



## Reproducibility Certificate

This is to certify that the results in the paper below have been assessed and found to meet the requirements of the cascada reproducibility policy for a rating of RRR.

### EXIM's Exit: The Real Effects of Trade Financing by Export Credit Agencies

**Authors:** Adrien Matray, Karsten Mueller, Chenzi Xu

**Type of certification:** Free (Guest researchers)

**Certification date:** 09/27/2024

**Major Concerns:**

NONE. We reproduced Figures 1, 3-7, B1-B6, C1, D1-D5 and Tables 1-9 A1-A8, D2 with accuracy. Figures 2, E1, and E2 are illustrations. Similarly, Table D1 does not contain any numerical results. Therefore, they are outside the scope of this verification.

**Minor Concerns:**

NONE.

# Execution Report

Title: **EXIM's Exit: The Real Effects of Trade Financing  
by Export Credit Agencies**

Authors: **Adrien Matray, Karsten Müller, Chenzi Xu & Poorya Kabir**

**Full reference:** Matray et al. "EXIM's Exit: The Real Effects of Trade Financing by Export Credit Agencies" Working paper, September 2024.

The structure and contents of this execution report provided by **cascad** for the certification are similar to those recommended by the [AEA Data Editor](#).

## 1. DATA DESCRIPTION

This study uses five main data sources: (1) loan authorizations by EXIM; (2) an annual panel of origin country-by-product-by-destination country-level exports; (3) firm balance sheets and outcomes from Compustat; (4) firm-level transaction-level export data from Datamyne, and (5) additional firm level variables from various sources.

For a thorough description of the data, please refer to section 3.1 of the main paper and section C of the Appendix.

## 2. CODE DESCRIPTION

The replication materials only contain one folder, *dofile*, with 16 Stata scripts in it:

- *0\_launcher.do* runs all the code: it defines globals, creates folders, extracts data, cleans data, assembles the final datasets and generates all tables and figures in the manuscript.
- *00a\_own programs.do* and *00b\_programEventStudy.do* contain programs that are used later.
- *00c\_extract\_data.do* downloads the publicly available data and saves it into a *data* folder that had previously been created.
- *01\_ComplementDatasets.do* prepares some additional datasets.
- *02\_Xwalks\_industry\_hs.do* creates crosswalks for NAICS and HS data.
- *03\_EXIM\_datasets.do* cleans EXIM's loan authorizations data.
- *04\_BACI.do* cleans custom BACI data, computes midpoint growth and assembles working sample.
- *04\_destinationCharacteristics.do* assembles a dataset with exports' destinations country characteristics for cross-sectional analysis.
- *05\_Datamyne.do* cleans Datamyne export data.

- *06b\_main\_sample\_firm* merges all the firm data together into a working file.
- *07\_Tables.do* produces all the tables in the main body of the paper.
- *08\_Graphs.do* produces all the figures in the main body of the paper.
- *09\_AppendixResults.do* produces all the tables and figures in the Appendix of the paper.
- *10\_DatamyneResults.do* produces Datamyne results.

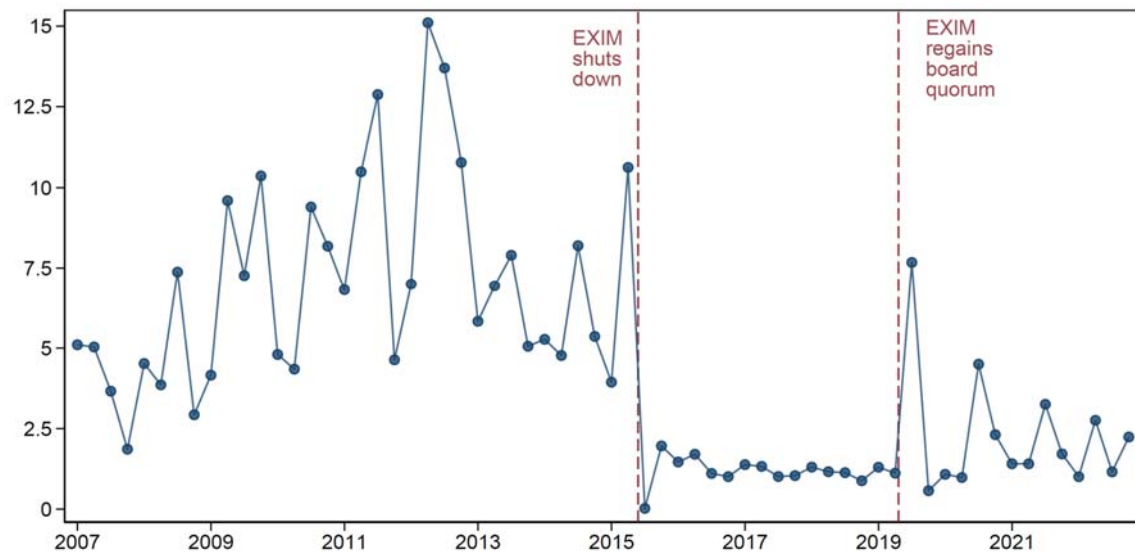
### 3. VERIFICATION STEPS

The verification materials were received as a zip file and run as per readme using Stata 18 on a computer with 256 GB RAM, Intel Xeon Silver 4210R 2.40GHz (32 cores), NVIDIA RTX™ A5000 and Windows 10 OS. We encountered no issues during the verification.

### 4. FINDINGS

We reproduced Figures 1, 3-7, B1-B6, C1, D1-D5 and Tables 1-9 A1-A8, D2 with accuracy. Figures 2, E1, and E2 are illustrations. Similarly, Table D1 does not contain any numerical results. Therefore, they are outside the scope of this verification.

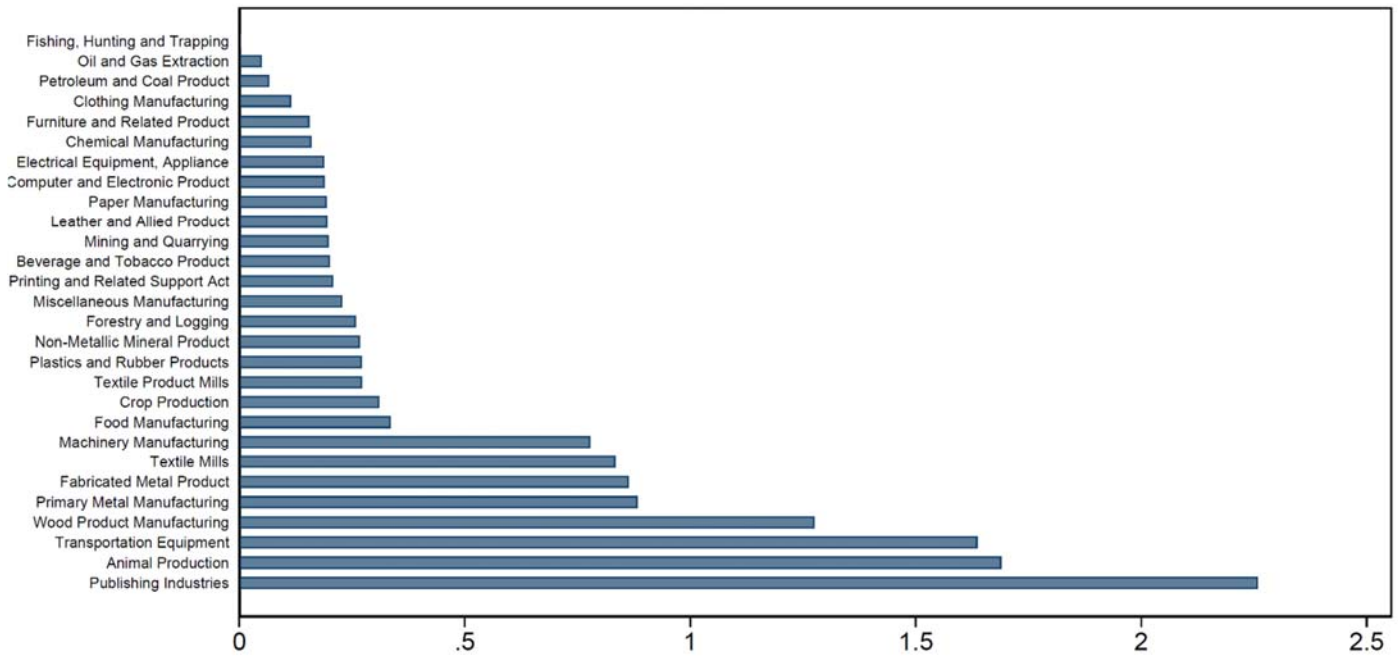
#### 4.1. FIGURE 1: EXIM'S SUPPLY OF TRADE FINANCING



