Economic Dependencies between Germany/Europe and China

Current Challenges and Options

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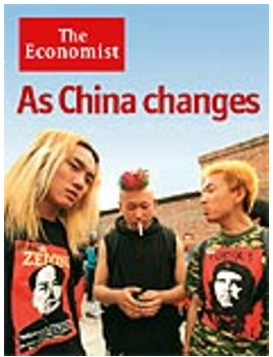
Bielefeld University and Kiel Institute for the World Economy

4 Juli 2024 — KAS


The Economist
China—the fireworks to come


The Economist
China opens up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As China changes


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How China runs the world economy


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China, beware
The leaders meet, the cities grow, the peasants are left behind


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Facing up to China


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Does China play fair?


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Will quantum break the internet?
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A dangerous rivalry


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Union slack: Britons rebalance life
Trade without trust
How the West should do business with China


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Big tech's AI bets
Inside Turkey's economy
The global rice crisis
Russia's abandoned yachts
AMERICA V CHINA
It's worse than you think

TODAY'S ROAD MAP

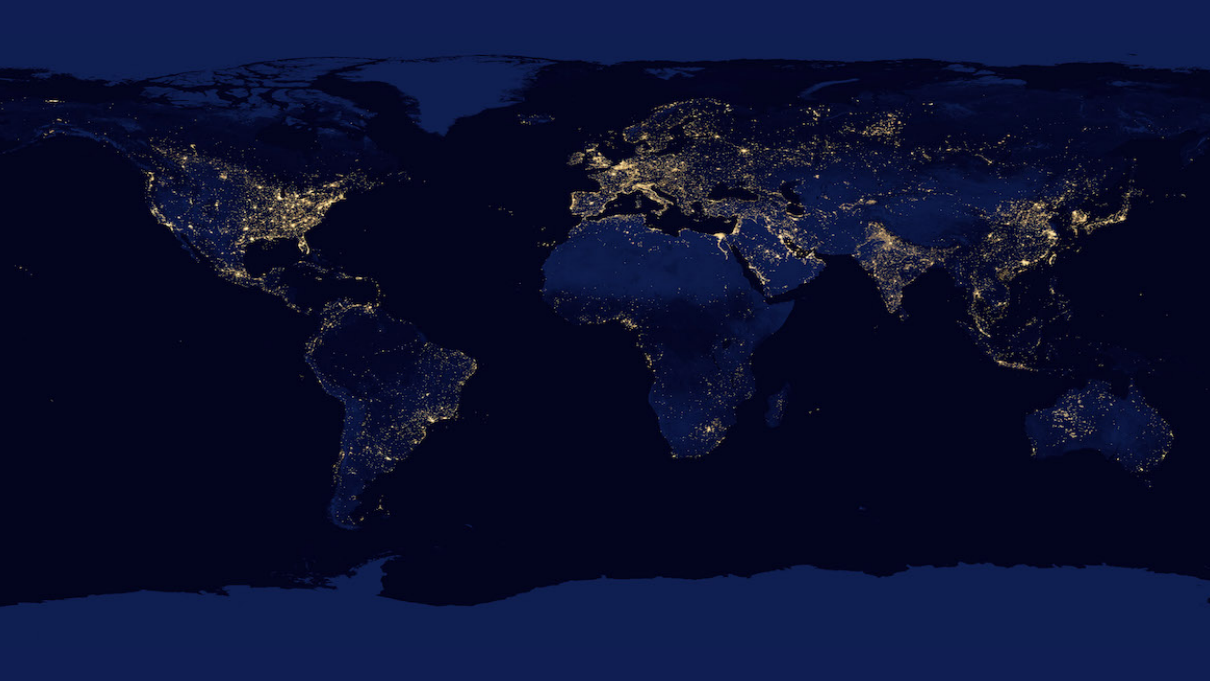
1. The economic rise of China

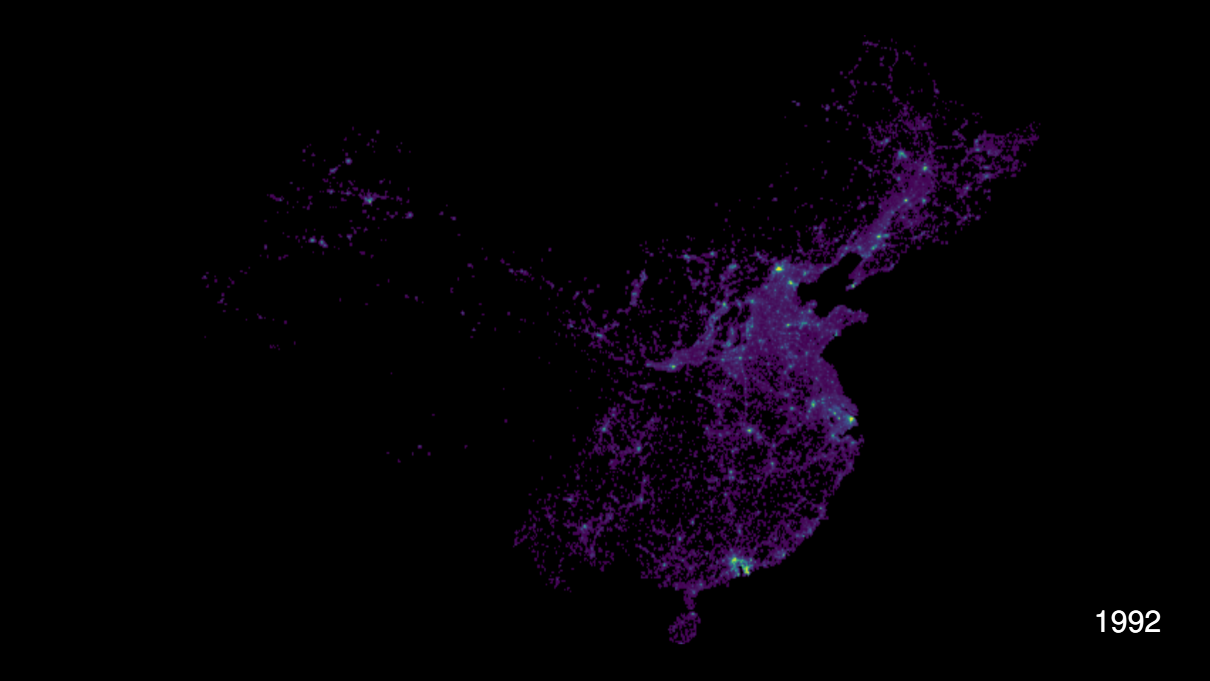
2. Dependence? Interdependence?

