BANCO DE ESPAÑA
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FLOODED BY CHINA? TRADE DIVERSION DUE TO US TARIFFS DURING TRUMP'S FIRST MANDATE

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SUERF | ECB WORKSHOP – CHINA AND THE SHIFTING GLOBAL TRADE ORDER

16 September 2025

DIRECTORATE GENERAL OF ECONOMICS, STATISTICS AND RESEARCH – BANCO DE ESPAÑA

SCOPE AND METHODOLOGY

- The recent **US tariffs** measures spurred a debate on their possible effects in terms of **trade flow reallocation**
- One common concern is that **Chinese exporters could redirect their exports towards European countries**, increasing competition faced by EU producers and exerting downward impact on prices (Lagarde, 2025)
  - ➢ Import surveillance task force of the European Commission
- **In this paper we study the effects that the special tariffs applied to China by the first Trump administration had on the EU**
  - Estimate the impact US tariffs had on Chinese exports to the EU and on EU import prices
    - ➢ *How large (if any) was the increase in EU imports from China due to US tariffs? Which Chinese products were mostly redirected to the EU market?*
    - ➢ *Did (potentially) larger EU imports from China occur at the expenses of intra-EU providers?*
    - ➢ *Did Chinese exporters reduce their prices in the EU market?*
- **Methodology**
  - Monthly disaggregated bilateral trade flows data and trade unit values data at the country / HS 6-digit level (from TDM)
  - Information on US special tariffs at the disaggregated level (from USTR)
  - Focus on a panel including all EU countries between Jan. 2017 and Jul. 2019
  - Study impact of US tariffs on EU imports from China and their price by applying diff-in-diff methods

MAIN (PRELIMINARY) FINDINGS

- Confirm literature finding that US tariffs had a large negative impact on US imports from China
- Find evidence of **limited trade diversion towards EU countries**
  - **US tariffs increased EU imports from China by less than 4% on average across affected products**
- Sectoral heterogeneity
  - **Increase in** EU imports of **machinery, electronics, metal articles and optical/precision instruments**
  - **No signs of diversion** detected for other sectors that were affected by tariffs, such as **vehicles, furniture and plastic**
- Product characteristics
  - **More specialized products** displayed higher redirection towards EU, especially in the machinery sector: due to **similarity btw US and EU market**?
- Higher imports from China occurred at the expense of intra-EU trade only in one sector (optical/precision instruments)
- Price impact:
  - Confirm literature finding that **Chinese exporters did not lower prices of affected products in the US market**
  - Find they **did not lower prices in the EU market either**