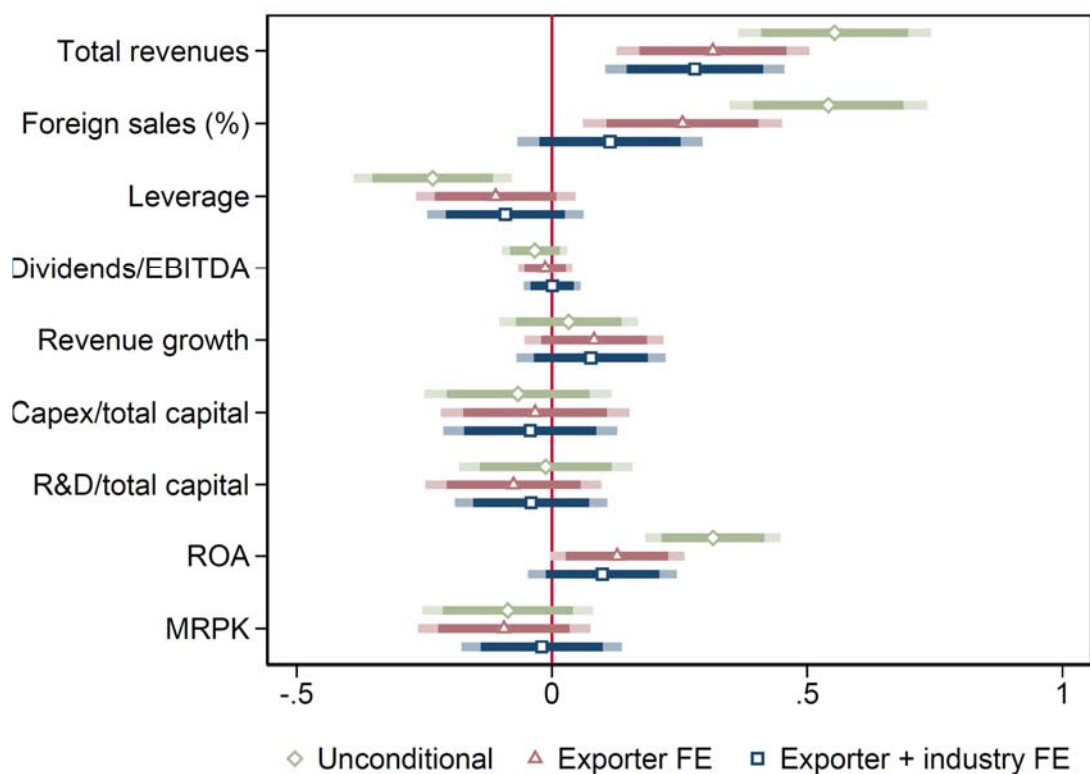
#### 4.2. TABLE 1: SUMMARY STATISTICS

	Mean	Std. Dev.	p25	Median	p75
EXIM	0.05	0.22	0.00	0.00	0.00
Exporter	0.73	0.44	0.00	1.00	1.00
Total revenues	3,946.31	17,142.27	49.62	430.18	2,085.41
Employees	12.29	56.94	0.16	1.37	7.08
Tangible Capital	2,720.56	15,032.01	17.93	172.72	1,040.00
Intangible Capital	2,483.42	11,337.79	43.25	243.15	1,123.51
Total assets	4,754.64	19,424.28	68.31	489.75	2,360.14
Share foreign sales	0.26	0.28	0.00	0.17	0.45
MRPK	4.28	5.02	1.14	2.51	4.91
Profit margin	-0.45	1.58	-0.05	0.06	0.13
ROA	-0.05	0.29	-0.05	0.06	0.11
Dividend intensity	0.11	3.26	0.00	0.00	0.11
Leverage	0.29	0.29	0.03	0.22	0.44
Observations	28,468				

#### 4.3. FIGURE 3: EXIM FINANCING INTENSITY BY INDUSTRIES (%)



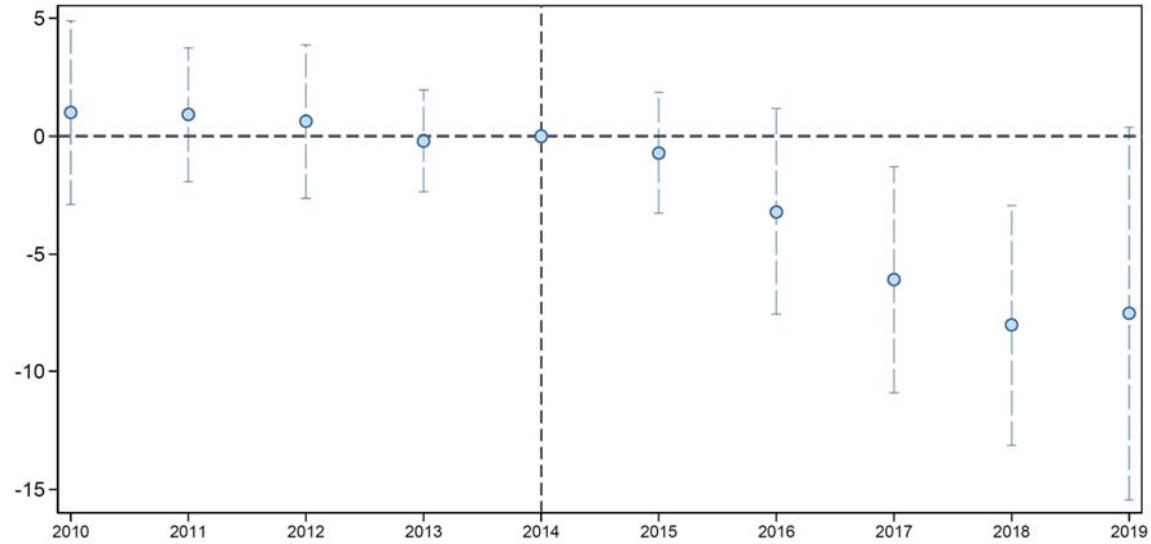
#### 4.4. FIGURE 4: FIRM COVARIATE BALANCE



#### 4.5. TABLE 2: IMPACT ON US PRODUCTS EXPORTS

	(1)	(2)	(3)	(4)	(5)	(6)
$EXIM_{p,o} \times Post_t$	-4.49	-4.49	-4.49	-4.20	-5.13	
	(1.60)	(1.60)	(1.60)	(1.67)	(2.28)	
	[0.0050]	[0.0050]	[0.0050]	[0.012]	[0.024]	
$EXIM_{p,o \geq 0.45\%} \times Post_t$						-0.061
						(0.019)
						[0.0017]
<i>Fixed Effects</i>						
Origin $\times$ Year	✓	✓	✓	✓	✓	✓
Product (4-digit) $\times$ Year	✓	✓	✓	—	—	—
Product (6-digit) $\times$ Year	—	—	—	✓	—	—
Product (6-digit) $\times$ Destination $\times$ Year	—	—	—	—	✓	✓
Observations	109,208	8,541,850	24,143,761	24,143,761	24,143,761	24,143,761

