The costs of trade protectionism: evidence from Spanish firms and non-tariff measures

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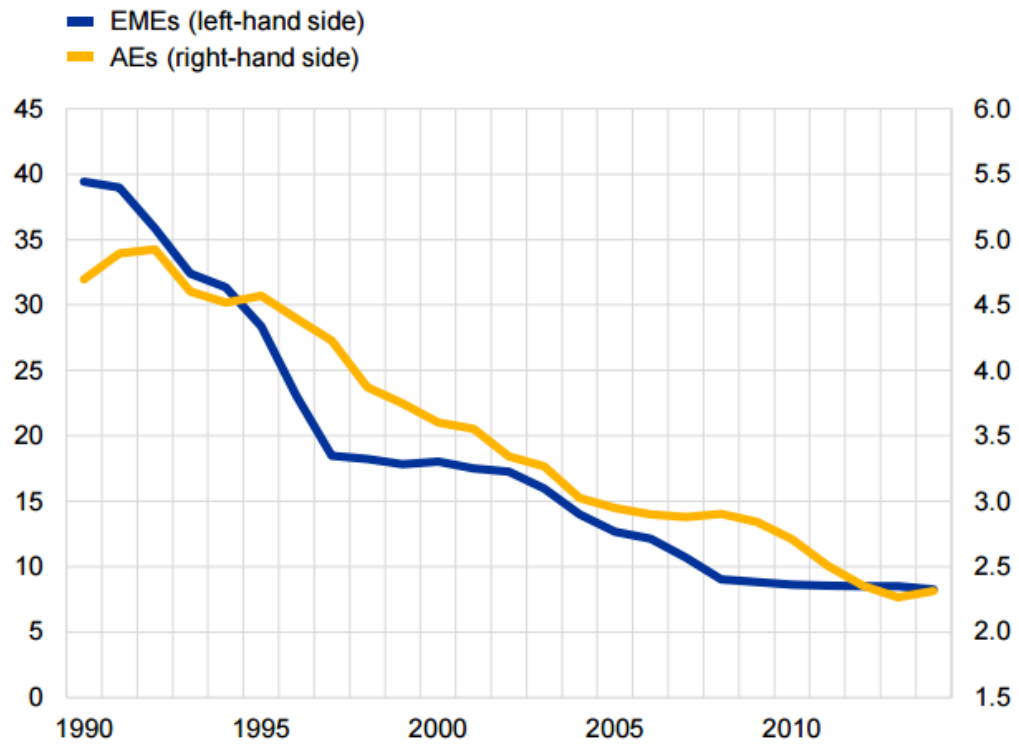
A fall in tariff rates...