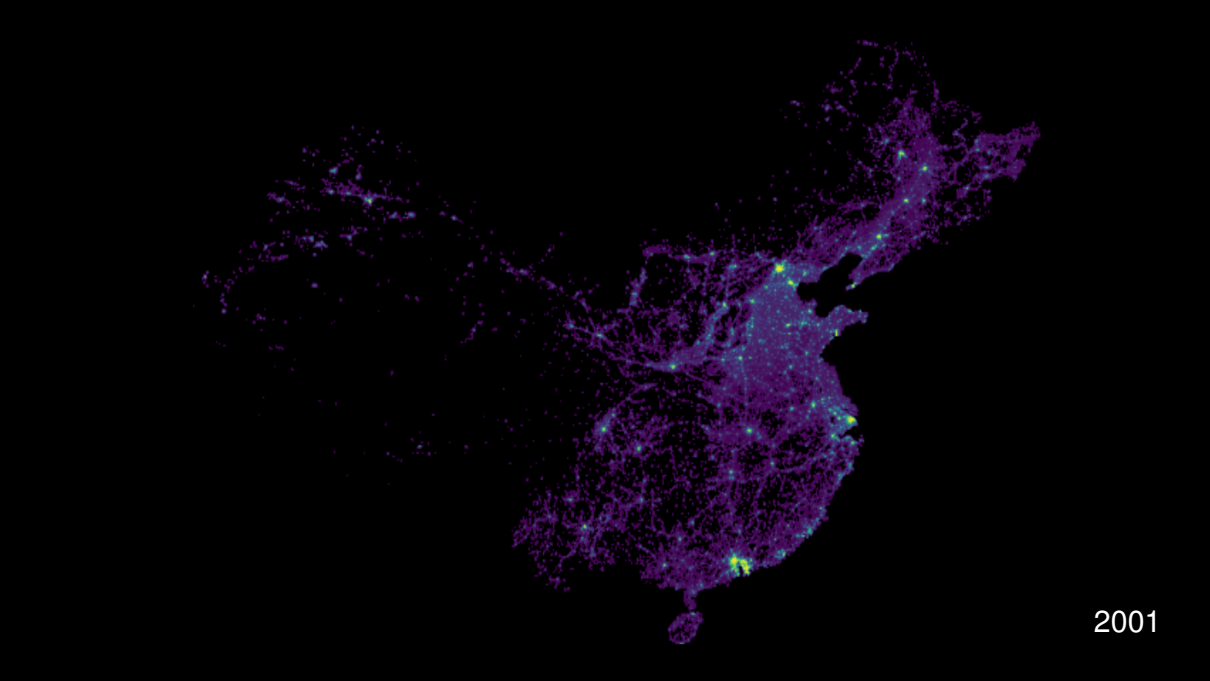
3. Effects of decoupling

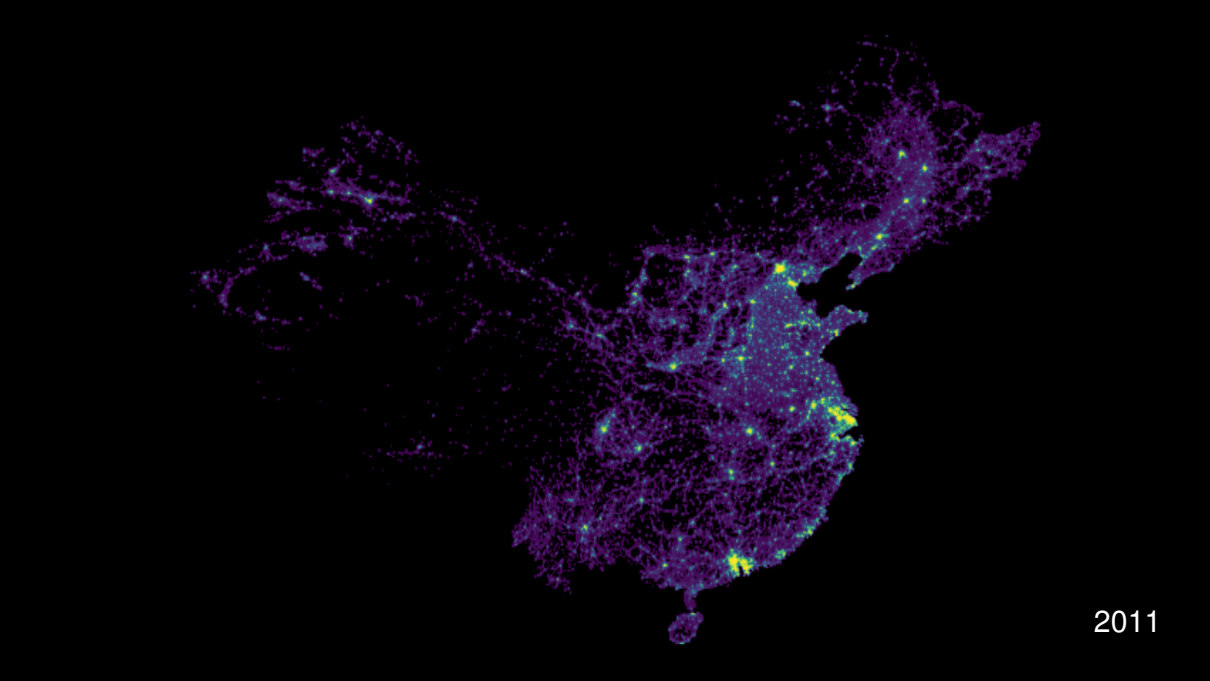
4. Tariffs against Chinese EVs

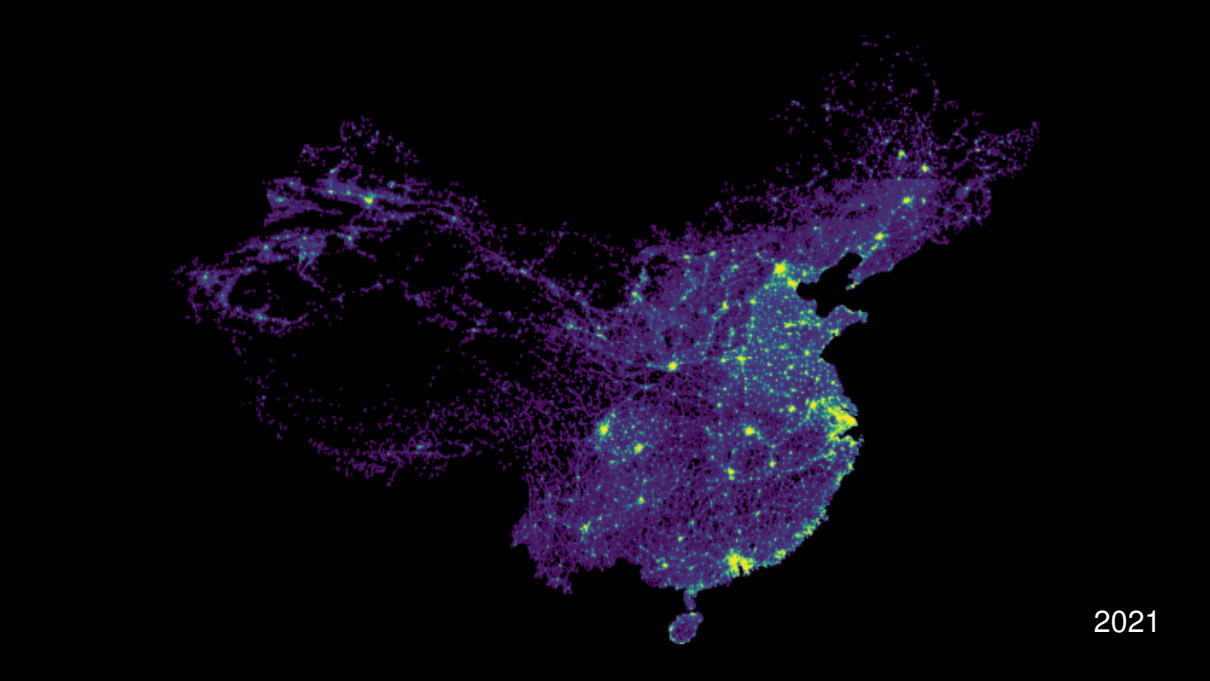
The economic rise of China



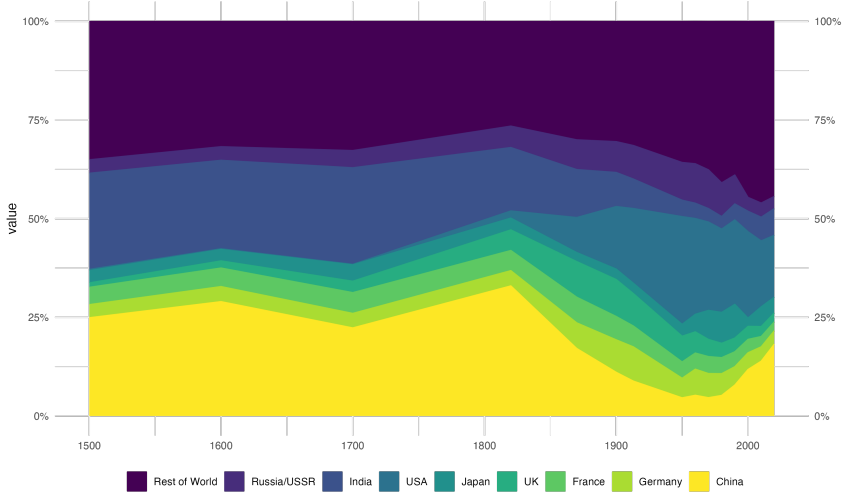

1992