#### 4.6. FIGURE 5: IMPACT ON AGGREGATE PRODUCT LEVEL EXPORTS



#### 4.7. TABLE 3: DECOMPOSING IMPACT ON EXPORTS INTO INTENSIVE AND EXTENSIVE MARGINS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$EXIM_{p,o} \times Post_t$	-4.49 (1.60) [0.0050]		-4.04 (1.47) [0.0060]		0.51 (0.43) [0.24]		-0.96 (0.47) [0.043]	
$EXIM_{p,o \geq 0.45\%} \times Post_t$		-0.054 (0.019) [0.0035]		-0.044 (0.016) [0.0082]		0.00000051 (0.0036) [1.00]		-0.011 (0.0059) [0.072]
<i>Fixed Effects</i>								
Origin×Year	✓	✓	✓	✓	✓	✓	✓	✓
Product (4-digit)×Year	✓	✓	✓	✓	✓	✓	✓	✓
Observations	109,208	109,208	109,208	109,208	109,208	109,208	109,208	109,208

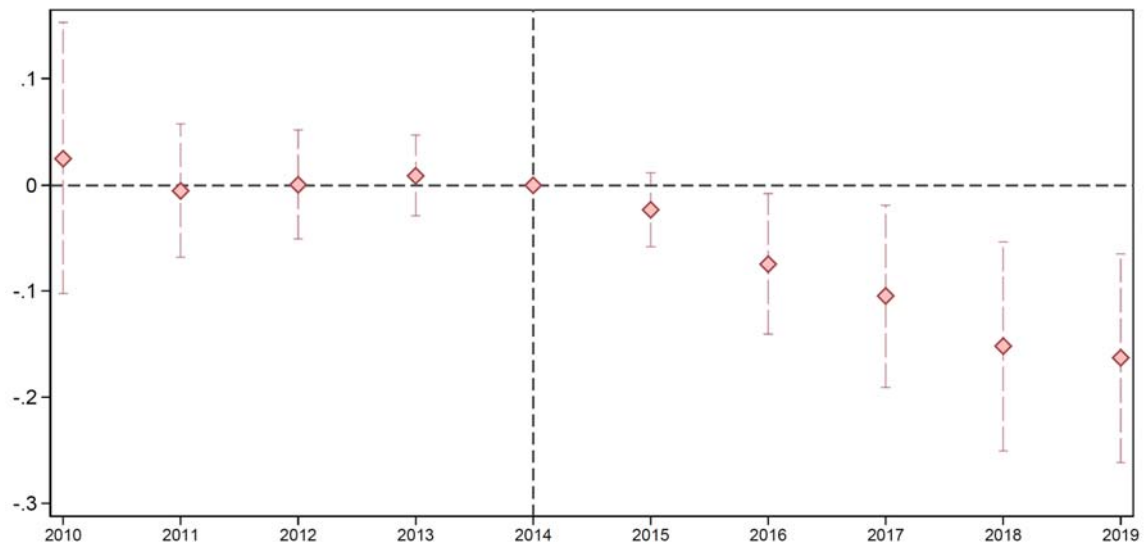
#### 4.8. TABLE 4: IMPACT ON FIRM MARITIME EXPORTS

	(1)	(2)	(3)	(4)	(5)
$EXIM_i \times Post_t$	-0.19 (0.023) [6.7e-16]	-0.18 (0.022) [8.9e-16]	-0.19 (0.022) [2.0e-17]	-0.17 (0.021) [2.3e-15]	-0.25 (0.046) [0.000000071]
<i>Fixed Effects</i>					
Post	✓	—	—	—	—
Product×Post	—	✓	—	—	—
Destination×Post	—	—	✓	—	—
Product×Destination×Post	—	—	—	✓	✓
Observations	1,979,189	1,979,189	1,979,189	1,979,189	153,977

4.9. TABLE 5: IMPACT ON FIRM TOTAL REVENUES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EXIM <sub><i>i</i></sub> ×Post <sub><i>t</i></sub>	-0.17 (0.033) [0.00000012]	-0.16 (0.033) [0.0000012]	-0.13 (0.035) [0.00028]	-0.12 (0.035) [0.00072]	-0.10 (0.035) [0.0045]	-0.12 (0.035) [0.00079]	-0.11 (0.041) [0.0050]	-0.12 (0.035) [0.00081]
<i>Fixed Effects</i>								
Year	✓	—	—	—	—	—	—	—
Exporter×Year	—	✓	—	✓	✓	✓	✓	✓
Industry×Year	—	—	✓	✓	✓	✓	✓	✓
Fiscal month×Year	—	—	—	—	✓	—	—	—
Size×Year	—	—	—	—	✓	—	—	—
Balance sheet controls×Year	—	—	—	—	✓	—	—	—
Lobbying×Year	—	—	—	—	✓	—	—	—
Observations	25,174	25,174	25,174	25,174	24,511	25,109	20,151	25,165

4.10. FIGURE 6: IMPACT OF EXIM'S SHUTDOWN ON FIRM TOTAL REVENUES

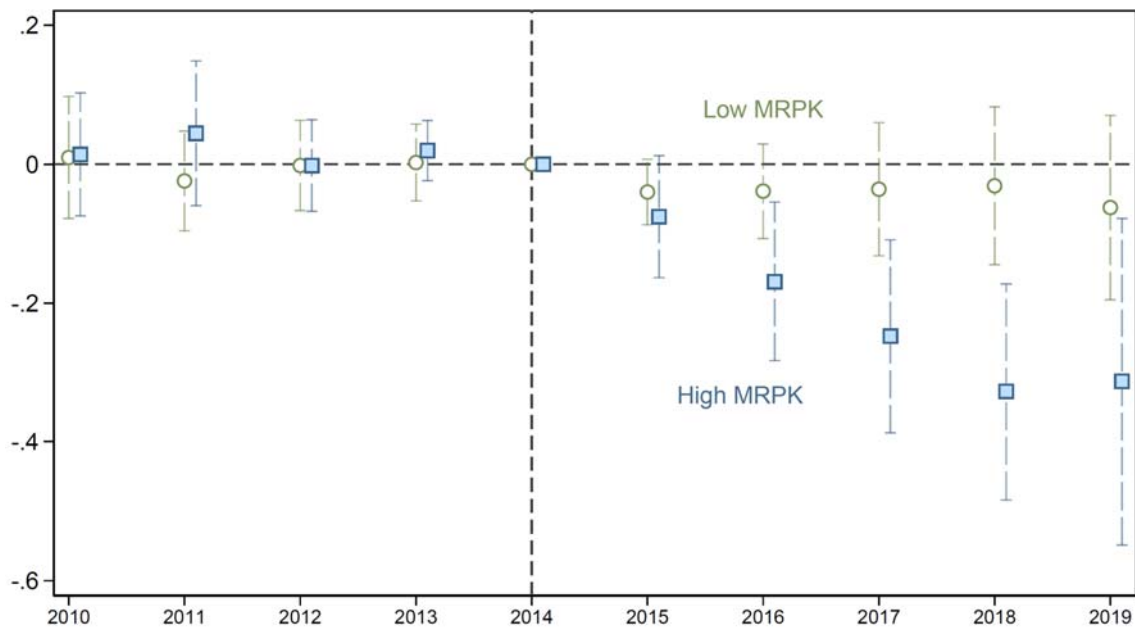




4.11. TABLE 6: IMPACT ON EMPLOYMENT, CAPITAL ACCUMULATION, AND PRO\_T RATES

	(1)	(2)	(3)	(4)	(5)
$EXIM_i \times Post_t$	-0.12 (0.035) [0.00072]	-0.14 (0.044) [0.0014]	-0.19 (0.047) [0.000042]	-0.098 (0.032) [0.0025]	0.00024 (0.0062) [0.97]
<i>Fixed Effects</i>					
Exporter×Year	✓	✓	✓	✓	✓
Industry×Year	✓	✓	✓	✓	✓
Observations	25,174	24,635	25,015	22,902	25,174