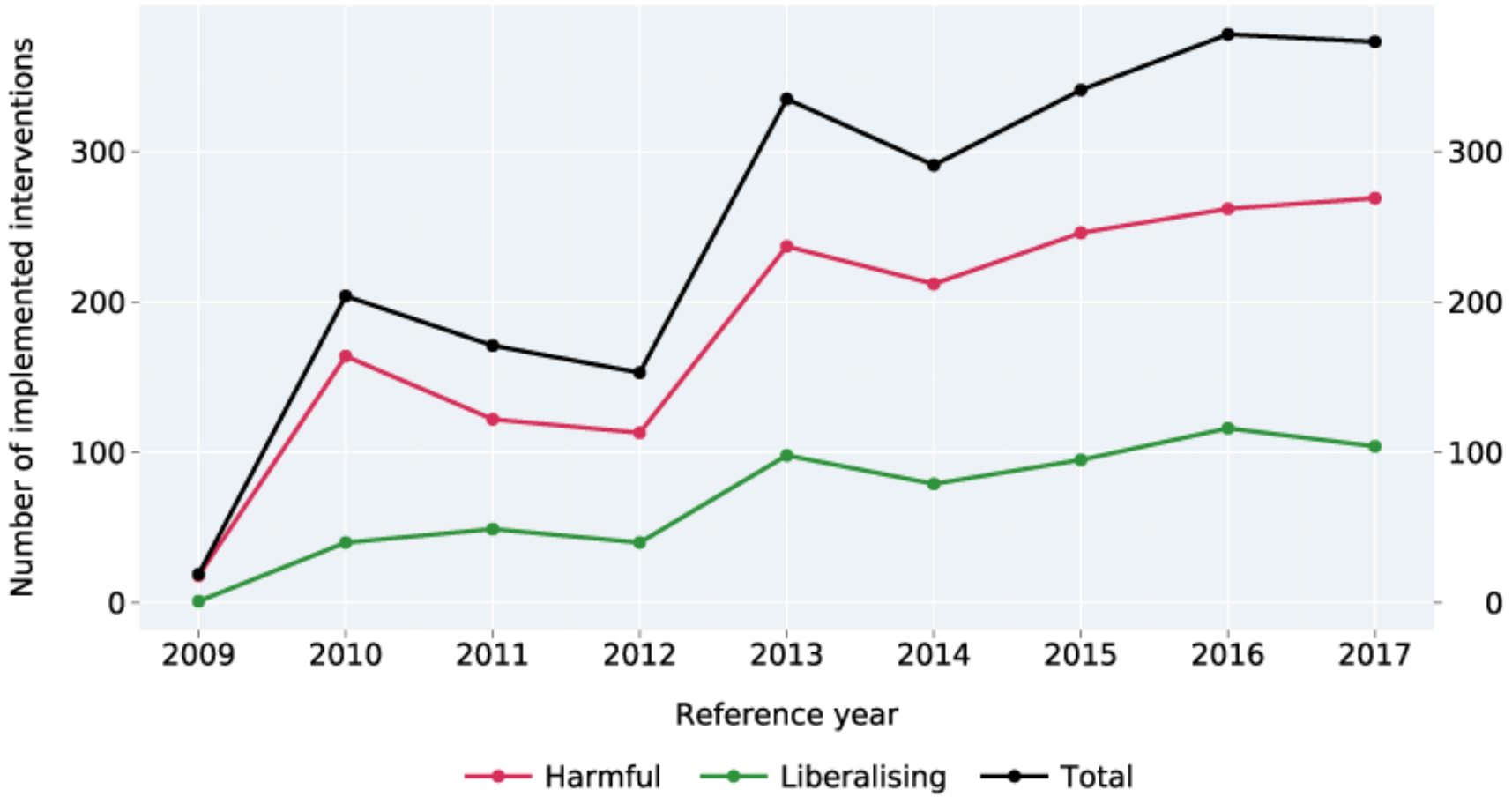
Average tariffs in advanced economies and emerging market economies

(percentages)



Source: World Bank (WDI).
Notes: Tariff rate, applied, simple mean, all products in percentages. Aggregates based on the 14 largest countries in the world (according to PPP GDP weights in 2010). AEs include the United States, Japan, Germany, France, United Kingdom, Italy and Spain. EMEs include China, India, Russia, Brazil, Indonesia, Mexico and Korea. Tariffs are three-year moving averages. Missing years have been extrapolated.

...with a rise in protectionist measures



Introduction

The ECB (2016) enumerates three potential causes behind the recent trade slowdown:

(1) Economic activity is moving away from trade-intensive sectors and towards less trade-intensive countries

(2) Expansion of global value chains during the 90s and the 2000s leaves small room for growth in the 2010s

(3) **Rise in trade protectionism**

Introduction

- The purpose of the paper is to evaluate the effects of trade protectionism on firm outcomes using Spanish micro-panel data.
- The period of analysis is 2009-2013, following the collapse of trade and the rise in non-tariff protectionist measures.
- We also investigate the effects of liberalizing non-tariff measures.

Firm-level data

- We use administrative data for Spanish exporting firms from Balance of payments together with balance sheet data from the Spanish Mercantile Registry gathered by the Bank of Spain.
- We have data on firm characteristics, including exports by country at the 2-digit level according to the HS classification.
- The Balance of Payment data represents almost 97% of Spanish aggregate exports.

Firms: Descriptive statistics

Table: Summary statistics from BP data.