ROADMAP

- **US TARIFFS ON IMPORTS FROM CHINA**
- **PANEL DIFF-IN-DIFF ANALYSIS**
  - **IMPACT ON TRADE FLOWS**

    SECTOR HETEROGENEITY / PRODUCT CHARACTERISTICS
  - **IMPACT ON PRICES**

    SECTOR HETEROGENEITY
- **WORK IN PROGRESS**

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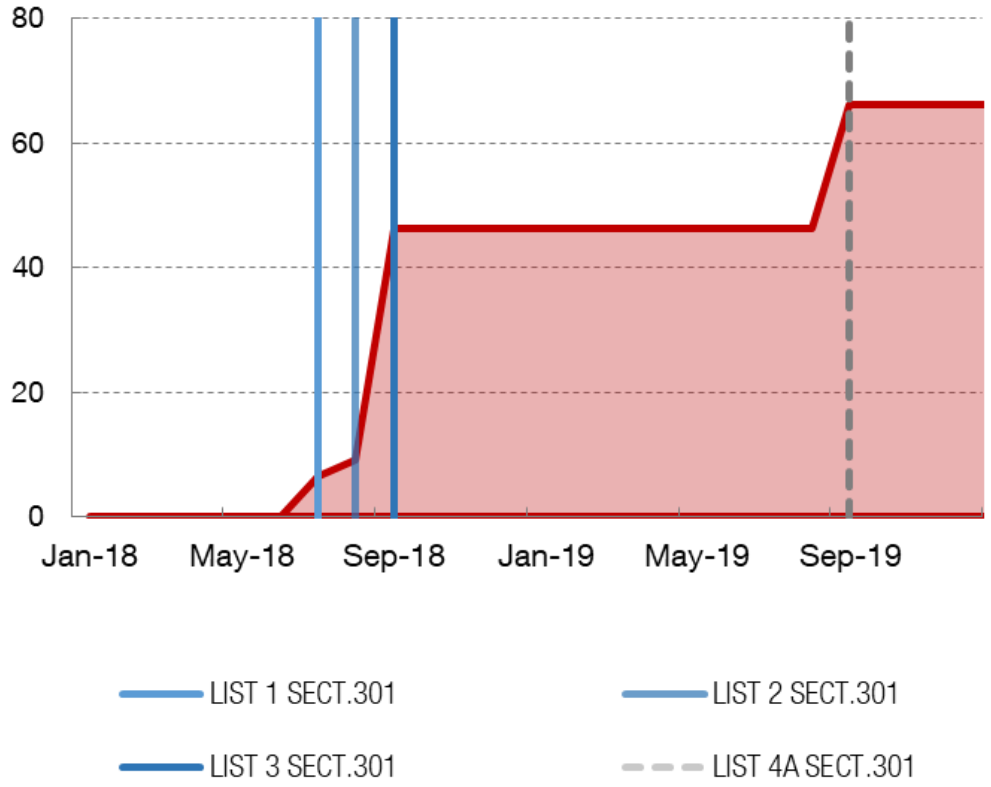
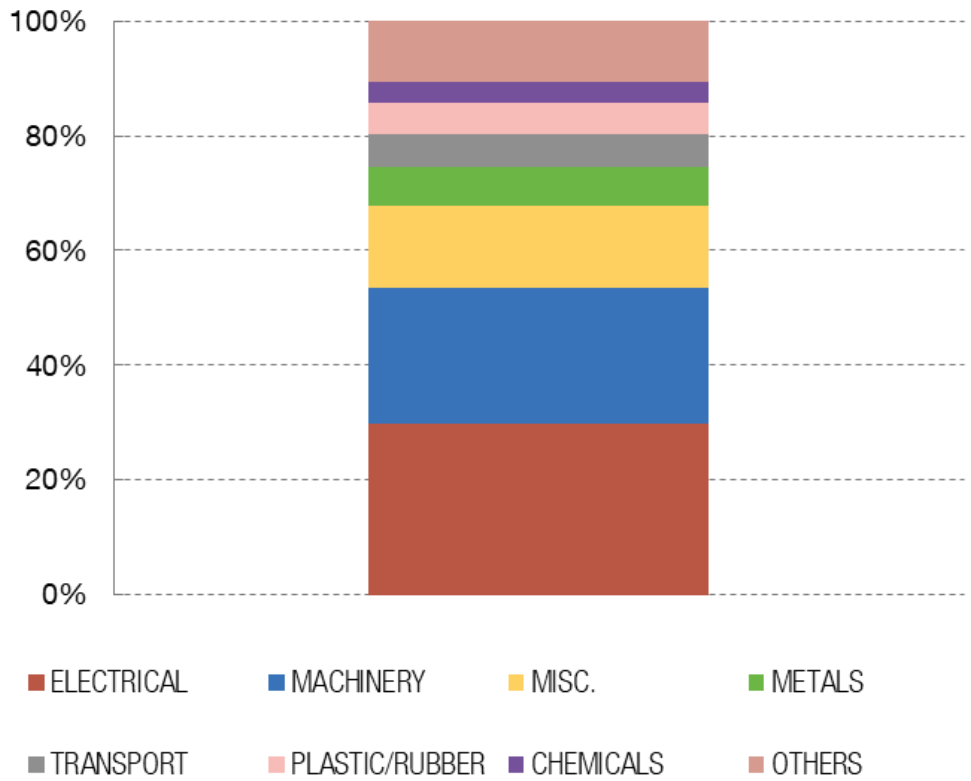
US TARIFFS ON CHINESE IMPORTS DURING TRUMP'S FIRST MANDATE