4.12. FIGURE 7: EXIM'S SHUTDOWN AMPLIFIES CAPITAL MISALLOCATION



4.13. TABLE 7: IMPACT ON CAPITAL MISALLOCATION

	(1)	(2)	(3)	(4)	(5)	(6)
$EXIM_i \times Post_t$	-0.056 (0.038) [0.14]	-0.17 (0.055) [0.0016]		-0.041 (0.042) [0.33]	-0.22 (0.062) [0.00042]	
$EXIM_i \times Post_t \times I_i^{High} MRPK$			-0.12 (0.067) [0.072]			-0.18 (0.074) [0.017]
<i>Fixed Effects</i>						
Exporter×Year	✓	✓	—	✓	✓	—
Industry×Year	✓	✓	—	—	—	—
Industry×Size quartile×Year	—	—	—	✓	✓	—
EXIM×Year	—	—	✓	—	—	✓
<i>Fixed Effects (interacted)</i>						
Exporter×Year	—	—	✓	—	—	✓
Industry×Year	—	—	✓	—	—	—
Industry×Size quartile×Year	—	—	—	—	—	✓
Observations	13,226	10,784	24,010	14,988	9,022	24,010

4.14. TABLE 8: ROLE OF FINANCING FRICTIONS

	(1)	(2)	(3)	(4)	(5)
$EXIM_i \times Post_t$	-0.12 (0.032) [0.00017]				
$EXIM_i \times Post_t \times I_i^{Constrained}$		-0.16 (0.044) [0.00034]	-0.10 (0.039) [0.010]	-0.12 (0.047) [0.0097]	-0.071 (0.039) [0.068]
<i>Fixed Effects</i>					
Exporter×Year	✓	—	—	—	—
Industry×Year	✓	—	—	—	—
EXIM×Year	—	✓	✓	✓	✓
<i>Fixed Effects (interacted)</i>					
Exporter×Year	—	✓	✓	✓	✓
Industry×Year	—	✓	✓	✓	✓
Observations	24,635	23,994	23,963	22,294	24,635

4.15. TABLE 9: ROLE OF IMPORTER MARKET FRICTIONS

	(1)	(2)	(3)	(4)	(5)
$EXIM_{p,o} \times Post_t \times I_d^{Constrained}$	-2.08 (0.96) [0.030]	-3.10 (1.21) [0.010]	-2.28 (1.05) [0.030]	-1.55 (0.90) [0.085]	-2.05 (0.98) [0.037]
$EXIM_{p,o} \times Post_t$	-1.56 (1.35) [0.25]	-0.85 (1.38) [0.54]	-1.58 (1.34) [0.24]	-3.22 (1.09) [0.0031]	-2.96 (1.10) [0.0069]
<i>Fixed Effects</i>					
Product (6-digit) $\times$ Destination $\times$ Post <sub>t</sub>	✓	✓	✓	✓	✓
Origin $\times$ Post <sub>t</sub> $\times$ I <sub>d</sub> <sup>Constrained</sup>	✓	✓	✓	✓	✓
$EXIM_{p,o} \times Post_t \times Controls_{p,d}$	✓	✓	✓	✓	✓
Observations	1,677,054	1,677,054	1,677,054	3,471,365	3,275,185

4.16. TABLE A.1: IMPACT ON US PRODUCT EXPORTS: ROBUSTNESS TO ALTERNATIVE CONTROL GROUP

	(1)	(2)	(3)	(4)	(5)	(6)
$EXIM_{p,o} \times Post_t$	-3.14 (1.79) [0.079]	-3.14 (1.79) [0.079]	-3.14 (1.79) [0.079]	-2.45 (1.56) [0.12]	-2.72 (1.76) [0.12]	
$EXIM_{p,o} \geq 0.45\% \times Post_t$						-0.058 (0.017) [0.00051]
<i>Fixed Effects</i>						
Origin $\times$ Year	✓	✓	✓	✓	✓	✓
Product (4-digit) $\times$ Year	✓	✓	✓	—	—	—
Product (6-digit) $\times$ Year	—	—	—	✓	—	—
Product (6-digit) $\times$ Destination $\times$ Year	—	—	—	—	✓	✓
Observations	65,862	6,808,567	20,528,380	20,528,380	20,528,380	20,528,380

4.17. TABLE A.2: IMPACT ON US PRODUCT EXPORTS: ROBUSTNESS TO ALTERNATIVE WEIGHTING

	(1)	(2)	(3)	(4)
$EXIM_{p,o} \times Post_t$	-3.72 (1.89) [0.049]	-5.77 (2.57) [0.025]	-5.36 (2.32) [0.021]	-5.24 (2.41) [0.030]
<i>Fixed Effects</i>				
Origin $\times$ Year	✓	✓	✓	✓
Product (6-digit) $\times$ Destination $\times$ Year	✓	✓	✓	✓
Observations	24,143,761	24,143,761	24,143,660	24,143,660

4.18. TABLE A.3: IMPACT ON FIRM-LEVEL MARITIME EXPORTS: ROBUSTNESS TO DIFFERENT MEASURES

EXIM <sub>i</sub> ×Post <sub>t</sub>	-0.20 (0.022) [6.6e-18]	-0.19 (0.021) [4.1e-18]	-0.20 (0.022) [1.6e-19]	-0.18 (0.020) [1.3e-17]	-0.26 (0.051) [0.00000026]
EXIM <sub>i</sub> ×Post <sub>t</sub>	-0.18 (0.023) [1.9e-15]	-0.17 (0.022) [3.0e-15]	-0.19 (0.022) [5.2e-17]	-0.16 (0.021) [6.0e-15]	-0.25 (0.045) [0.00000020]
EXIM <sub>i</sub> ×Post <sub>t</sub>	-0.17 (0.021) [7.5e-15]	-0.16 (0.020) [2.2e-15]	-0.17 (0.020) [7.4e-17]	-0.15 (0.018) [1.3e-16]	-0.28 (0.034) [7.0e-16]
<i>Fixed Effects</i>					
Post	✓	—	—	—	—
Product×Post	—	✓	—	—	—
Destination×Post	—	—	✓	—	—
Product×Destination×Post	—	—	—	✓	✓
Observations	1,855,542	1,855,542	1,855,542	1,855,542	144,404

4.19. TABLE A.4: IMPACT ON FIRM-LEVEL MARITIME EXPORTS: ROBUSTNESS TO EQUAL WEIGHTING

EXIM <sub>i</sub> ×Post <sub>t</sub>	-0.48 (0.030) [4.7e-52]	-0.45 (0.024) [7.2e-69]	-0.46 (0.028) [3.3e-53]	-0.39 (0.023) [9.6e-56]	-0.25 (0.046) [0.00000071]
EXIM <sub>i</sub> ×Post <sub>t</sub>	-0.49 (0.031) [5.3e-51]	-0.45 (0.024) [4.0e-68]	-0.47 (0.029) [8.2e-52]	-0.39 (0.023) [5.0e-55]	-0.26 (0.051) [0.00000026]
EXIM <sub>i</sub> ×Post <sub>t</sub>	-0.49 (0.030) [7.5e-53]	-0.45 (0.024) [2.5e-70]	-0.47 (0.029) [3.7e-54]	-0.39 (0.023) [2.6e-57]	-0.25 (0.045) [0.00000020]
EXIM <sub>i</sub> ×Post <sub>t</sub>	-0.43 (0.028) [2.4e-47]	-0.38 (0.024) [2.1e-53]	-0.40 (0.027) [4.0e-46]	-0.33 (0.023) [1.8e-42]	-0.28 (0.034) [7.0e-16]
<i>Fixed Effects</i>					
Post	✓	—	—	—	—
Product×Post	—	✓	—	—	—
Destination×Post	—	—	✓	—	—
Product×Destination×Post	—	—	—	✓	✓
Observations	1,855,542	1,855,542	1,855,542	1,855,542	144,404