	2009	2010	2011	2012	2013
Number of products					
p10	1	1	1	1	1
Mean	1.74	1.78	1.81	1.84	1.86
Median	1	1	1	1	1
p90	3	3	3	3	4
Number of destinations					
p10	1	1	1	1	1
Mean	2.91	3.01	3.11	3.23	3.29
Median	1	1	1	2	2
p90	6	7	7	7	7
Exports (EUR thousands)					
p10	61	63	65	68	70
Mean	1,734	1,931	2,070	2,199	2,256
Median	324	350	376	389	404
p90	4,687	5,200	5,454	5,726	5,884
Number of firms	22,543	22,524	23,442	23,619	23,496

NTMs data

- We use the Global Trade Alert (GTA) Database, a CEPR Initiative (Fritz and Johannes, 2008). It gathers information on different types of trade interventions including tariff and non-tariff measures.
- Advantages: Very detailed annual data at 6-digit HS level including measures not officially recorded by the WTO as in the WTO IT-TIP/UN TRAINS database.
- It includes when a policy is announced, implemented or resumed, a brief description, the implementing and affected countries, the products affected by the policy and a classification to whether it is liberalizing or protectionist.
- Since we focus on NTMs, we use the UN MAST classification of trade measures rather the one proposed by GTA.

NTMs: Products

Table: Most affected Spanish products by foreign NTMs

Product	Total NTB	Liberalizing	Protectionist	Indeterminate
Articles of iron or steel.	284	15	257	12
Iron and steel.	270	10	240	20
Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof.	201	29	154	18
Electrical machinery and equipment and parts thereof.	189	25	142	22
Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof.	156	15	119	22
Organic chemicals.	86	4	72	10
Plastics and articles thereof.	71	7	52	12
Miscellaneous chemical products.	64	6	50	8
Mineral fuels, mineral oils and products of their distillation; bituminous substances.	62	5	47	10
Inorganic chemicals; organic or inorganic compounds of precious metals.	61	4	50	7
Rubber and articles thereof.	54	6	41	7
Pharmaceutical products.	52	5	41	6
Optical, photographic, cinematographic, measuring, medical or surgical instruments.	52	9	38	5
Fish and crustaceans, molluscs and other aquatic invertebrates.	51	4	39	8

NTMs: Countries

Table: Number of NTM policies implemented by the rest of the world that affect Spain.

Country	Total NTB	Liberalizing	Protectionist	Indeterminate
India	1,000	138	762	100
US	490	34	433	23
China	263	23	226	14
Brazil	236	5	221	10
Russia	162	6	148	8
Argentina	128	-	114	14
Venezuela	117	69	47	1
Indonesia	99	13	81	5
Turkey	77	-	77	5
Germany	50	1	49	6
Algeria	47	-	4	43
Saudi Arabia	44	-	44	-
France	45	1	34	12
Kazakhstan	39	-	39	2
Korean Republic	38	2	35	1

NTMs: Tariff and NTMs

Table: Tariff vs non-tariff measures affecting Spain.

	Tariff	Protectionist	Liberalizing	Indeterminate	Non-tariff	Protectionist	Liberalizing	Indeterminate
2008	5	3	2	-	157	140	1	16
2009	299	82	201	16	578	519	26	33
2010	385	77	293	15	611	493	55	63
2011	372	83	269	20	522	418	68	36
2012	432	174	257	1	618	589	17	12
2013	327	123	198	6	869	619	154	96
Total	1820	542	1220	58	3355	2778	321	256

Econometric model

Diff-in-diff strategy where the baseline specification is:

$$\Delta \ln X_{ipd,t} = \beta NTM_{pd,t-1} + \text{Fixed Effects} + \epsilon_{ipdt} \quad (1)$$

- X refers to export volume of product p to country d from firm i in year t.
- $NTM_{pd,t-1}$ is a dummy variable that takes the value 1 if there is at least one non-tariff measure affecting product p and country d in year $t-1$.
- The measure can be either protectionist ($NTM^{PROT}_{pd,t-1}$) or liberalizing ($NTM^{LIBE}_{pd,t-1}$).
- Finally, different sets of Fixed Effects are included in the specifications in order to enhance identification:

(1) Firm-country-product fixed effects to exploit time variation
(2) Year-firm-product fixed effects to exploit variation across countries
(3) Year-firm-country fixed effects to exploit variation across products