SHARE OF US IMPORTS FROM CHINA AFFECTED BY SPECIAL TARIFFS



SHARE OF US TARGETED IMPORTS BY SECTOR (LISTS 1- 3)



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DIF IN DIF MODEL: IMPACT OF US TARIFFS ON EU IMPORTS FROM CHINA

Based on Dang, Krishna, Zao (2023) and Cigna, Meinen, Schulte, Steinhoff (2022)

$$\log\left(M_{i,p,t}^{CN}\right) = \beta \cdot \tau_{p,t}^{US} + \gamma_{i,t} + \gamma_{i,p} + \gamma_{s,t} + \gamma_{q,p} + \epsilon_{i,p,t}$$

where *i* is the importer country, *p* the product (HS6-digit level), *t* the month

- $M_{i,p,t}^{CN}$ Imports from China of importer country *i* of product *p* (HS6-digit level) in month *t*
- $\tau_{p,t}^{US}$ Dummy = 1 if in month *t* US tariffs on Chinese imports are in force for product *p*
- $\gamma_{i,t}$ Importer-time fixed effects (e.g., exchange rate)
- $\gamma_{i,p}$ Importer-product fixed effects (e.g., tastes, time-invariant trade policy)
- $\gamma_{s,t}$ Sector (HS2)-time fixed effects (trends/shocks common to all products in a sector)
- $\gamma_{q,p}$ Quarter-product fixed effects (controls for seasonality)

  ➢ Robust standard errors, clustered at product level

US TARIFFS MILDLY INCREASED EU COUNTRIES' IMPORTS FROM CHINA

SPECIFICATION	BASELINE		PLACEBO	
	US	EU	US	EU
	(1)	(2)	(3)	(4)
US tariff dummy	-0.325***	0.038***	-0.039	0.013
	(0.026)	(0.010)	(0.035)	(0.014)
Constant	13.334***	9.914***	13.331***	9.928***
	(0.006)	(0.002)	(0.011)	(0.004)
Observations	117,399	1,809,396	56,178	855,729
R-squared	0.929	0.827	0.949	0.845
Fixed Effects				
Importer-time FE	Yes	Yes	Yes	Yes
Importer-product FE	Yes	Yes	Yes	Yes
Quarter-prod. FE	Yes	Yes	Yes	Yes
HS2 sector-time FE	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses.
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

EU IMPORTS FROM CHINA INCREASED ONLY IN SOME OF THE MOST TARIFF-AFFECTED SECTORS

HS2 SECTOR	ELECTR.	MACHINERY	IRON/STEEL ARTICLES	OPTICAL/ PRECISION	FURNIT.	VEHICLES	PLASTIC
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
US tariff dummy	0.053**	0.082***	0.150***	0.070**	0.083	-0.053	-0.014
	(0.025)	(0.023)	(0.039)	(0.031)	(0.052)	(0.055)	(0.058)
Trend*targeted						0.005*	0.001
						(0.003)	(0.002)
Constant	10.845***	10.252***	10.163***	9.923***	11.692***	11.071***	-3.251
	(0.007)	(0.008)	(0.010)	(0.009)	(0.015)	(0.016)	(11.146)
Observations	173,676	231,183	66,518	86,546	29,821	33,058	58,912
R-squared	0.880	0.807	0.794	0.837	0.889	0.859	0.812
Fixed Effects							
Importer-time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Importer-product FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quarter-prod. FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