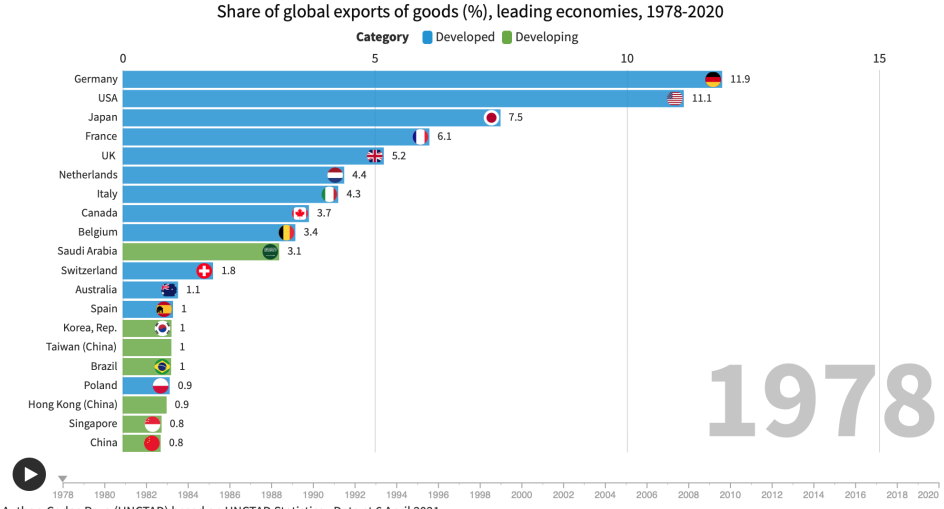

2001


2011

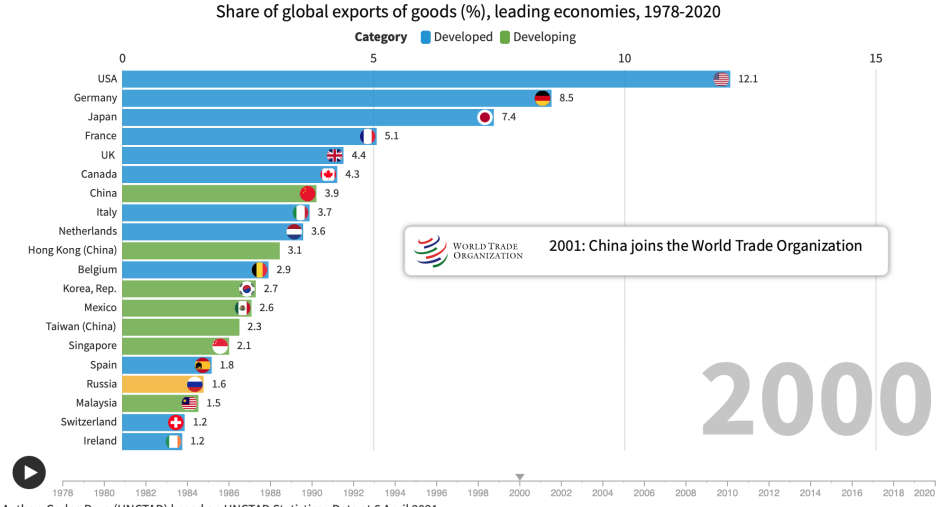

2021

SHARE IN GLOBAL GDP





Author: Carlos Razo (UNCTAD) based on UNCTAD Statistics • Data at 6 April 2021



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