Baseline Results: protectionist NTMs

Table: Effect of protectionist non-tariff measures on export growth.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$NTM^{PROT}_{pd,t-1}$	-0.048***	-0.048***	-0.047***	-0.025***	-0.031***	-0.024***	-0.003	-0.014
(s.e.)	(0.017)	(0.012)	(0.013)	(0.007)	(0.007)	(0.007)	(0.046)	(0.010)
R2	0.24	0.24	0.11	0.22	0.29	0.22	0.43	0.22
# obs	132,381	146,736	165,245	148,320	129,807	148,313	43,855	148,253
# firms	12,564	10,327	14,516	10,439	8,771	10,438	5,170	10,438
# countries	187	188	189	196	196	196	145	184
# products	118	118	118	118	117	117	118	118
Fixed effects:								
Firm × country × product	YES	NO	NO	NO	NO	NO	NO	NO
Firm × year	NO	YES	NO	YES	NO	YES	NO	YES
Firm	NO	NO	YES	NO	NO	NO	NO	NO
Year	YES	NO	YES	NO	NO	NO	NO	NO
Product × country	NO	YES	YES	NO	NO	NO	NO	NO
Product	NO	NO	NO	YES	NO	NO	YES	YES
Country	NO	NO	NO	YES	YES	YES	NO	NO
Product × year	NO	NO	NO	NO	NO	YES	NO	NO
Country × year	NO	NO	NO	NO	NO	NO	NO	YES
Firm × product × year	NO	NO	NO	NO	YES	NO	NO	NO
Firm × country × year	NO	NO	NO	NO	NO	NO	YES	NO

Notes. Dependent variable is export growth at the firm-country-product level ($\Delta \ln X_{ipd,t}$). Sample covers 2009-2013. Standard errors are clustered at the product-destination level.

Baseline Results: liberalizing NTMs

Table: Effect of liberalizing non-tariff measures on export growth.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$NTM^{LIBE}_{pd,t-1}$	0.030	0.009	0.026	0.009	0.001	0.010	0.053	0.001
(s.e.)	(0.031)	(0.030)	(0.032)	(0.023)	(0.020)	(0.022)	(0.040)	(0.028)
R2	0.24	0.24	0.11	0.22	0.29	0.22	0.43	0.22
# obs	132,381	146,736	165,245	148,320	129,807	148,313	43,855	148,253
# firms	12,564	10,327	14,516	10,439	8,771	10,438	5,170	10,438
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Fixed effects:								
Firm × country × product	YES	NO	NO	NO	NO	NO	NO	NO
Firm × year	NO	YES	NO	YES	NO	YES	NO	YES
Firm	NO	NO	YES	NO	NO	NO	NO	NO
Year	YES	NO	YES	NO	NO	NO	NO	NO
Product × country	NO	YES	YES	NO	NO	NO	NO	NO
Product	NO	NO	NO	YES	NO	NO	YES	YES
Country	NO	NO	NO	YES	YES	YES	NO	NO
Product × year	NO	NO	NO	NO	NO	YES	NO	NO
Country × year	NO	NO	NO	NO	NO	NO	NO	YES
Firm × product × year	NO	NO	NO	NO	YES	NO	NO	NO
Firm × country × year	NO	NO	NO	NO	NO	NO	YES	NO

Notes. Dependent variable is export growth at the firm-country-product level ($\Delta \ln X_{ipd,t}$). Sample covers 2009-2013. Standard errors are clustered at the product-destination level.

The role of tariff changes

Table: Effect of non-tariff measures and tariffs on export growth.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$NTM^{PROT}_{pd,t-1}$	-0.057***	-0.058***	-0.057***	-0.030***	-0.036***	-0.030***	-0.022	-0.017
(s.e.)	(0.023)	(0.017)	(0.019)	(0.011)	(0.010)	(0.010)	(0.047)	(0.013)
$NTM^{LIBE}_{pd,t-1}$	0.023	0.024	0.024	0.006	-0.011	0.005	0.032	-0.033
(s.e.)	(0.034)	(0.040)	(0.038)	(0.031)	(0.034)	(0.032)	(0.061)	(0.028)
Tariff increase$_{pd,t-1}$	-0.017	-0.044	-0.029	-0.019	-0.031	-0.021	0.067	0.002
(s.e.)	(0.034)	(0.045)	(0.035)	(0.022)	(0.021)	(0.022)	(0.055)	(0.019)
Tariff cut$_{pd,t-1}$	-0.013	-0.012	-0.011	-0.0005	0.002	0.001	-0.012	-0.005
(s.e.)	(0.031)	(0.024)	(0.021)	(0.018)	(0.017)	(0.019)	(0.039)	(0.017)
R2	0.24	0.24	0.11	0.22	0.29	0.22	0.44	0.22
# obs	132,381	146,736	165,245	148,320	129,807	148,313	43,855	148,253
# firms	12,564	10,327	14,516	10,439	8,771	5,170	2,401	10,438
# countries	187	188	189	196	196	196	145	184
# products	118	118	118	118	117	117	118	118
Fixed effects:								
Firm × country × product	YES	NO	NO	NO	NO	NO	NO	NO
Firm × year	NO	YES	NO	YES	NO	YES	NO	YES
Firm	NO	NO	YES	NO	NO	NO	NO	NO
Year	YES	NO	YES	NO	NO	NO	NO	NO
Product × country	NO	YES	YES	NO	NO	NO	NO	NO
Product	NO	NO	NO	YES	NO	NO	YES	YES
Country	NO	NO	NO	YES	YES	YES	NO	NO
Product × year	NO	NO	NO	NO	NO	YES	NO	NO
Country × year	NO	NO	NO	NO	NO	NO	NO	YES
Firm × product × year	NO	NO	NO	NO	YES	NO	NO	NO
Firm × country × year	NO	NO	NO	NO	NO	NO	YES	NO