MORE SPECIALIZED (LOWER TRADE ELASTICITY) PRODUCTS REDIRECTED TO THE EU MARKET

$$\log\left(M_{i,p,t}^{CN}\right) = \beta_1 \cdot \tau_{p,t}^{US} + \beta_2 \cdot \tau_{p,t}^{US} \cdot \log(t\_elast.) + \gamma_{i,t} + \gamma_{i,p} + \gamma_{s,t} + \gamma_{q,p} + \epsilon_{i,p,t}$$

SPECIFICATION	EU ALL SECTORS	EU MACHINERY
	(1)	(2)
US tariff dummy	0.102***	0.204***
	(0.024)	(0.043)
US tariff dummy*t_elast.	-0.037***	-0.067***
	(0.012)	(0.021)
Trend*targeted	-0.002	
	(0.002)	
Trend*targeted*t_elast.	0.002*	
	(0.001)	
Constant	9.788***	10.275***
	(0.116)	(0.008)
Observations	1,718,062	226,081
R-squared	0.826	0.807
Fixed Effects		
Importer-time FE	Yes	Yes
Importer-product FE	Yes	Yes
Quarter-prod. FE	Yes	Yes
HS2 sector-time FE	Yes	Yes

Notes: Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

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NO SIGNIFICANT IMPACT ON US AND EU IMPORT PRICES FROM CHINA

$$\log\left(P_{i,p,t}^{CN}\right) = \beta \cdot \tau_{p,t}^{US} + \gamma_{i,t} + \gamma_{i,p} + \gamma_{s,t} + \gamma_{q,p} + \epsilon_{i,p,t}$$

SPECIFICATION	US	EU	
	ALL SECTORS	ALL SECTORS	RELEVANT SECTORS
US tariff dummy	0.021	0.001	-0.006
	(0.024)	(0.006)	(0.007)
Constant	6.143***	7.463***	7.700***
	(0.006)	(0.001)	(0.002)
Observations	92,047	1,604,452	616,742
R-squared	0.969	0.940	0.921
Fixed Effects			
Importer-time FE	Yes	Yes	Yes
Importer-product FE	Yes	Yes	Yes
Quarter-prod. FE	Yes	Yes	Yes
HS2 sector-time FE	Yes	Yes	Yes

Notes: Relevant sectors are electronics, machinery, iron/steel articles, furniture, vehicles, optical and precision instruments, and plastic. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

SUMMARY OF PRELIMINARY FINDINGS AND WORK IN PROGRESS

- We study **the impact of US tariffs on EU imports from China**, finding evidence of **limited diversion effects** towards EU countries
  - Sectoral heterogeneity: some sectors affected by US tariffs –vehicles, furniture, plastic– show no evidence of diversion
  - More specialized products redirected towards EU: due to similarity btw US and EU market?
  - Chinese exporters did not lower export prices in the EU market –not even in the most affected sectors

- **Robust to**: controlling for exceptions granted to US tariffs; controlling for product-level demand shocks; alternative fixed effects; triple difference estimation

- **Work in progress**
  - ➢ Robustness and dynamics: **Local projections**. Preliminary findings using the Dube, Girardi, Jordá and Taylor (2025) estimator confirm main results
  - ➢ Trade flows analysis: **Comparative advantage**. Preliminary findings hint at that a stronger comparative advantage of the EU importing country with respect to China does not generally have a meaningful impact on export redirection
  - ➢ Price analysis: price distribution across EU providers / impact on average import prices
  - ➢ Trade flows & prices: dig deeper into sectoral & importer heterogeneity / tariff magnitude / 8-digit level