4.20. TABLE A.5: IMPACT ON FIRM REVENUES: ROBUSTNESS TO DIFFERENT INDUSTRY DEFINITIONS

	(1)	(2)	(3)	(4)
EXIM <sub><i>i</i></sub> ×Post <sub><i>t</i></sub>	-0.13 (0.033) [0.000038]	-0.12 (0.035) [0.00072]	-0.10 (0.032) [0.0017]	-0.13 (0.044) [0.0031]
<i>Fixed Effects</i>				
Exporter×Year	✓	✓	✓	✓
Industry (1-digit)×Year	✓	—	—	—
Industry (2-digit)×Year	—	✓	—	—
Industry (3-digit)×Year	—	—	✓	—
Industry (4-digit)×Year	—	—	—	✓
Observations	25,174	25,174	25,174	25,174

4.21. TABLE A.6: IMPACT ON FIRM REVENUES BY SEPARATE EXIM PROGRAMS

	(1)	(2)	(3)	(4)
EXIM (working cap) <sub><i>i</i></sub> ×Post <sub><i>t</i></sub>	-0.15 (0.053) [0.0058]		-0.12 (0.074) [0.10]	
EXIM (insurance) <sub><i>i</i></sub> ×Post <sub><i>t</i></sub>		-0.13 (0.043) [0.0025]		-0.13 (0.049) [0.0095]
<i>Fixed Effects</i>				
Exporter×Year	✓	✓	✓	✓
Industry×Year	✓	✓	✓	✓
Size×Year	✓	✓	✓	✓
Observations	24,448	24,775	24,448	24,775

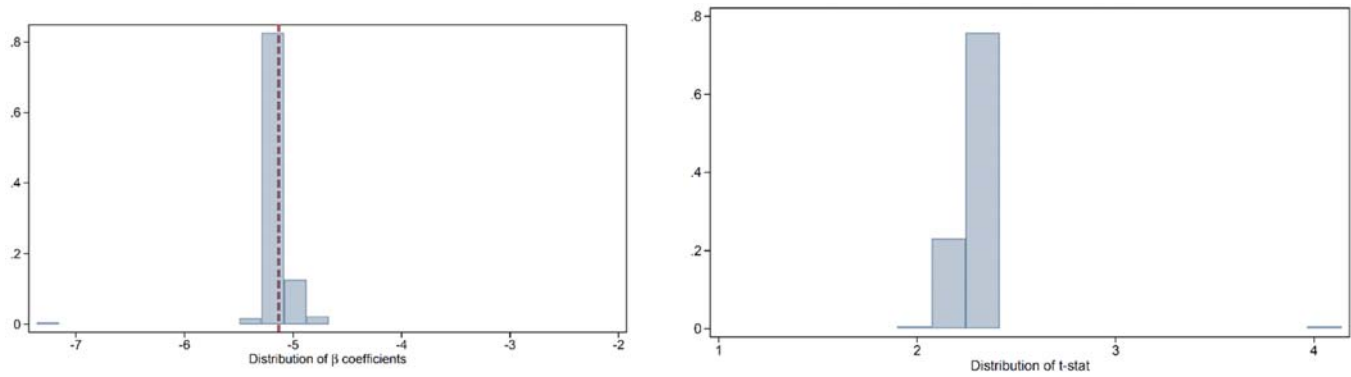
4.22. TABLE A.7: IMPACT ON EMPLOYMENT, CAPITAL, AND PROFIT RATES: ROBUSTNESS TO DIFFERENT WEIGHTING

EXIM <sub><i>i</i></sub> ×Post <sub><i>t</i></sub>	-0.15 (0.032) [0.0000029]	-0.12 (0.032) [0.00017]	-0.14 (0.034) [0.000060]	-0.077 (0.026) [0.0030]	-0.015 (0.014) [0.29]
EXIM <sub><i>i</i></sub> ×Post <sub><i>t</i></sub>	-0.098 (0.036) [0.0065]	-0.17 (0.058) [0.0041]	-0.19 (0.066) [0.0042]	-0.088 (0.035) [0.011]	-0.0027 (0.0048) [0.58]
<i>Fixed Effects</i>					
Exporter×Year	✓	✓	✓	✓	✓
Industry×Year	✓	✓	✓	✓	✓
Observations	25,174	24,635	25,015	22,902	25,174

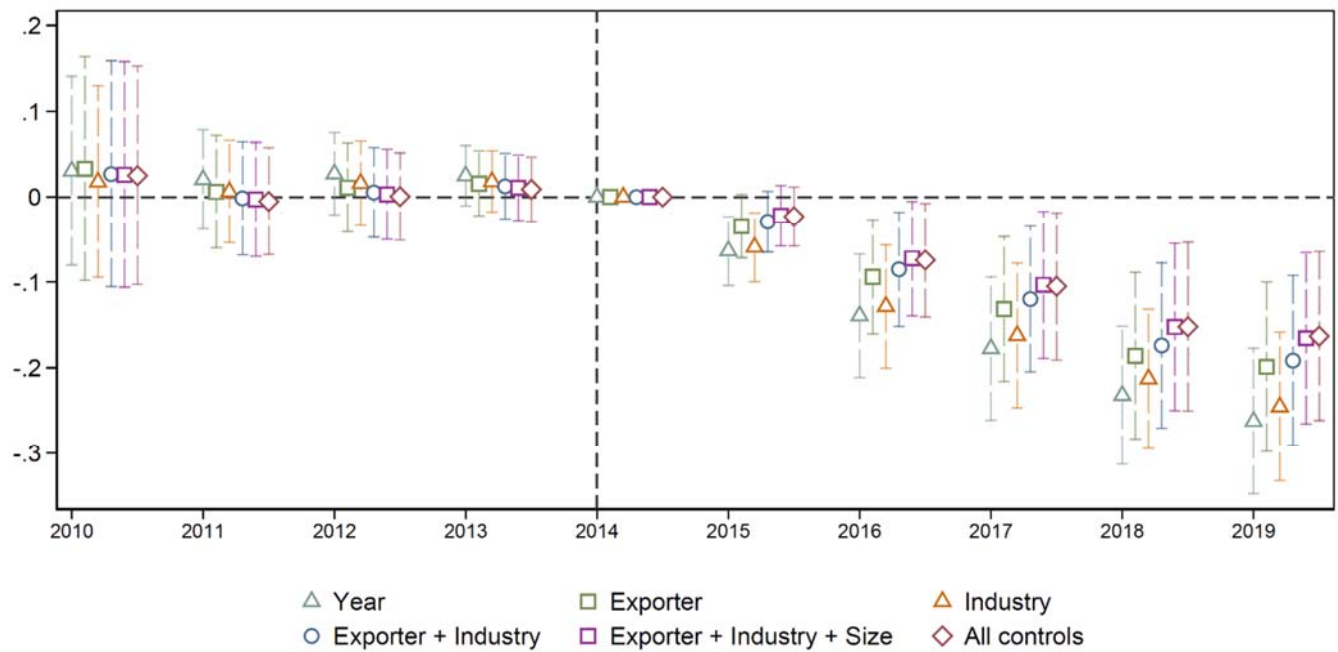
4.23. TABLE A.8: IMPACT ON EMPLOYMENT, CAPITAL, AND PROFIT RATES: ROBUSTNESS TO LHS WINSORIZATION