Notes. Dependent variable is export growth at the firm-country-product level ($\Delta \ln X_{ipd,t}$). Sample covers 2009-2013. Standard errors are clustered at the product-destination level.

Cumulative effects

Table: Cumulative effect of non-tariff measures on export growth.

	Firm-country-product FE			Firm-product-year FE			Firm-country-year FE		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cumulative growth	1-year	2-year	3-year	1-year	2-year	3-year	1-year	2-year	3-year
$NTM^{PROT}_{pd,t-1}$	-0.051***	-0.074***	0.007	-0.048***	-0.067***	0.009	0.009	0.016	0.052
(s.e.)	(0.014)	(0.030)	(0.006)	(0.012)	(0.017)	(0.026)	(0.044)	(0.070)	(0.075)
$NTM^{LIBE}_{pd,t-1}$	0.043	0.055*	0.070***	0.013	0.011	0.025	0.079	0.048	-0.053
(s.e.)	(0.032)	(0.028)	(0.023)	(0.027)	(0.057)	(0.051)	(0.129)	(0.074)	(0.037)
R2	0.15	0.31	0.55	0.31	0.33	0.34	0.46	0.48	0.49
# obs	66,824	63,752	47,046	50,236	47,865	35,306	9,512	8,889	6,511
# firms	5,951	5,951	5,951	2,574	2,574	2,574	640	640	640
# countries	152	152	152	150	150	150	69	69	69
# products	113	113	113	101	101	101	100	100	100
Fixed effects									
Firm × country × product	YES	YES	YES	NO	NO	NO	NO	NO	NO
Year	YES	YES	YES	NO	NO	NO	NO	NO	NO
Product	NO	NO	NO	NO	NO	NO	YES	YES	YES
Country	NO	NO	NO	YES	YES	YES	NO	NO	NO
Firm × product × year	NO	NO	NO	YES	YES	YES	NO	NO	NO
Firm × country × year	NO	NO	NO	NO	NO	NO	YES	YES	YES

Notes. Dependent variable is export growth at the firm-country-product level ($\Delta \ln X_{ipd,t}$) over 1, 2, and 3 years. Sample covers 2009-2013. Standard errors are clustered at the product-destination level. Sample of permanent firm-product-destinations triplets.

Firm-level analysis

$$\Delta \ln X_{i,t} = \beta_F NTM_{i,t-1} + \theta Z_{i,t-1} + \eta_i + \delta_t + \nu_{i,t} \tag{2}$$

where $\Delta \ln X_{i,t}$ refers to overall export (output,employment, TFP) growth of firm t in year t. $Z_{i,t-1}$ refers to a set of firm controls, a set of firm and year fixed effects is also included (η_i and δ_t). $NTM_{i,t-1}$ is the average exposure of firm i to NTMs:

$$NTM_{i,t} = \sum_{pd} \frac{X_{ipd,t-1}}{X_{i,t-1}} NTM_{pd,t-1} \tag{3}$$

- TFP is estimated using Levinsohn-Petrin (2003)
- Average $NTM_{i,t}$ is 7.2% with a 0 median and 22.2% 90th percentile.

Firm-level analysis: Results

Table: Firm-level effects of non-tariff measures.