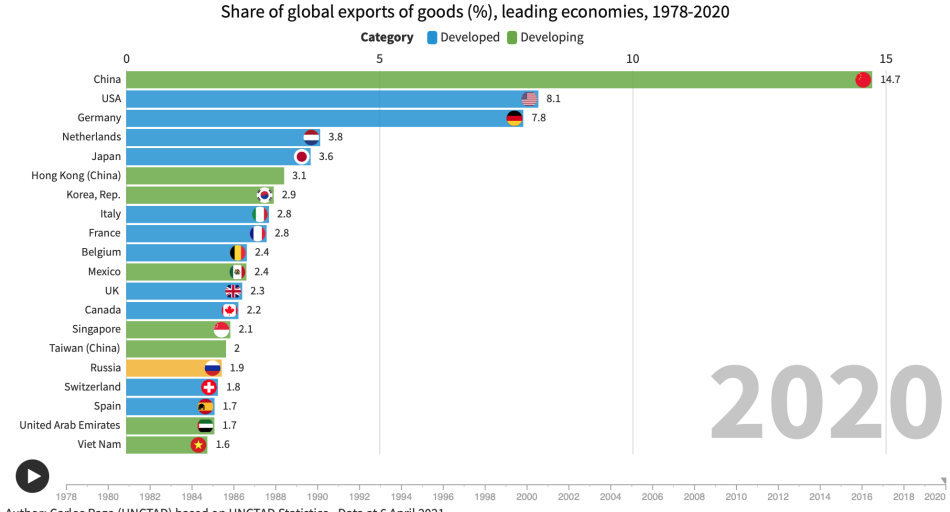

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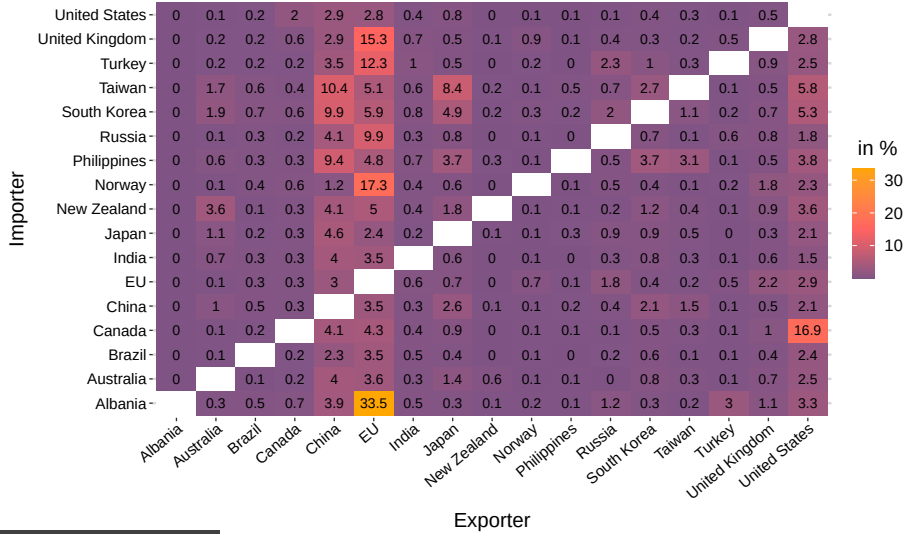
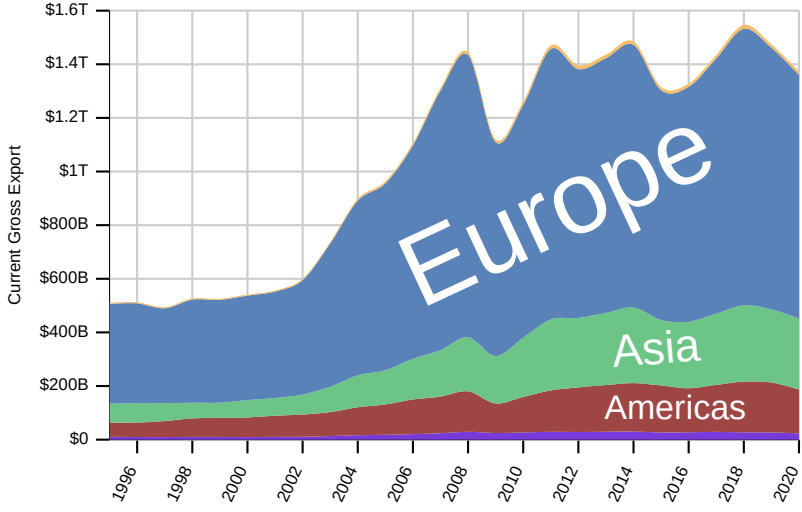
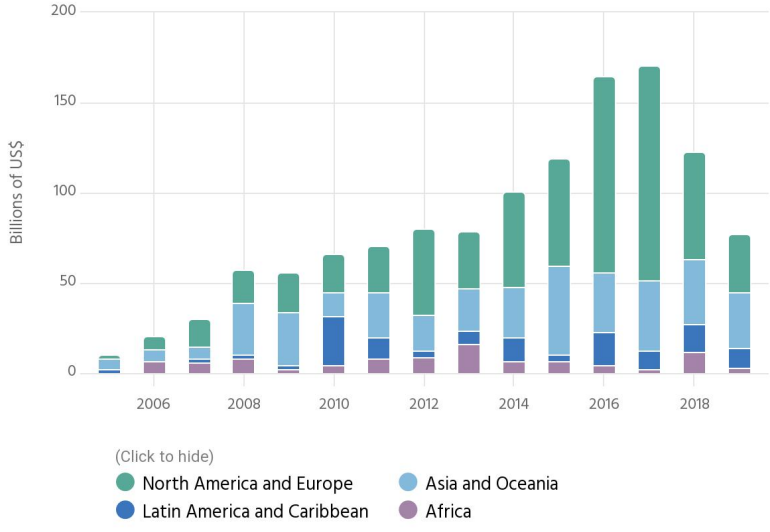
SHARE OF TRADE WITH CHINA GDP



