

The China Shock in World Markets: Chinese Competition and German Exporters

Philip Bodenschatz Peter H. Egger Arne Nagengast

28 September 2026

Discussion by Matteo Alpino
(Banca d'Italia)

China Workshop

Paper in a nutshell

- ▶ **Question:** How does stronger Chinese competition affect German exporters in third markets during the China shock 2.0?
- ▶ **Data:** German custom data 2012-2023
- ▶ **Identification:** Instrument Chinese market-share growth using Chinese gains in the same product in structurally similar destinations.
- ▶ **Main result:** A 1 pp increase in firm-level Chinese exposure lowers export growth by 1.7 pp.
- ▶ **Adjustment:** Weaker growth of continuing relationships + market exit and weaker entry.
- ▶ **Incidence:** Losses are smaller for firms with stronger quality/price positions, core and high-tech products, and relative trade-cost advantages.

Novel contributions

1. First paper to study the China shock 2.0
 - ▶ I have a similar on-going project with Italian data (Alpino, D'Agostino and Linarello, 2026)
2. Extend the Autor et al. (2013) China shock shift-share machinery to a multiple-country setting

Comment 1: measuring Chinese import growth

The paper defines Chinese market-share growth relative to imports **excluding Germany** to avoid mechanical correlation with declines in Germany export:

$$\Delta MS_{CN,jk} = \frac{X_{CN,jk,2023}}{M_{(-DE),jk,2023}} - \frac{X_{CN,jk,2012}}{M_{(-DE),jk,2012}}. \quad (1)$$

where $M_{(-DE),jkt} = M_{tot,jkt} - X_{DE,jkt}$.

We can re-write as:

$$\Delta MS_{CN} = \frac{\Delta MS_{CN}^{tot}}{1 - MS_{DE,12}^{tot}} + \frac{MS_{CN,23}^{tot} \Delta MS_{DE}^{tot}}{\left(1 - MS_{DE,23}^{tot}\right) \left(1 - MS_{DE,12}^{tot}\right)}$$

► Proof

Comment 1 continued

- Case 1: no growth in Chinese import

$$\underbrace{\Delta MS_{CN}}_{\neq 0} = \underbrace{\frac{\Delta MS_{CN}^{tot}}{1 - MS_{DE,12}^{tot}}}_{= 0 \text{ if } \Delta MS_{CN}^{tot} = 0} + \frac{MS_{CN,23}^{tot} \Delta MS_{DE}^{tot}}{\left(1 - MS_{DE,23}^{tot}\right) \left(1 - MS_{DE,12}^{tot}\right)}$$

Even if Chinese imports are constant, the treatment variable is not zero. Furthermore, it gets positive or negative value depending on the sign of growth in **German** import

Comment 1 continued

- Case 2: no growth in German import

$$\Delta MS_{CN} = \frac{\Delta MS_{CN}^{tot}}{1 - MS_{DE}^{tot}} + \underbrace{\frac{MS_{CN,23}^{tot} \Delta MS_{DE}^{tot}}{(1 - MS_{DE}^{tot})^2}}_{=0}$$

The actual China shock is scaled by the negative of the German market share: the shock is larger in markets where the German share is larger

► Examples

Comment 1 continued

- Case 3: Chinese gain is exactly German pain

$$\Delta MS_{CN} = \frac{\Delta}{1 - MS_{DE,12}^{tot}} \left(1 - \frac{MS_{CN,23}^{tot}}{1 - MS_{DE,23}^{tot}} \right)$$

Comment 1: wrap up

- ▶ Measurement error in the China shock measure
- ▶ IV likely does not help, as Z is constructed using the same approach
- ▶ Perhaps better simply to use the change in the regular Chinese market share without excluding German import?

Comment 2: shift-share in multi-country setting

One-country setting:

- ▶ Original idea by Autor et al. (2013): in order to instrument Chinese exports to the US, use Chinese exports to other advanced countries
- ▶ Economic logic behind the IV: supply shock in China, purging US demand shocks

Multi-country setting:

- ▶ New idea here: in order to instrument Chinese exports to country X , use Chinese exports to countries similar to X
- ▶ Economic logic behind the IV: same supply shock in China has different effects in destination countries X and Y , depending on common conditions in a set of countries similar to X but different from Y , purging demand shock in country X

Comment 2: questions on the instrument

- ▶ Is it a pure supply shock? Or supply + common demand shock?
- ▶ Can the IV net out demand shocks common to the set of similar countries used to instrument X ?
- ▶ Is Holland used to instrument Belgium, but also Belgium used to instrument Holland?

Comment 2: few countries account for most DE export



- ▶ suggestion: split countries in endogenous vs instrument
- ▶ related: how do you deal with DE export to China (black dot)?

Conclusion

- ▶ Very nice, novel, important and timely paper!
- ▶ Looking forward to reading the next version!

Thank you!

Proof

Define market shares relative to total imports:

$$MS_{CN,t}^{tot} = \frac{x_{CN,t}}{M_{tot,t}}, \quad MS_{DE,t}^{tot} = \frac{x_{DE,t}}{M_{tot,t}}.$$

Since

$$M_{(-DE),t} = M_{tot,t} - x_{DE,t} = M_{tot,t} (1 - MS_{DE,t}^{tot}),$$

the Chinese market share used in the paper can be written as

$$MS_{CN,t} = \frac{x_{CN,t}}{M_{(-DE),t}} = \frac{MS_{CN,t}^{tot}}{1 - MS_{DE,t}^{tot}}.$$

Therefore,

$$\Delta MS_{CN} = \frac{MS_{CN,23}^{tot}}{1 - MS_{DE,23}^{tot}} - \frac{MS_{CN,12}^{tot}}{1 - MS_{DE,12}^{tot}}.$$

Putting the two terms over a common denominator and rearranging:

$$\Delta MS_{CN} = \frac{\Delta MS_{CN}^{tot}}{1 - MS_{DE,12}^{tot}} + \frac{MS_{CN,23}^{tot} \Delta MS_{DE}^{tot}}{(1 - MS_{DE,23}^{tot})(1 - MS_{DE,12}^{tot})}.$$

Example 1

	es1	2012	2023	Delta
import from:	china	1	2	
	de	7	7	
	other	2	1	
	total	10	10	
	MS as used in the paper	0,33333	0,66667	0,33333
	actual china share	0,1	0,2	0,1
	es2	2012	2023	
import from:	china	1	2	
	de	0	0	
	other	9	8	
	total	10	10	
	Delta MS as used in the paper	0,1	0,2	0,1
	actual china share	0,1	0,2	0,1

► Back

Example 2

9		es2	2012	2023		
10	import from:	china	1	2		
11		de	0	0		
12		other	9	8		
13		total	10	10		
14		Delta MS as used in the paper	0,1	0,2	0,1	
15		actual china share	0,1	0,2	0,1	
16						
17		es3	2012	2023		
18	import from:	china	0,1	0,18		
19		de	7	7		
20		other	2	1		
21		total	9,1	8,18		
22		Delta MS as used in the paper	0,04762	0,15254	0,1	
23		actual china share	0,01099	0,022	0,0	
24						
25						
26						
27						

► Back