Dep. Variable	Exports growth		Output growth		Employment growth		TFP growth	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$NTM_{i,t-1}^{PROT}$	-0.045***	-0.045***	-0.017***	-0.016***	-0.005	-0.003	-0.033***	-0.027***
(s.e.)	(0.003)	(0.003)	(0.007)	(0.006)	(0.007)	(0.005)	(0.013)	(0.01)
$NTM_{i,t-1}^{LIBE}$	0.06	0.05	0.007	0.005	0.024**	0.014	0.018	0.000
(s.e.)	(0.05)	(0.05)	(0.009)	(0.008)	(0.010)	(0.009)	(0.020)	(0.015)
Average Dep. Variable	0.07	0.09	0.004	0.005	-0.003	0.001	-0.006	-0.006
R2	0.19	0.21	0.24	0.47	0.34	0.55	0.21	0.61
# obs	81,192	59,477	61,092	58,485	63,061	58,886	55,791	55,791
# firms	24,077	17,963	18,484	17,693	18,963	17,791	16,919	16,919
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Firm Controls	YES	NO	YES	NO	YES	NO	YES	NO

Notes. Dependent variable is export (output, employment, TFP) growth at the firm level ($\Delta \ln X_{i,t}$). Sample covers 2009-2013. Standard errors are clustered at the firm level.

Counterfactual exercise

For each firm i in our sample we compute the export growth one would have observed if $NTM_{i,t-1} = 0$:

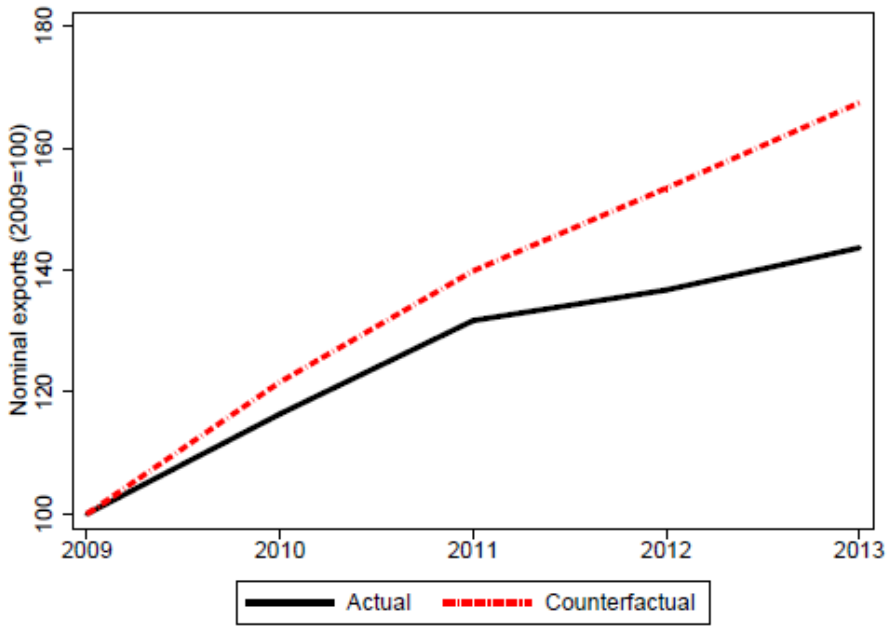
$$\widetilde{\Delta \ln X_{i,t}} = \Delta \ln X_{i,t} - \hat{\beta}_F NTM_{i,t-1} \tag{4}$$

Then simply aggregate across all firms in our sample using firm-specific export shares ($\phi_{i,t}$) as weights:

$$\widetilde{\Delta \ln X_t} = \sum_i \phi_{i,t} \widetilde{\Delta \ln X_{i,t}}. \tag{5}$$

Counterfactual exercise

Figure 1: Aggregate export growth in the absence of NTBs.



Notes. Actual refers to annual nominal growth of goods exports. Counterfactual refers to aggregate growth in the absence of NTBs as computed in equation (6).

Conclusions

- Non-tariff measures seem to be playing an important role in rising protectionism.
- We find statistically significant effects of protectionist measures in export growth and other firm outcomes.
- We find an asymmetric result regarding the effect of protectionist and liberalizing NTMs, being the former significant and negative and the latter non-significant.
- We find that finance and government procurement measures are the most harmful ones.
- Traditional trade instruments like tariff measures seem to be playing a lesser role.
- Firm outcomes such as output and TFP growth are also negatively affected by the use of protectionist tariff measures.