EXIM <sub><i>i</i></sub> ×Post <sub><i>t</i></sub>	-0.16 (0.044) [0.00028]	-0.20 (0.059) [0.00079]	-0.29 (0.068) [0.000017]	-0.12 (0.040) [0.0023]	0.00033 (0.0062) [0.96]
EXIM <sub><i>i</i></sub> ×Post <sub><i>t</i></sub>	-0.10 (0.033) [0.0019]	-0.11 (0.039) [0.0030]	-0.13 (0.038) [0.00069]	-0.092 (0.033) [0.0057]	0.0010 (0.0052) [0.84]
EXIM <sub><i>i</i></sub> ×Post <sub><i>t</i></sub>	-0.075 (0.032) [0.019]	-0.11 (0.038) [0.0051]	-0.11 (0.035) [0.0013]	-0.056 (0.059) [0.35]	0.0015 (0.0059) [0.80]
<i>Fixed Effects</i>					
Exporter×Year	✓	✓	✓	✓	✓
Industry×Year	✓	✓	✓	✓	✓
Observations	25,174	24,795	25,036	23,605	25,174

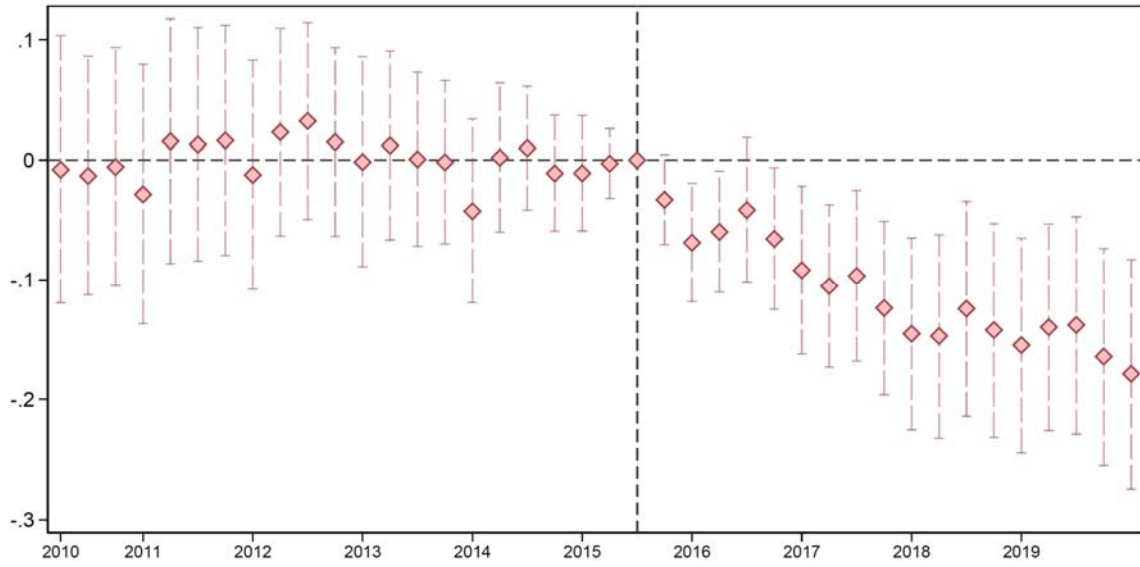
4.24. FIGURE B.1: US EXPORT EFFECTS EXCLUDING PRODUCTS INDIVIDUALLY: DISTRIBUTION OF B AND T-STATS



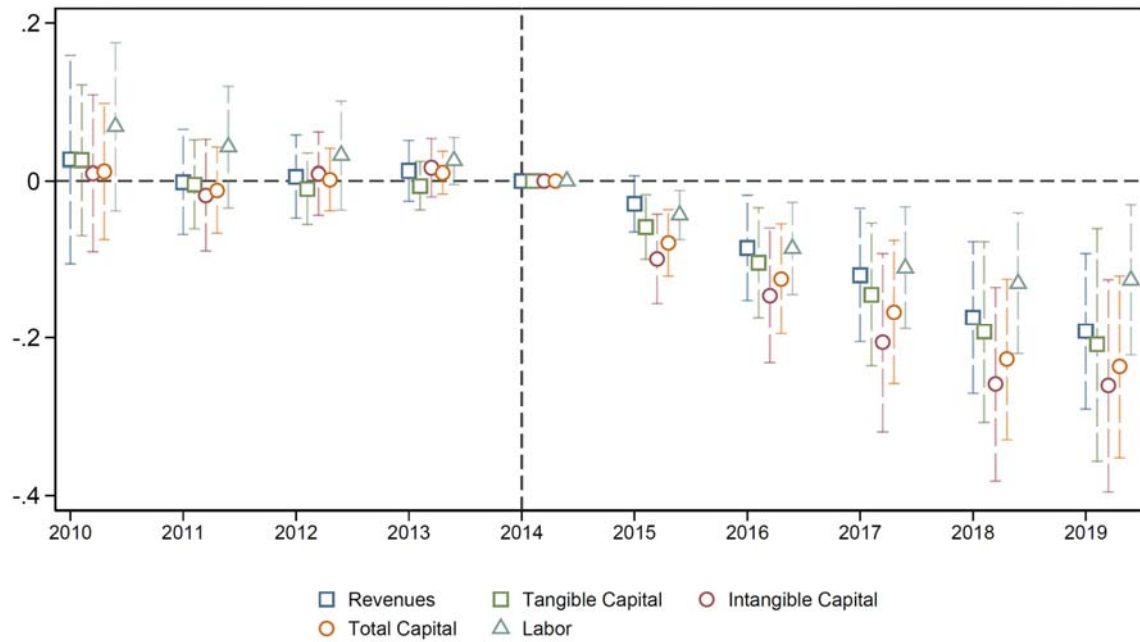
4.25. FIGURE B.2: IMPACT OF EXIM'S SHUTDOWN ON TOTAL REVENUES: ROBUSTNESS TO MULTIPLE SPECIFICATIONS