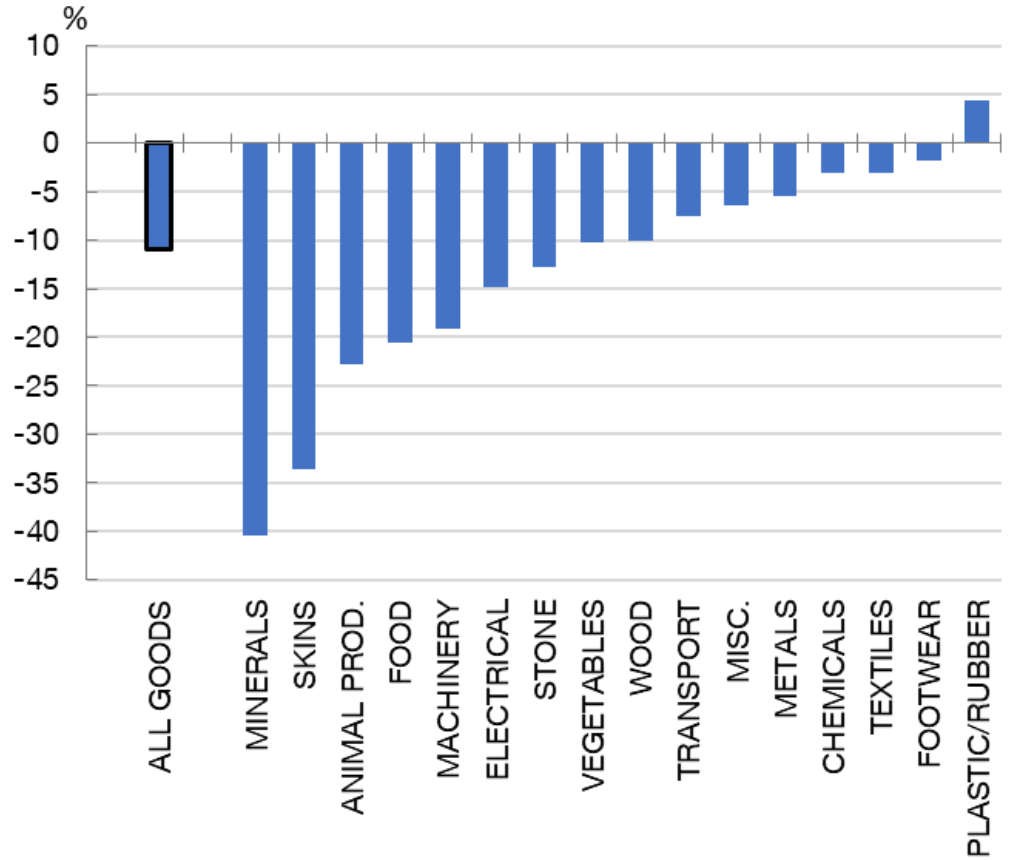
robustness LP

THANKS FOR YOUR ATTENTION

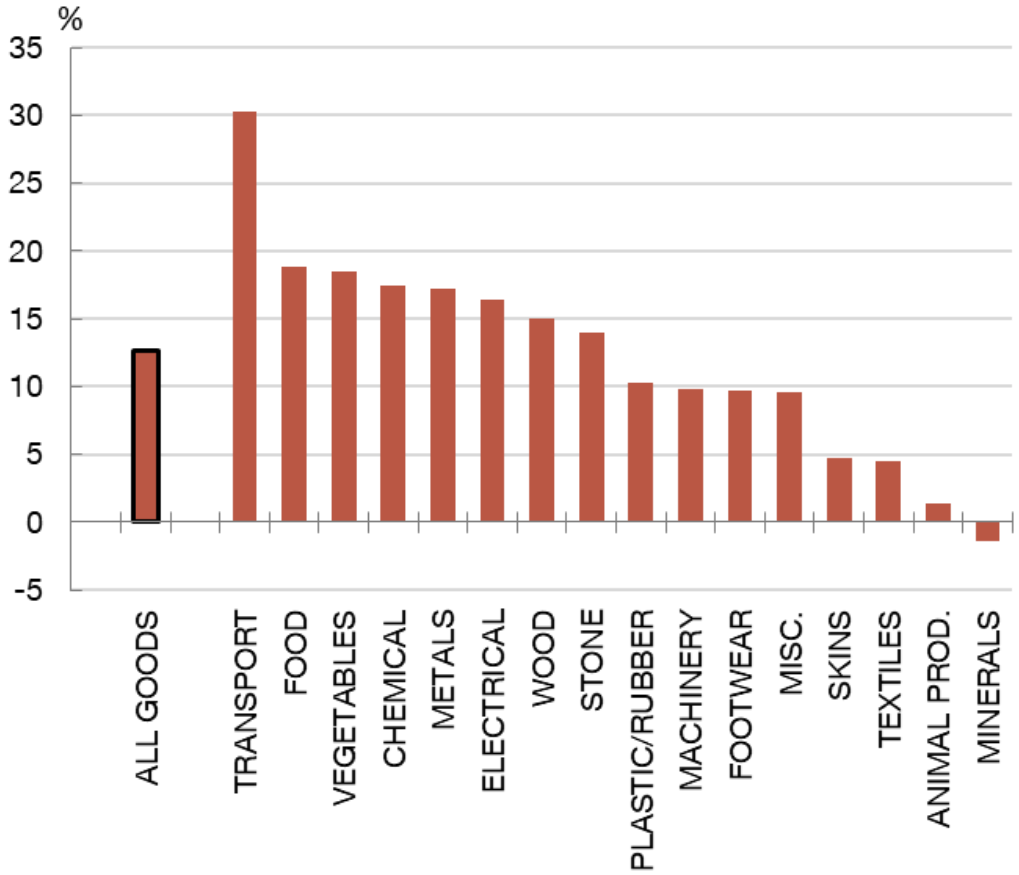
ANNEX

SOME PATTERNS: CHANGE IN IMPORTS FROM CHINA ACROSS PRE AND POST-TARIFF PERIOD

CHANGE IN US IMPORTS FROM CHINA (2017H2-2019H2)



CHANGE IN EU IMPORTS FROM CHINA (2017H2-2019H2)



DIVERSION AT THE EXPENSE OF INTRA-EU IMPORTS ONLY IN THE OPTICAL SECTOR

$$\log\left(M_{i,p,t}^{intra-EU}\right) = \beta \cdot \tau_{p,t}^{US} + \gamma_{i,t} + \gamma_{i,p} + \gamma_{s,t} + \gamma_{q,p} + \epsilon_{i,p,t}$$

SECTOR	ALL	METALS	MACHINERY	ELECTRIC	OPTICAL
	(1)	(2)	(3)	(4)	(5)
US tariff dummy	-0.003	0.028	-0.018	0.040*	-0.052**
	(0.007)	(0.018)	(0.017)	(0.023)	(0.024)
Trend*targeted	0.000	0.005***	0.005**		
	(0.001)	(0.001)	(0.002)		
Constant	11.313***	12.034***	11.262***	12.256***	10.959***
	(0.076)	(0.004)	(0.258)	(0.007)	(0.354)
Observations	3,596,076	95,165	347,474	207,325	110,155
R-squared	0.890	0.886	0.829	0.917	0.887
Fixed Effects					
Importer-time FE	Yes	Yes	Yes	Yes	Yes
Importer-product FE	Yes	Yes	Yes	Yes	Yes
Quarter-prod. FE	Yes	Yes	Yes	Yes	Yes
Sector-time FE	Yes	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

ROBUSTNESS: IMPACT ON US IMPORTS

SPECIFICATION	EXCEPTIONS (1)	DEMAND EFFECTS (2)	ALTERNATIVE FE (3)
US tariff excl. excep.	-0.325***		
	(0.026)		
Exception dummy	-0.267***		
	(0.059)		
US tariff dummy		-0.329***	-0.316***
		(0.026)	(0.018)
Imports from ROW		0.070***	
		(0.009)	
Constant	13.334***	12.321***	13.334***
	(0.006)	(0.141)	(0.004)
Observations	117,399	116,063	117,452
R-squared	0.929	0.929	0.925
Fixed Effects			
Time FE	Yes	Yes	Yes
Product FE	Yes	Yes	Yes
HS2 sector-time FE	Yes	Yes	
Quarter-prod. FE	Yes	Yes	Yes