A. Robustness

Table: Effect of protectionist and liberalizing non-tariff measures on export growth.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$NTM^{PROT}_{pd,t-1}$	-0.049***	-0.046***	-0.047***	-0.023***	-0.028***	-0.023***	-0.006	-0.011
(s.e.)	(0.018)	(0.017)	(0.015)	(0.009)	(0.008)	(0.009)	(0.045)	(0.012)
$NTM^{LIBE}_{pd,t-1}$	-0.004	-0.022	0.002	-0.022	-0.042	-0.023	0.063	-0.050
(s.e.)	(0.043)	(0.021)	(0.025)	(0.026)	(0.027)	(0.025)	(0.050)	(0.029)
R2	0.24	0.24	0.11	0.22	0.29	0.22	0.44	0.22
# obs	132,381	146,736	165,245	148,320	129,807	148,313	43,855	148,253
# firms	12,564	10,327	14,516	10,439	8,771	10,438	5,170	10,438
# countries	187	188	189	196	196	196	106	184
# products	118	118	118	118	117	117	116	118
Fixed effects:								
Firm × country × product	YES	NO	NO	NO	NO	NO	NO	NO
Firm × year	NO	YES	NO	YES	NO	YES	NO	YES
Firm	NO	NO	YES	NO	NO	NO	NO	NO
Year	YES	NO	YES	NO	NO	NO	NO	NO
Product × country	NO	YES	YES	NO	NO	NO	NO	NO
Product	NO	NO	NO	YES	NO	NO	YES	YES
Country	NO	NO	NO	YES	YES	YES	NO	NO
Product × year	NO	NO	NO	NO	NO	YES	NO	NO
Country × year	NO	NO	NO	NO	NO	NO	NO	YES
Firm × product × year	NO	NO	NO	NO	YES	NO	NO	NO
Firm × country × year	NO	NO	NO	NO	NO	NO	YES	NO

Notes. Dependent variable is export growth at the firm-country-product level ($\Delta \ln X_{ipd,t}$). Sample covers 2009-2013. Standard errors are clustered at the product-destination level.

A. Robustness

Table: Effect of protectionist non-tariff measures and tariffs on export growth.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$NTB_{pd,t-1}$	-0.047**	-0.047***	-0.046**	-0.025***	-0.032***	-0.025***	0.0004	-0.014
(s.e.)	(0.020)	(0.013)	(0.015)	(0.008)	(0.007)	(0.008)	(0.048)	(0.010)
$Tariff_{pd,t-1}$	-0.059**	-0.010	-0.041**	0.0004	0.001	0.003	-0.083**	0.020
(s.e.)	(0.012)	(0.018)	(0.013)	(0.016)	(0.016)	(0.016)	(0.042)	(0.020)
R2	0.24	0.24	0.11	0.22	0.29	0.22	0.43	0.22
# obs	132,381	146,736	165,245	148,320	129,807	148,313	43,855	148,253
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Fixed effects:								
Firm × country × product	YES	NO	NO	NO	NO	NO	NO	NO
Firm × year	NO	YES	NO	YES	NO	YES	NO	YES
Firm	NO	NO	YES	NO	NO	NO	NO	NO
Year	YES	NO	YES	NO	NO	NO	NO	NO
Product × country	NO	YES	YES	NO	NO	NO	NO	NO
Product	NO	NO	NO	YES	NO	NO	YES	YES
Country	NO	NO	NO	YES	YES	YES	NO	NO
Product × year	NO	NO	NO	NO	NO	YES	NO	NO
Country × year	NO	NO	NO	NO	NO	NO	NO	YES
Firm × product × year	NO	NO	NO	NO	YES	NO	NO	NO
Firm × country × year	NO	NO	NO	NO	NO	NO	YES	NO

Notes. Dependent variable is export growth at the firm-country-product level ($\Delta \ln X_{ipd,t}$). Sample covers 2009-2013. Standard errors are clustered at the product-destination level.