GERMANY'S EXPORT DESTINATIONS



Breakdown of Chinese Outbound FDI by Region



CSIS China Power Project
Source: AEI and Heritage Foundation, China Global Investment Tracker

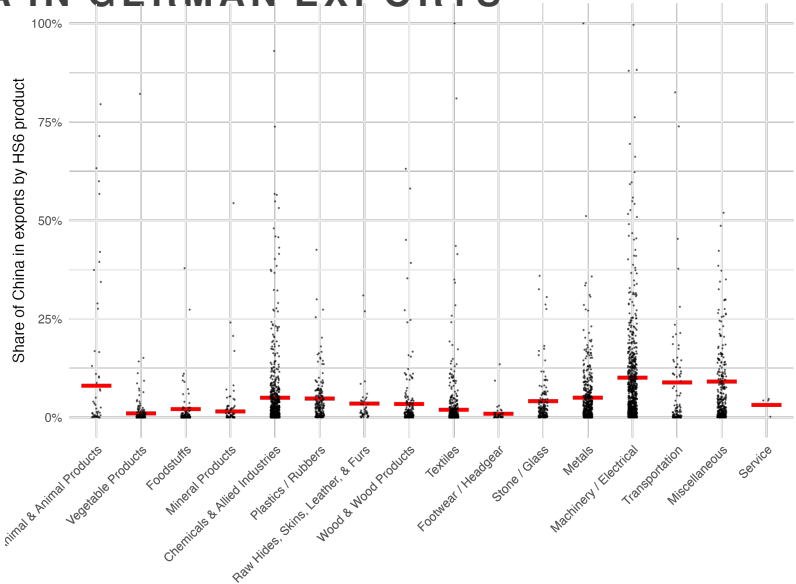
Dependence? Interdependence?

DEPENDENCE

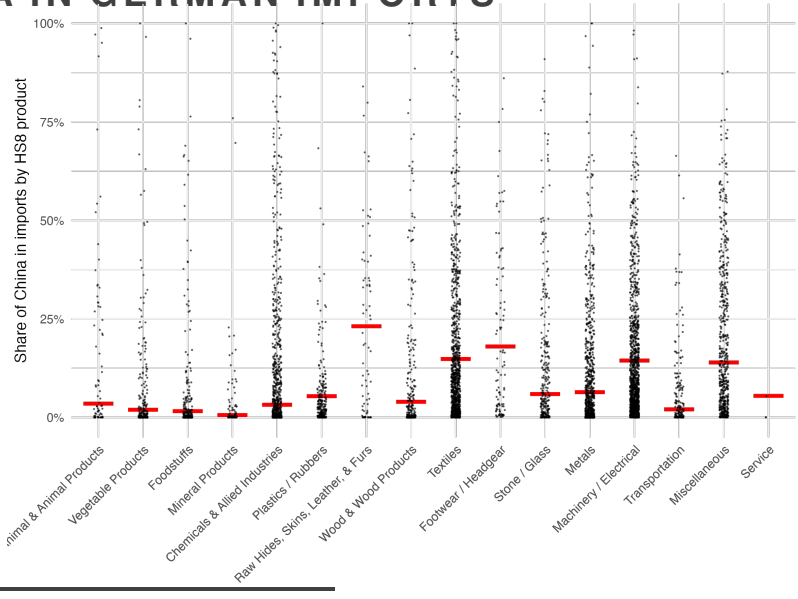
- Exports: Important market where lots of German-produced goods go
- Imports: Critical inputs for German industries
- FDI: Profits from German companies' investments in China

  $\rightarrow$ 0.5 % of German GNI . . .

