02, 0.11)	0.05 (-0.02, 0.12)	0.05 (-0.02, 0.12)
Dyadic rival	-0.16 (-0.42, 0.09)	-0.16 (-0.41, 0.10)	-0.15 (-0.41, 0.10)
Both democracies	0.05* (0.01, 0.08)	0.05* (0.01, 0.08)	0.05* (0.01, 0.09)
Both authoritarian	-0.03 (-0.25, 0.19)	-0.04 (-0.26, 0.19)	-0.04 (-0.26, 0.18)
log Distance	-0.16*** (-0.18, -0.13)	-0.15*** (-0.18, -0.13)	-0.15*** (-0.18, -0.13)
Contiguity	0.20*** (0.11, 0.30)	0.21*** (0.11, 0.30)	0.20*** (0.11, 0.30)
US sanction against exporter	-0.03 (-0.07, 0.02)	-0.03 (-0.07, 0.02)	-0.03 (-0.07, 0.02)
Constant	-2.94*** (-3.45, -2.43)	-2.87*** (-3.36, -2.38)	-3.18*** (-3.59, -2.76)
Observations	49058	49058	49058
Adjusted R <sup>2</sup>	0.813	0.813	0.813

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001



## 9 Models examining trade with targets of non-US sanctions

One way to guard against spurious correlation is to demonstrate that we do *not* find results when we examine the association between US sanctions enforcement and trade with states that are facing sanction by states other than the US. We used the ICEWS data specifically to identify these third-party sanctions and coded a selection variable to include only observations where the exporter does face sanctions from some sender but does not face US sanctions. As expected, results show that there is no association between US sanctions enforcement and trade with third-party-sanctioned states.