A. Robustness

Table: Effect of liberalizing non-tariff measures and tariffs on export growth.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$NTB_{pd,t-1}$	0.029	0.008	0.025	0.009	0.001	0.010	0.050	0.0005
(s.e.)	(0.031)	(0.030)	(0.031)	(0.022)	(0.020)	(0.022)	(0.036)	(0.027)
$Tariff_{pd,t-1}$	-0.062***	-0.014	-0.044*	-0.003	-0.004	-0.0003	-0.080*	-0.022
(s.e.)	(0.008)	(0.016)	(0.016)	(0.015)	(0.016)	(0.016)	(0.046)	(0.020)
R2	0.24	0.24	0.11	0.22	0.29	0.22	0.43	0.22
# obs	132,381	146,736	165,245	148,320	129,807	148,313	43,855	148,253
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# products	118	118	118	118	117	117	118	118
Fixed effects:								
Firm × country × product	YES	NO	NO	NO	NO	NO	NO	NO
Firm × year	NO	YES	NO	YES	NO	YES	NO	YES
Firm	NO	NO	YES	NO	NO	NO	NO	NO
Year	YES	NO	YES	NO	NO	NO	NO	NO
Product × country	NO	YES	YES	NO	NO	NO	NO	NO
Product	NO	NO	NO	YES	NO	NO	YES	YES
Country	NO	NO	NO	YES	YES	YES	NO	NO
Product × year	NO	NO	NO	NO	NO	YES	NO	NO
Country × year	NO	NO	NO	NO	NO	NO	NO	YES
Firm × product × year	NO	NO	NO	NO	YES	NO	NO	NO
Firm × country × year	NO	NO	NO	NO	NO	NO	YES	NO

Notes. Dependent variable is export growth at the firm-country-product level ($\Delta \ln X_{ipd,t}$). Sample covers 2009-2013. Standard errors are clustered at the product-destination level.

B. Regressions by UN MAST type

Table: Effect of protectionist non-tariff measures on export growth by UN MAST category.

	(1)	(2)	(3)
$NTM^{PROT}_{pd,t-1}$ (Category A)	-0.089***	0.131**	-0.348
(s.e)	(0.044)	(0.066)	(0.369)
$NTM^{PROT}_{pd,t-1}$ (Category B)	-0.081	-0.095**	0.183
(s.e)	(0.069)	(0.040)	(0.211)
$NTM^{PROT}_{pd,t-1}$ (Category D)	0.086	0.057	0.003
(s.e)	(0.096)	(0.060)	(0.119)
$NTM^{PROT}_{pd,t-1}$ (Category F)	0.266***	0.255**	-0.072
(s.e)	(0.088)	(0.081)	(0.249)
$NTM^{PROT}_{pd,t-1}$ (Category E)	0.028	-0.017	0.057
(s.e)	(0.094)	(0.037)	(0.100)
$NTM^{PROT}_{pd,t-1}$ (Category G)	-0.272***	-0.289***	-1.379***
(s.e)	(0.037)	(0.081)	(0.223)
Fixed effects:			
Firm $\times$ country $\times$ product	YES	NO	NO
Year	YES	NO	NO
Product	NO	NO	YES
Country	NO	YES	NO
Firm $\times$ product $\times$ year	NO	YES	NO
Firm $\times$ country $\times$ year	NO	NO	YES

B. Regressions by UN MAST type (cont.)

Table: Effect of protectionist non-tariff measures on export growth by UN MAST category.

	(1)	(2)	(3)
$NTM^{PROT}_{pd,t-1}$ (Category I)	-0.013	0.018	0.057
(s.e)	(0.061)	(0.048)	(0.049)
$NTM^{PROT}_{pd,t-1}$ (Category L)	-0.031	-0.017	-0.029
(s.e)	(0.031)	(0.019)	(0.058)
$NTM^{PROT}_{pd,t-1}$ (Category M)	-0.146***	-0.073***	-0.023
(s.e)	(0.052)	(0.021)	(0.102)
$NTM^{PROT}_{pd,t-1}$ (Category P)	-0.017	-0.035	0.080
(s.e)	(0.040)	(0.032)	(0.047)
$NTM^{PROT}_{pd,t-1}$ (Category X)	0.019	-0.009	0.061
(s.e)	(0.041)	(0.026)	(0.065)
R2	0.24	0.29	
# obs	132,381	129,807	43,855
# firms	12,564	8,771	5,170
# countries	187	196	145
# products	118	117	118