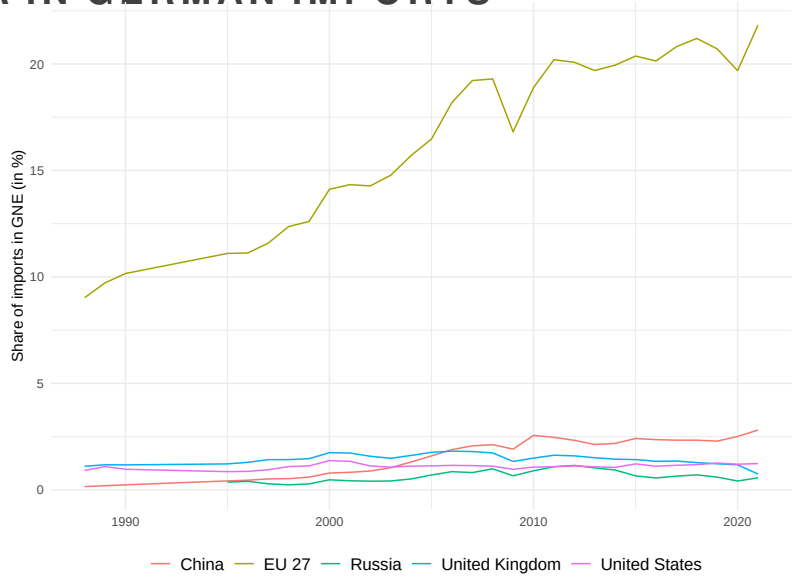
CHINA IN GERMAN EXPORTS



CHINA IN GERMAN IMPORTS



CHINA IN GERMAN IMPORTS

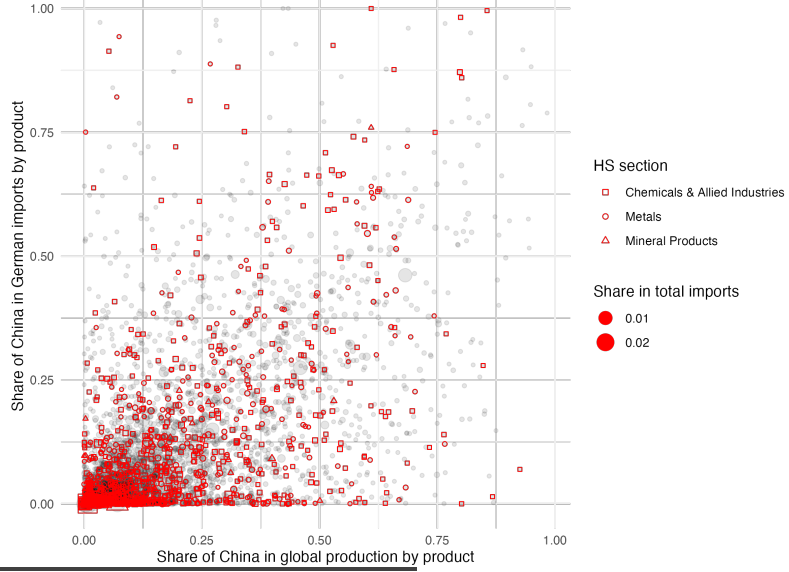


CRITICAL INPUTS

- Energy: Natural gas, electricity
- Raw materials: Quartz sand, soda, lime, dolomite, sodium sulfate, aluminum oxide, tin, titanium oxide, zirconium oxide, borax, boron oxide, cobalt, indium, other metals and rare earths

→ Important for production, imported, concentrated world market

CRITICAL INPUTS FROM CHINA



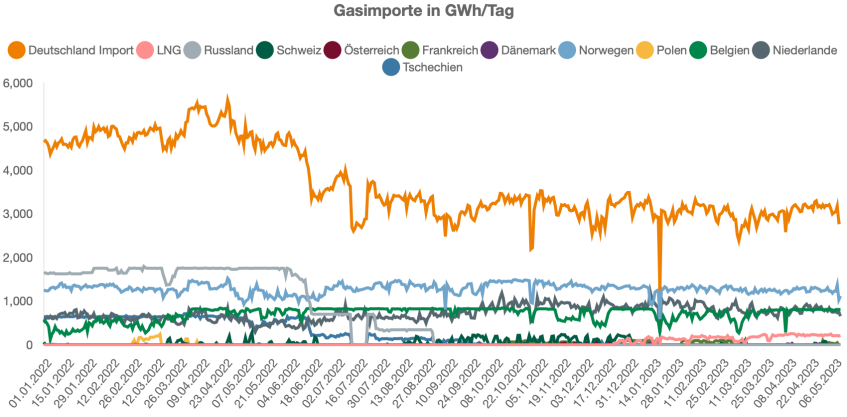
Effects of decoupling

DECOUPLING

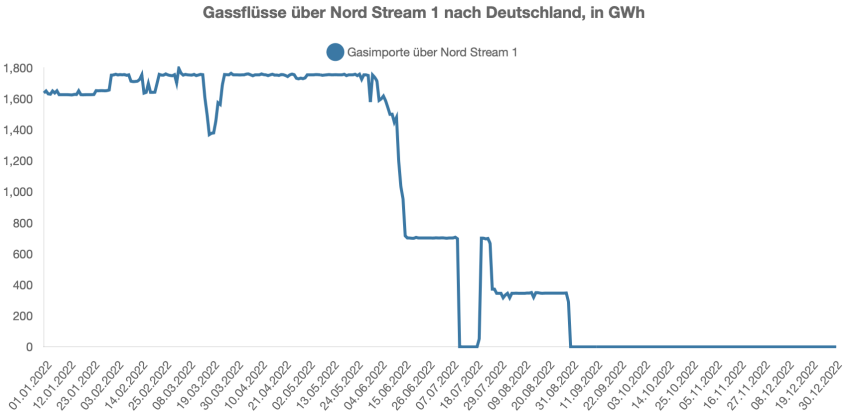
- German industry is dependent on energy and other imported inputs
- But: Import structure actually quite diversified
- Can trade diversions avoid shortages?



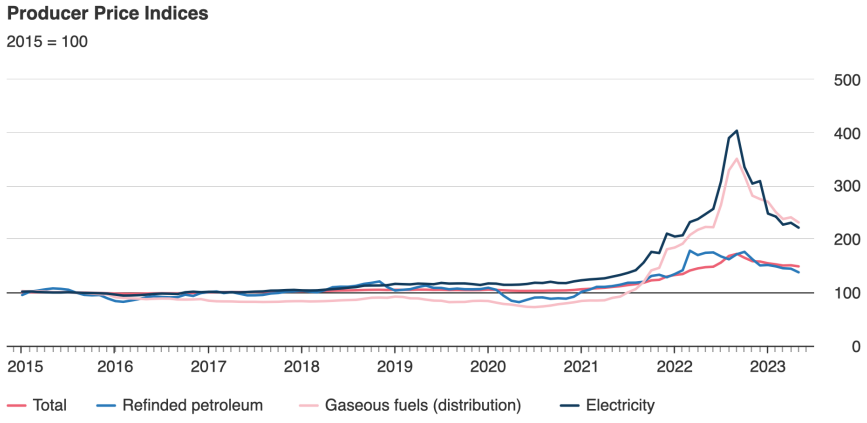
NATURAL GAS


Gasimporte in GWh/Tag
Deutschland Import
LNG
Russland
Schweiz
Österreich
Frankreich
Dänemark
Norwegen
Polen
Belgien
Niederlande
Tschechien
6,000
5,000
4,000
3,000
2,000
1,000
0
01.01.2022
15.01.2022
29.01.2022
12.02.2022
26.02.2022
12.03.2022
26.03.2022
09.04.2022
23.04.2022
07.05.2022
21.05.2022
04.06.2022
18.06.2022
02.07.2022
16.07.2022
30.07.2022
13.08.2022
27.08.2022
10.09.2022
24.09.2022
08.10.2022
22.10.2022
05.11.2022
19.11.2022
03.12.2022
17.12.2022
31.12.2022
14.01.2023
28.01.2023
11.02.2023
25.02.2023
11.03.2023
25.03.2023
08.04.2023
22.04.2023
06.05.2023