4.26. FIGURE B.3: EXIM'S SHUTDOWN AND QUARTERLY FIRM REVENUES

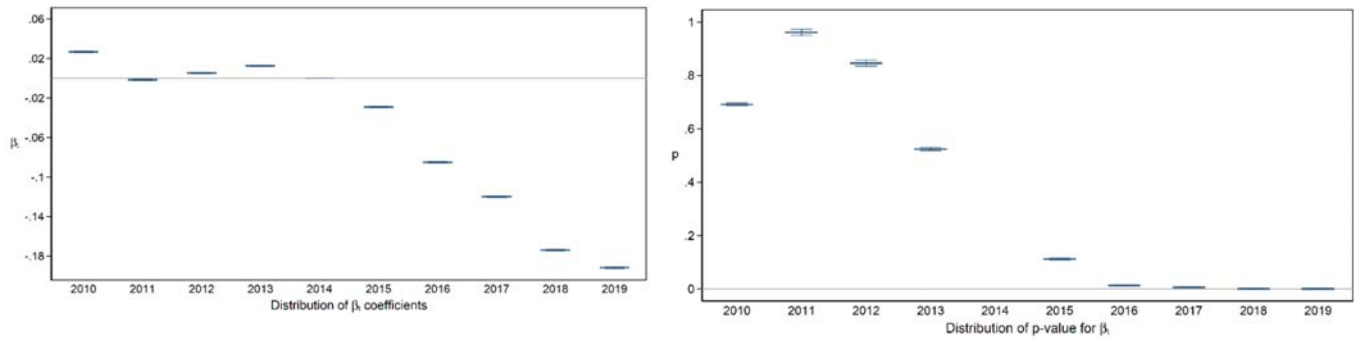


4.27. FIGURE B.4: IMPACT OF EXIM'S SHUTDOWN ON OTHER FIRM OUTCOMES

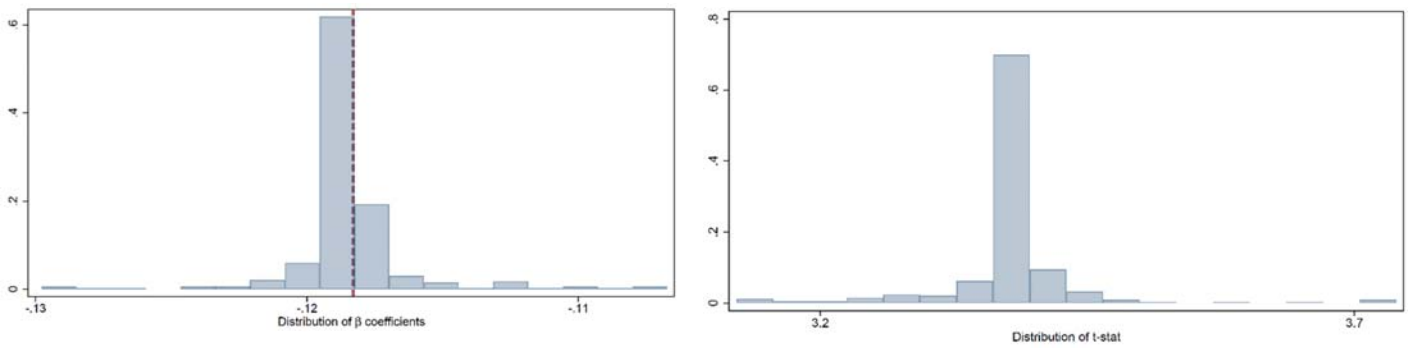




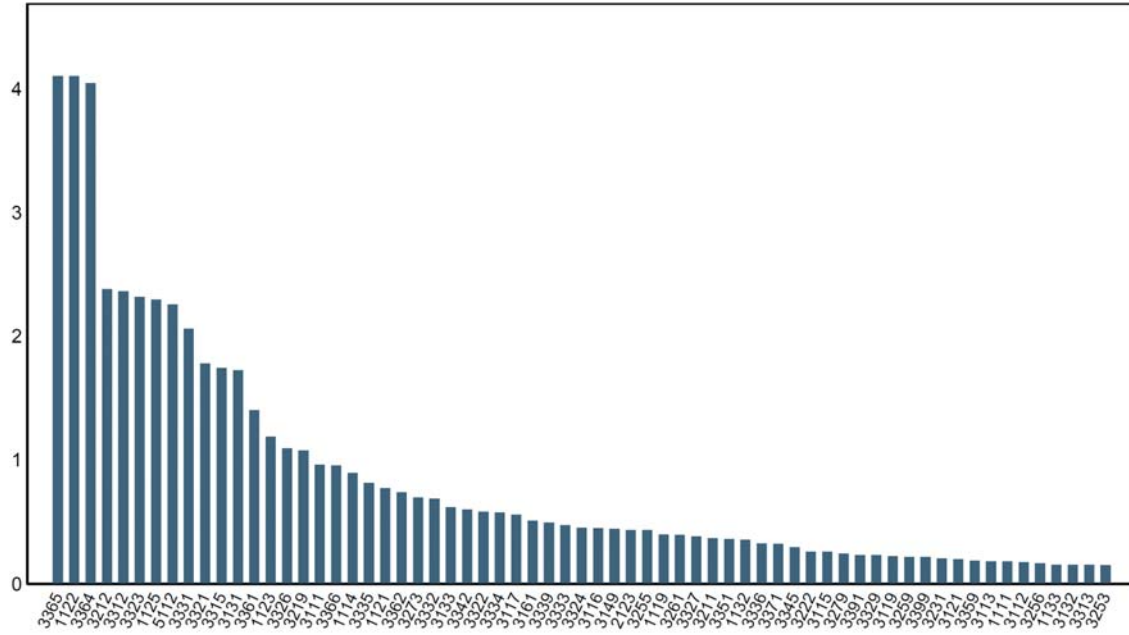
4.28. FIGURE B.5: FIRM-LEVEL EFFECTS EXCLUDING INDUSTRIES INDIVIDUALLY:  
DISTRIBUTION OF B AND P-VALUES



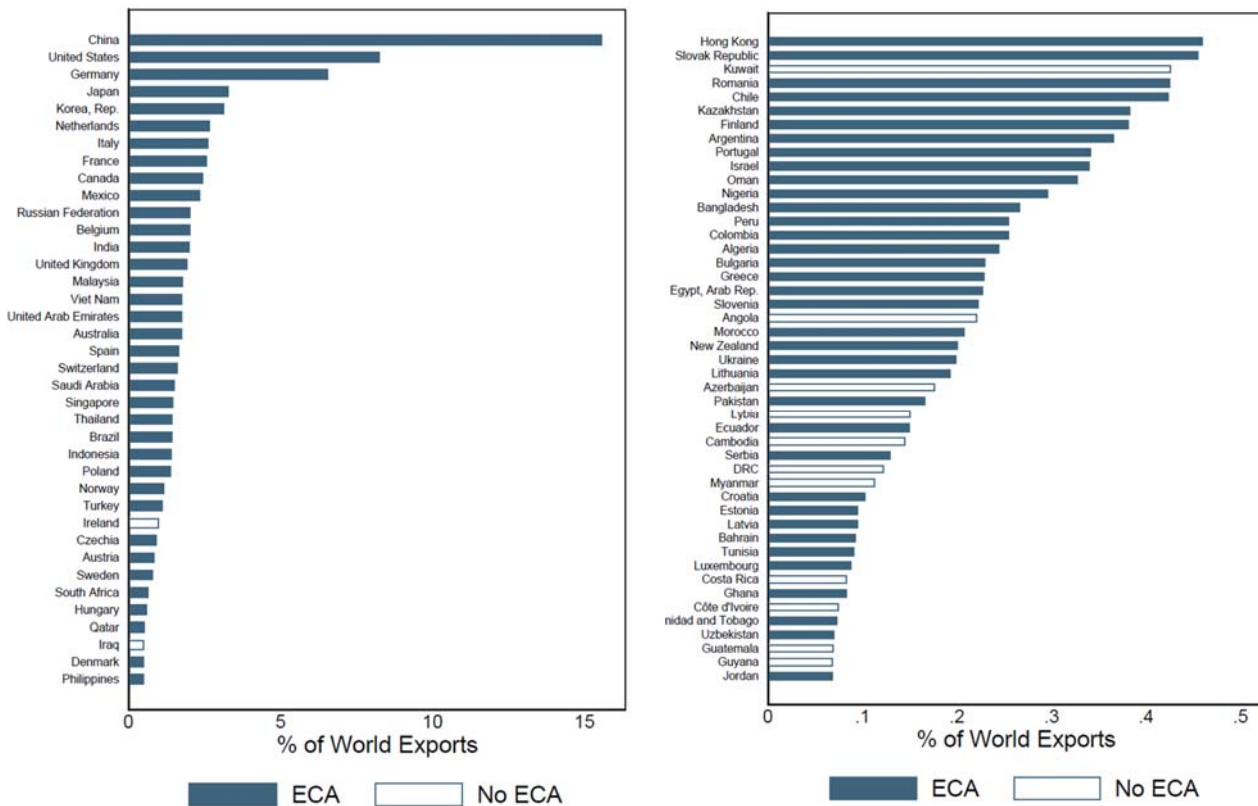
4.29. FIGURE B.6: FIRM-LEVEL EFFECTS EXCLUDING INDUSTRIES INDIVIDUALLY:  
DISTRIBUTION OF B AND T-STATS



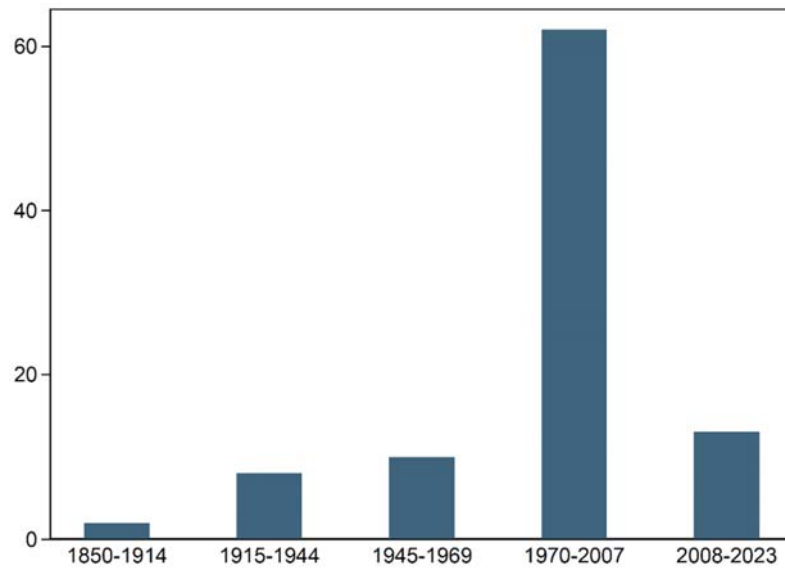
4.30. FIGURE C.1: EXIM FINANCING INTENSITY BY INDUSTRIES (%)