ROBUSTNESS: TRADE DIVERSION TOWARDS EU COUNTRIES

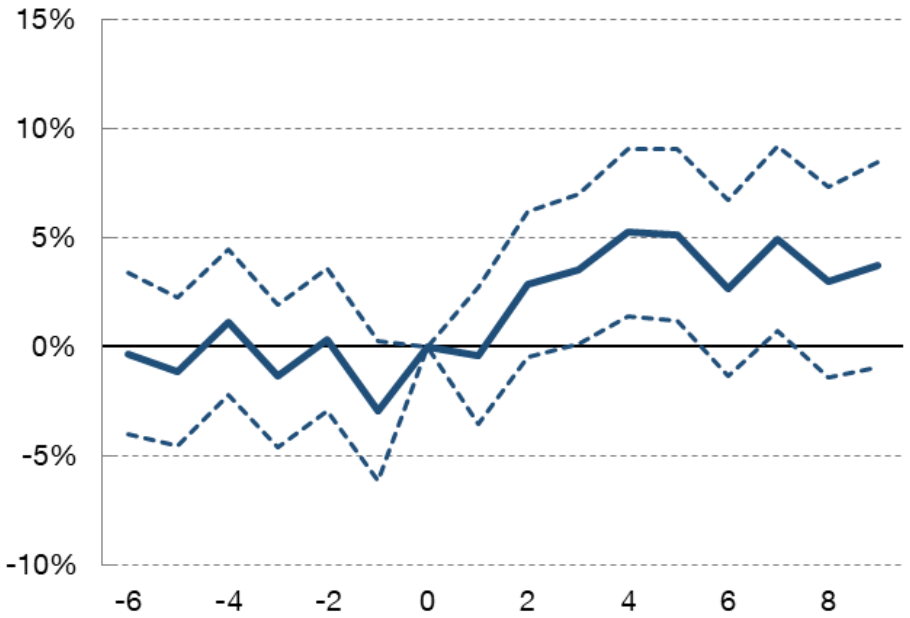
SPECIFICATION	EXCEPTIONS	DEMAND EFFECTS	ALTERNATIVE FE	
	(1)	(2)	(3)	(4)
US tariff excl. excep.	0.038***			
	(0.010)			
Exception dummy	0.075***			
	(0.022)			
US tariff dummy		0.038***	0.046***	0.041***
		(0.010)	(0.008)	(0.011)
Imports from ROW		0.048***		
		(0.003)		
US tariff * China				
Constant	9.914***	9.338***	9.913***	9.897***
	(0.002)	(0.032)	(0.002)	(0.003)
Observations	1,809,396	1,786,977	1,809,396	1,818,681
R-squared	0.827	0.827	0.826	0.614
Fixed Effects				
Importer FE				Yes
Time FE				Yes
Product FE				Yes
Importer-Time FE	Yes	Yes	Yes	
Importer-Product FE	Yes	Yes	Yes	
Importer-Exporter-Time FE				
Importer-Exporter-Product FE				
HS2 sector-time FE	Yes	Yes		Yes
Quarter-prod. FE	Yes	Yes	Yes	Yes

PRELIMINARY LOCAL PROJECTION RESULTS CONFIRM MAIN FINDINGS

LOCAL PROJECTION ANALYSIS: IMPACT OF US TARIFFS ON THE EU

POINT ESTIMATE AND 90% CI

VALUE OF IMPORTS FROM CHINA



IMPORT PRICE FROM CHINA