NATURAL GAS FROM RUSSIA



PRODUCER PRICES FOR ENERGY



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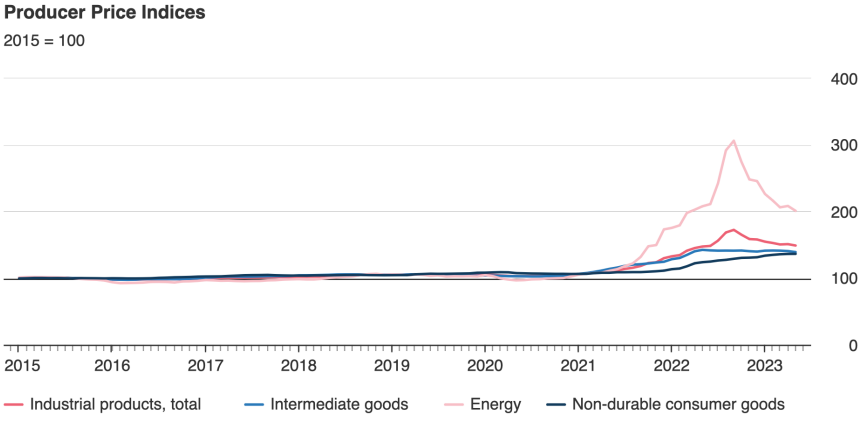
PRODUCER PRICES FOR GOODS



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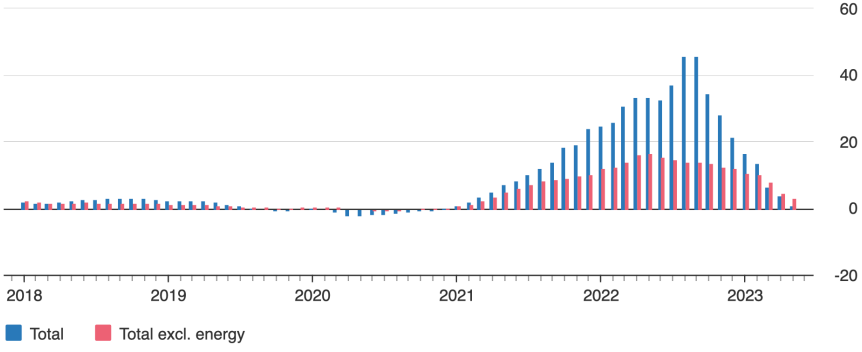
PRODUCER PRICES CHANGES

Producer Price Indices (2015 = 100)

Change on the previous year in %



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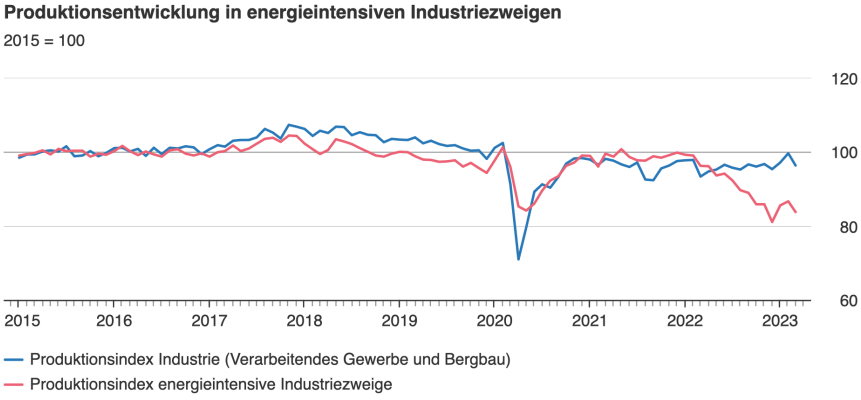
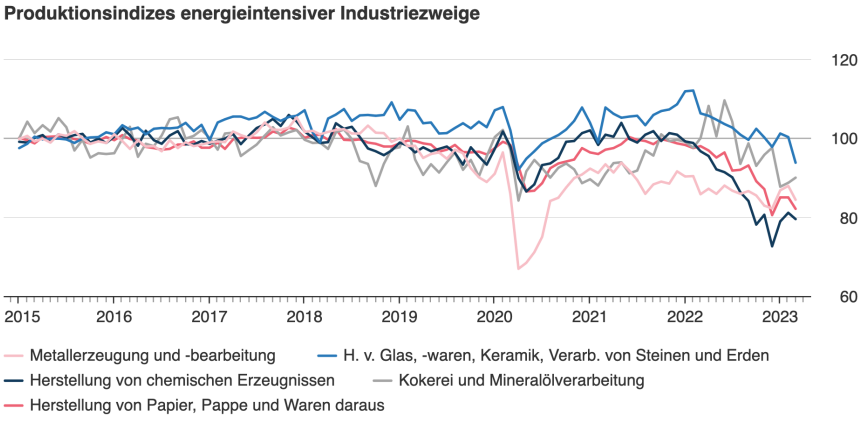
EVOLUTION OF OUTPUT



EVOLUTION OF OUTPUT



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MORE ACADEMIC RIGOUR

- Simulation study with gravity-based model of the world economy
- Many sectors, countries, and global value chains
- Idea: “What if?” — Counterfactual scenarios
- Calibration of the model with actual production and trade data

ECONOMIC IMPACT OF SANCTIONS

Russia ’14

	Current Coalition	Global Coalition
Current measures	-1.44 %	-2.49 %
	(0.29)	(0.41)
Complete embargo	-8.81 %	-15.24 %

ECONOMIC IMPACT OF SANCTIONS

Russia ’14

	Current Coalition	Global Coalition
Current measures	-1.44 % (0.29)	-2.49 % (0.41)
Complete embargo	-8.81 %	-15.24 %

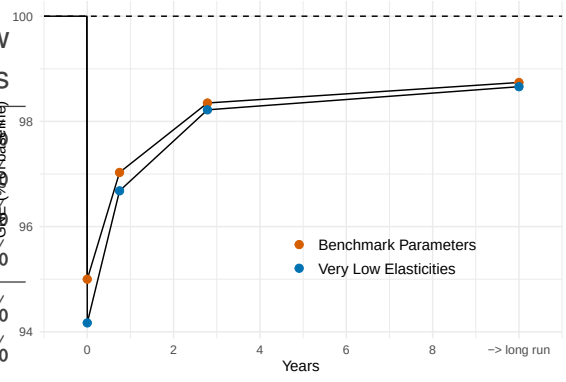
Iran ’12

	Current Coalition	Global Coalition
Current measures	-1.9 % (0.16)	-4.88 % (0.45)
Complete embargo	-4.04 %	-13.2 %