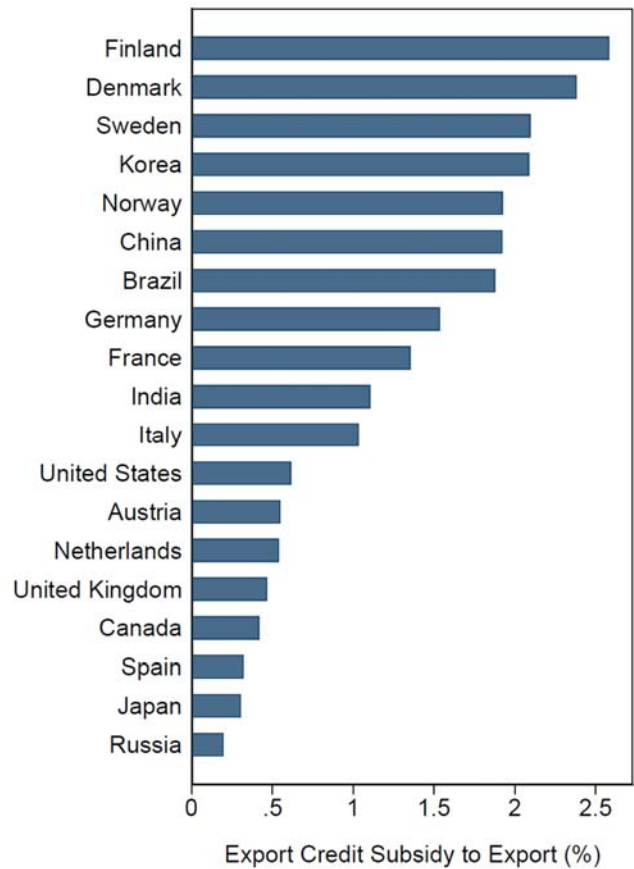
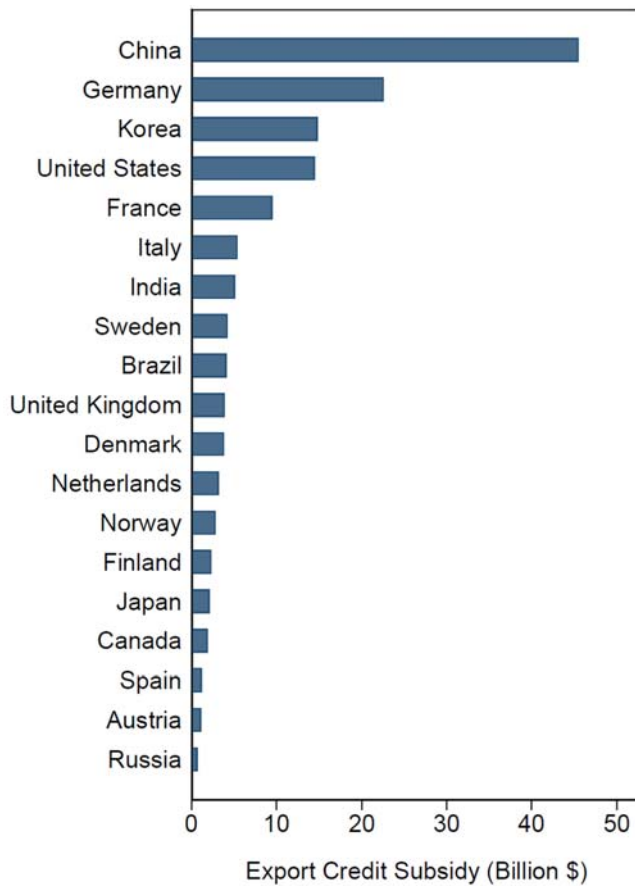
4.31. FIGURE D.1: EXPORT CREDIT AGENCIES AROUND THE WORLD



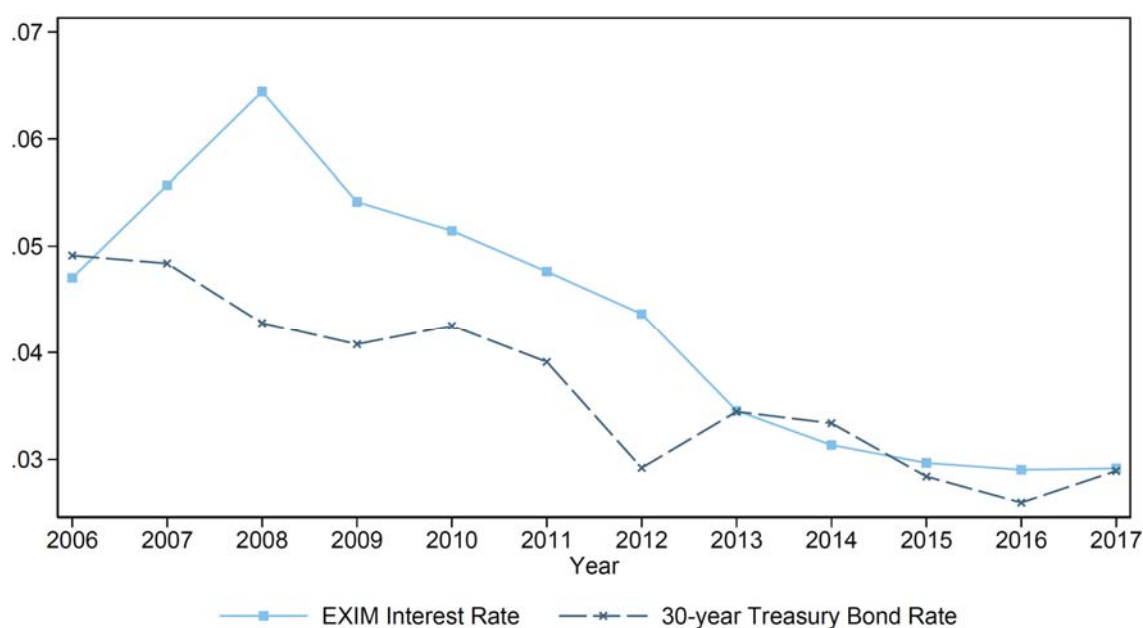
4.32. FIGURE D.2: EXPORT CREDIT AGENCIES: NUMBER FOUNDED BY TIME PERIOD



4.33. FIGURE D.3: EXPORT CREDIT AGENCY SUPPORT BY COUNTRY



#### 4.34. FIGURE D.4: EXIM'S ANNUAL INTEREST EXPENSE



#### 4.35. TABLE D.2: EXIM SUPPORT AND COUNTRY RISK

	(1)	(2)	(3)	(4)	(5)
Risk (by all)	2.23 (0.76) [0.0048]				
Risk (by financial)		1.59 (0.64) [0.016]			
Risk (by foreign)			1.61 (0.93) [0.087]		
Risk (by domestic)				-0.018 (0.069) [0.79]	
Local crisis					0.093 (0.044) [0.038]
<i>Fixed Effects</i>					
Country	✓	✓	✓	✓	✓
Year	✓	✓	✓	✓	✓
Observations	812	812	812	660	812

4.36. FIGURE D.5: EXIM SUPPORT AND COUNTRY RISK