Table A.11: Replication of Table 1 for states sanctioned by non-US states

	DV = log imports from sanction target		
	Model 1: 500k threshold	Model 2: 1m threshold	Model 3: 25m threshold
LDV <sub>t-1</sub>	0.40*** (0.37, 0.43)	0.40*** (0.37, 0.43)	0.40*** (0.37, 0.43)
LDV <sub>t-2</sub>	0.17*** (0.13, 0.20)	0.17*** (0.13, 0.20)	0.17*** (0.13, 0.20)
LDV <sub>t-3</sub>	0.12*** (0.09, 0.15)	0.12*** (0.09, 0.15)	0.12*** (0.09, 0.15)
LDV <sub>t-4</sub>	0.07*** (0.04, 0.10)	0.07*** (0.04, 0.10)	0.07*** (0.04, 0.10)
LDV <sub>t-5</sub>	0.09*** (0.06, 0.12)	0.09*** (0.06, 0.12)	0.09*** (0.06, 0.12)
LDV <sub>t-1</sub>	0.01 (-0.02, 0.05)	0.01 (-0.03, 0.05)	0.00 (-0.04, 0.05)
LDV <sub>t-2</sub>	0.01 (-0.01, 0.02)	0.00 (-0.01, 0.02)	0.00 (-0.02, 0.02)
LDV <sub>t-3</sub>	0.95*** (0.65, 1.26)	0.96*** (0.65, 1.26)	0.96*** (0.65, 1.26)
Inside penalty <sub>t</sub>	-0.21 (-0.59, 0.18)	-0.20 (-0.58, 0.19)	-0.19 (-0.58, 0.19)
Outside penalty <sub>t</sub>	0.11 (-0.28, 0.51)	0.11 (-0.28, 0.51)	0.12 (-0.28, 0.52)
GDP importer <sub>t</sub>	-0.81*** (-1.23, -0.39)	-0.83*** (-1.26, -0.40)	-0.84*** (-1.26, -0.41)
GDP importer <sub>t-1</sub>	0.28 (-0.12, 0.67)	0.26 (-0.14, 0.65)	0.26 (-0.14, 0.65)
GDP importer <sub>t-2</sub>	-0.31 (-0.70, 0.07)	-0.28 (-0.66, 0.10)	-0.28 (-0.66, 0.10)
GDP importer <sub>t-3</sub>	0.13 (-0.13, 0.39)	0.12 (-0.13, 0.38)	0.13 (-0.13, 0.38)
GDP importer <sub>t-4</sub>	1.07*** (0.68, 1.45)	1.09*** (0.69, 1.49)	1.09*** (0.69, 1.48)
GDP importer <sub>t-5</sub>	-1.25*** (-1.84, -0.66)	-1.23*** (-1.87, -0.59)	-1.22*** (-1.87, -0.57)
GDP importer <sub>t-6</sub>	0.42 (-0.11, 0.96)	0.40 (-0.13, 0.94)	0.40 (-0.17, 0.98)
GDP target <sub>t</sub>	-0.18 (-0.76, 0.40)	-0.23 (-0.81, 0.35)	-0.24 (-0.81, 0.33)
GDP target <sub>t-1</sub>	0.78** (0.22, 1.35)	0.76** (0.20, 1.31)	0.76** (0.21, 1.30)
GDP target <sub>t-2</sub>	-0.59** (-0.97, -0.20)	-0.54** (-0.89, -0.18)	-0.53** (-0.87, -0.19)
GDP target <sub>t-3</sub>	0.05 (-0.04, 0.15)	0.05 (-0.04, 0.15)	0.05 (-0.04, 0.15)
GDP target <sub>t-4</sub>	-0.12** (-0.21, -0.03)	-0.12** (-0.21, -0.03)	-0.12** (-0.21, -0.03)
GDP target <sub>t-5</sub>	0.05 (-0.08, 0.18)	0.05 (-0.08, 0.18)	0.05 (-0.08, 0.18)
OECD importer	-0.07 (-0.21, 0.07)	-0.07 (-0.21, 0.07)	-0.07 (-0.21, 0.07)
OECD target	-0.33*** (-0.41, -0.24)	-0.33*** (-0.41, -0.25)	-0.33*** (-0.41, -0.25)
US ally importer	0.13** (0.05, 0.22)	0.13** (0.05, 0.22)	0.13** (0.05, 0.22)
US rival importer	0.28 (-0.09, 0.65)	0.28 (-0.09, 0.65)	0.28 (-0.09, 0.65)
US ally target	0.07* (0.01, 0.13)	0.07* (0.01, 0.13)	0.07* (0.01, 0.13)
US rival target	0.21 (-0.00, 0.42)	0.21 (-0.01, 0.42)	0.21 (-0.01, 0.42)
Dyadic ally	-0.16*** (-0.20, -0.12)	-0.16*** (-0.20, -0.12)	-0.16*** (-0.20, -0.12)
Dyadic rival	0.04 (-0.21, 0.29)	0.04 (-0.21, 0.29)	0.04 (-0.21, 0.29)
Both democracies	-0.02 (-0.09, 0.04)	-0.02 (-0.09, 0.04)	-0.02 (-0.09, 0.04)
Both authoritarian	-0.00 (-0.01, 0.00)	-0.00 (-0.01, 0.00)	-0.00 (-0.01, 0.00)
log Distance	-3.62*** (-4.37, -2.87)	-3.57*** (-4.31, -2.83)	-3.56*** (-4.29, -2.84)
Observations	20207	20207	20207
Adjusted R <sup>2</sup>	0.813	0.813	0.813

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

## 10 Summary statistics

Finally, we present summary statistics for the variables presented in our models—including lags of our key dependent and explanatory variables.