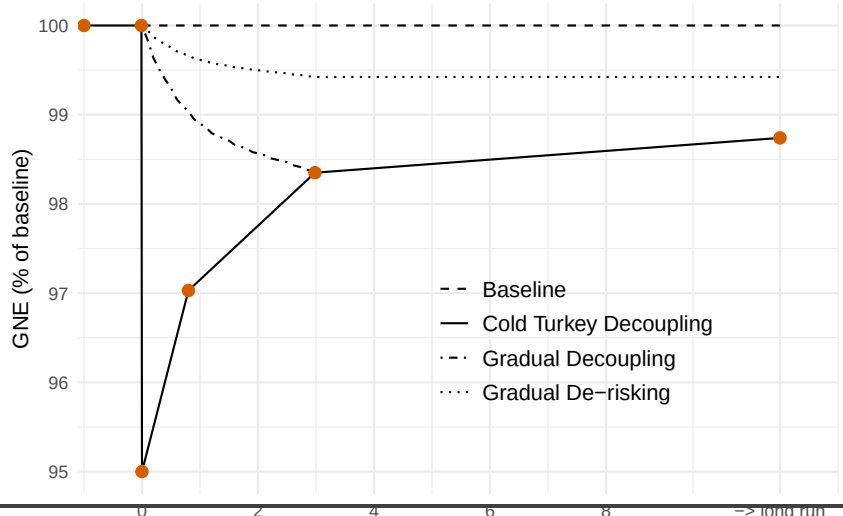
RESULTS: GERMAN WELFARE EFFECTS

Trade Elasticity	Benchmark Parameters	Very Low Elasticities
$\varepsilon = 0.5$	-5.00%	-5.83%
$\varepsilon = 1.5$	-2.97%	-3.32%
$\varepsilon = 3$	-1.65%	-1.78%
$\varepsilon = 4$	-1.26%	-1.34%
$\varepsilon = 0.1$	-5.92%	-6.15%
$\varepsilon = 0.25$	-5.62%	-6.38%



- Short-run: comparable to global financial crisis
- Long-run: comparable to Brexit.

RESULTS: COLD TURKEY VS. GRADUAL DECOUPLING

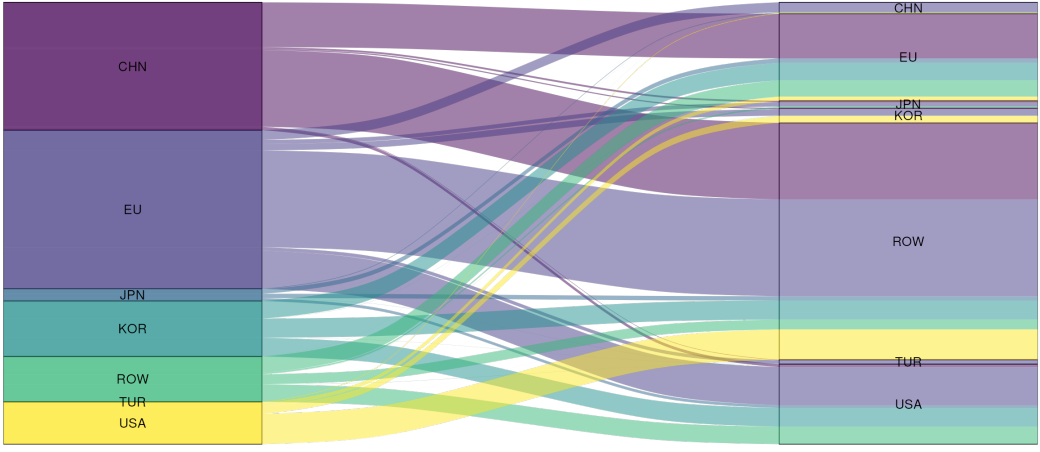


LESSONS FROM 2022

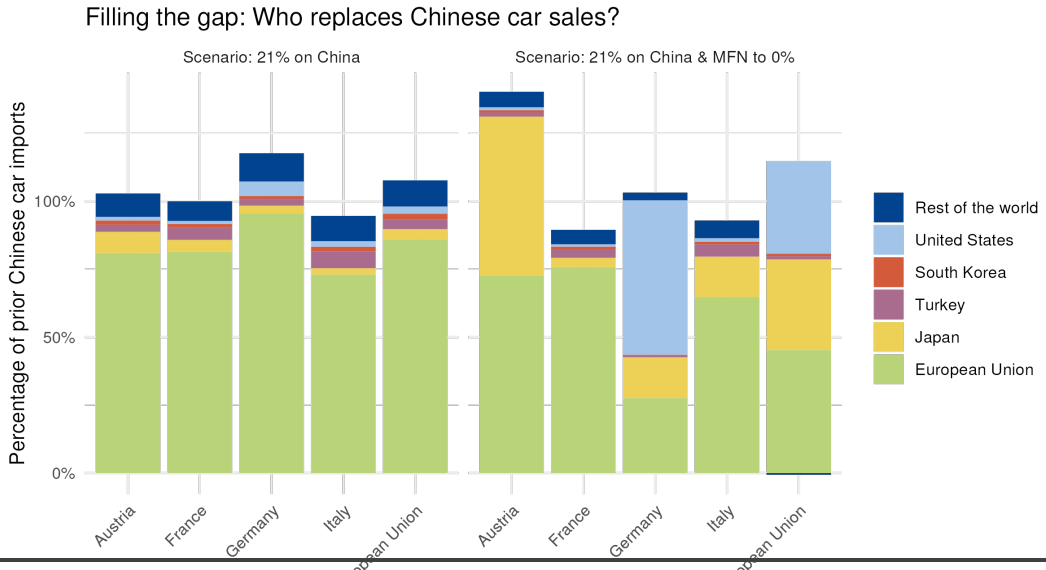
- Trade redirection: Imports from other countries
- Production adjustment: Substitution of input materials
- Production adjustment: Change/relocation of production
- Market mechanism: Global market price increases, promotion in other countries

Tariffs against Chinese EVs

FLOWS OF BEVS



EFFECTS OF TARIFFS



TAKE-AWAYS

- German industry: High energy intensity, important imported inputs
- Possible trade conflict with China: Risks?

  → Doom scenarios completely overblown
- 2022 shows resilience of the German industry

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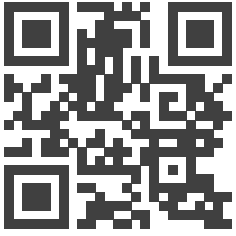
julianhinz.com

@julianhinz



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