Table A.12: Replication of Table 2 for states sanctioned by non-US states

	DV = log exports to sanction target		
	Model 4: 500k threshold	Model 5: 1m threshold	Model 6: 25m threshold
LDV <sub>t-1</sub>	0.42*** (0.39, 0.45)	0.42*** (0.39, 0.45)	0.42*** (0.39, 0.45)
LDV <sub>t-2</sub>	0.17*** (0.13, 0.20)	0.17*** (0.13, 0.20)	0.17*** (0.13, 0.20)
LDV <sub>t-3</sub>	0.10*** (0.07, 0.13)	0.10*** (0.07, 0.13)	0.10*** (0.07, 0.13)
LDV <sub>t-4</sub>	0.10*** (0.07, 0.13)	0.10*** (0.07, 0.13)	0.10*** (0.07, 0.13)
LDV <sub>t-5</sub>	0.07*** (0.05, 0.09)	0.07*** (0.05, 0.09)	0.07*** (0.05, 0.09)
Inside penalty <sub>t</sub>	-0.02 (-0.07, 0.03)	-0.04 (-0.08, 0.01)	-0.03 (-0.08, 0.01)
Inside penalty <sub>t-1</sub>	-0.03 (-0.07, 0.01)	-0.03 (-0.07, 0.01)	-0.03 (-0.08, 0.02)
Inside penalty <sub>t-2</sub>	-0.01 (-0.05, 0.04)	-0.02 (-0.06, 0.02)	-0.01 (-0.05, 0.04)
Inside penalty <sub>t-3</sub>	-0.02 (-0.05, 0.01)	-0.02 (-0.04, 0.01)	-0.02 (-0.05, 0.01)
Inside penalty <sub>t-4</sub>	-0.00 (-0.05, 0.04)	-0.01 (-0.05, 0.03)	-0.03 (-0.08, 0.02)
Inside penalty <sub>t-5</sub>	-0.03 (-0.07, 0.00)	-0.03 (-0.07, 0.00)	-0.03 (-0.07, 0.01)
Outside penalty <sub>t</sub>	-0.00 (-0.04, 0.04)	-0.01 (-0.05, 0.02)	-0.03 (-0.06, 0.01)
Outside penalty <sub>t-1</sub>	-0.00 (-0.04, 0.03)	-0.00 (-0.04, 0.03)	-0.01 (-0.05, 0.03)
Outside penalty <sub>t-2</sub>	0.02 (-0.02, 0.06)	0.01 (-0.02, 0.04)	0.02 (-0.02, 0.05)
Outside penalty <sub>t-3</sub>	-0.00 (-0.02, 0.02)	-0.00 (-0.02, 0.02)	0.00 (-0.02, 0.03)
Outside penalty <sub>t-4</sub>	-0.01 (-0.04, 0.02)	-0.01 (-0.03, 0.01)	-0.02 (-0.05, 0.01)
Outside penalty <sub>t-5</sub>	-0.01 (-0.04, 0.01)	-0.01 (-0.03, 0.02)	-0.02 (-0.05, 0.01)
GDP exporter <sub>t</sub>	0.31 (-0.04, 0.66)	0.31 (-0.04, 0.66)	0.31 (-0.04, 0.66)
GDP exporter <sub>t-1</sub>	-0.15 (-0.69, 0.39)	-0.15 (-0.69, 0.39)	-0.15 (-0.69, 0.39)
GDP exporter <sub>t-2</sub>	-0.05 (-0.65, 0.55)	-0.05 (-0.65, 0.55)	-0.05 (-0.65, 0.55)
GDP exporter <sub>t-3</sub>	-0.05 (-0.62, 0.53)	-0.05 (-0.62, 0.53)	-0.05 (-0.62, 0.52)
GDP exporter <sub>t-4</sub>	-0.05 (-0.62, 0.52)	-0.05 (-0.62, 0.52)	-0.05 (-0.62, 0.52)
GDP exporter <sub>t-5</sub>	0.25 (-0.31, 0.81)	0.25 (-0.31, 0.81)	0.25 (-0.31, 0.81)
GDP exporter <sub>t-6</sub>	-0.02 (-0.39, 0.34)	-0.02 (-0.39, 0.34)	-0.03 (-0.39, 0.34)
GDP target <sub>t</sub>	1.63*** (1.10, 2.17)	1.63*** (1.10, 2.17)	1.63*** (1.10, 2.17)
GDP target <sub>t-1</sub>	-0.85 (-1.70, 0.01)	-0.85 (-1.70, 0.01)	-0.85 (-1.70, 0.01)
GDP target <sub>t-2</sub>	0.17 (-0.64, 0.98)	0.17 (-0.64, 0.98)	0.17 (-0.64, 0.98)
GDP target <sub>t-3</sub>	-0.53 (-1.33, 0.27)	-0.53 (-1.33, 0.27)	-0.53 (-1.33, 0.27)
GDP target <sub>t-4</sub>	-0.19 (-0.92, 0.55)	-0.19 (-0.92, 0.55)	-0.19 (-0.92, 0.55)
GDP target <sub>t-5</sub>	-0.30 (-0.97, 0.36)	-0.30 (-0.97, 0.36)	-0.30 (-0.97, 0.36)
GDP target <sub>t-6</sub>	0.22 (-0.24, 0.69)	0.22 (-0.24, 0.69)	0.22 (-0.24, 0.69)
OECD exporter	-0.13** (-0.21, -0.04)	-0.13** (-0.21, -0.04)	-0.13** (-0.21, -0.04)
OECD target	0.05 (-0.06, 0.16)	0.05 (-0.06, 0.16)	0.05 (-0.06, 0.16)
US ally exporter	-0.01 (-0.13, 0.11)	-0.01 (-0.13, 0.11)	-0.01 (-0.13, 0.11)
US rival exporter	-0.12 (-0.25, 0.02)	-0.12 (-0.25, 0.02)	-0.11 (-0.25, 0.03)
US ally target	-0.03 (-0.14, 0.08)	-0.03 (-0.14, 0.08)	-0.03 (-0.14, 0.08)
US rival target	0.07 (-0.01, 0.15)	0.07 (-0.01, 0.15)	0.07 (-0.01, 0.15)
Dyadic ally	0.06 (-0.21, 0.33)	0.06 (-0.21, 0.33)	0.06 (-0.21, 0.33)
Dyadic rival	-0.00 (-0.07, 0.06)	-0.00 (-0.07, 0.06)	-0.00 (-0.06, 0.06)
Both democracies	-0.15 (-0.69, 0.38)	-0.15 (-0.69, 0.38)	-0.15 (-0.69, 0.38)
Both authoritarian	-0.17*** (-0.22, -0.13)	-0.17*** (-0.22, -0.13)	-0.18*** (-0.22, -0.13)
log Distance	0.22** (0.08, 0.36)	0.22** (0.08, 0.36)	0.22** (0.08, 0.36)
Contiguity	-0.04 (-0.11, 0.03)	-0.04 (-0.11, 0.03)	-0.04 (-0.11, 0.03)
US sanction against exporter	-0.01*** (-0.02, -0.01)	-0.01*** (-0.02, -0.01)	-0.01*** (-0.02, -0.01)
non-US sanction against exporter	-3.42*** (-4.47, -2.37)	-3.25*** (-4.18, -2.33)	-3.23*** (-3.99, -2.48)
Observations	20207	20207	20207
Adjusted R <sup>2</sup>	0.817	0.817	0.817

\* p less than 0.05, \*\* p less than 0.01, \*\*\* p less than 0.001

Table A.13: Summary statistics

Statistic	N	Mean	St. Dev.	Min	Max
Year	160,665	2,009.6	3.7	2,003	2,015
log 1 imports from 2	160,665	14.1	5.7	0.0	25.7
log 1 exports to 2	160,665	13.7	6.1	0.0	25.7
Inside dyad 500k+	160,665	0.1	0.5	0	8
Inside dyad 1m+	160,665	0.1	0.5	0	8
Inside dyad 25m+	160,665	0.1	0.3	0	6
Outside dyad 500k+	160,665	7.2	4.7	0	14
Outside dyad 1m+	160,665	5.8	4.7	0	13
Outside dyad 25m+	160,665	3.4	3.0	0	8
US ally 1	160,665	0.02	0.2	0	1
US ally 2	160,665	0.05	0.2	0	1
US adversary 1	160,665	0.05	0.2	0	1
US adversary 2	160,665	0.1	0.3	0	1
Dyadic allies	160,665	0.01	0.1	0	1
Dyadic adversaries	160,665	0.003	0.1	0	1
OECD 1	160,665	0.2	0.4	0	1
OECD 2	160,665	0.2	0.4	0	1
log GDP 1	156,282	17.3	2.3	9.9	22.9
log GDP 2	155,106	18.5	1.9	13.0	22.9
Both democracies	160,665	0.2	0.4	0	1
Both authoritarian	160,665	0.01	0.1	0	1
log Distance	160,324	8.7	0.8	4.7	9.9
Contiguity	159,395	0.02	0.2	0	1
US sanctions against 1	160,665	0.5	0.5	0	1