Trade and Tariffs- an introduction by Martin Cherkes

- Why trade
- Why countries trade-comp. advantage or economies to scale
- Trade may change allocation of industries
- Efficiency vs national security
- Trade efficiency may come at expense of national security
- Allocation of production under free trade and under a tariff regime
- Subsidies to farmers to compete with cheap foreign food -requires cash from the budget. tariffs on imports to raise UK food prices
- Tariffs to nurture industries

Example of industry re-allocation due to free trade -Greece 1970-2025

- The Greek manufacturing sector performed well in the 1970s, contributing
- **20% to GDP and**
- **12% to employment,**
- By 2025contribution has reduced to
- **5 %** of GDP and
- **4%** of employment

The Greek standard of living went up substantially

- n 1970, Greece's GDP per capita was about **$1,500**(PPP). **.**
- By 2025, Greece's GDP per capita is estimated to be $**26,000** (nominal) and
- **$44,000** (PPP).
- A 4-times increase in the standard of living over the period
- shift in the economy **towards services**.

Mechanics and economics of tariffs

- Consider an Example
- Importer buys in Malaysia palm oil for $100; sells in US at **$115-** to cover costs + profit
- Now a 5% tariff is imposed .
- Tariffs are paid by the importer at the time the goods enter US as percentage of import value
- Calculation of 5% tariff: when the importer's cost of an item is $100; a 5% tariff on item would result in a $5 tariff.

Mechanics and economics of tariffs

- Now the importer paid the purchase price of $100 plus $5 tariff
- Prior to tariffs item was sold at **$115** - What will be the after-tariff price to consumer?
- If it sells for $115- **importer pays the tariff**
- If it sells for $120- **consumers pays the tariff**
- If the importer negotiates the oil price in Malaysia down to $95, he can sell for $115 **the foreign producer pays the tariff**

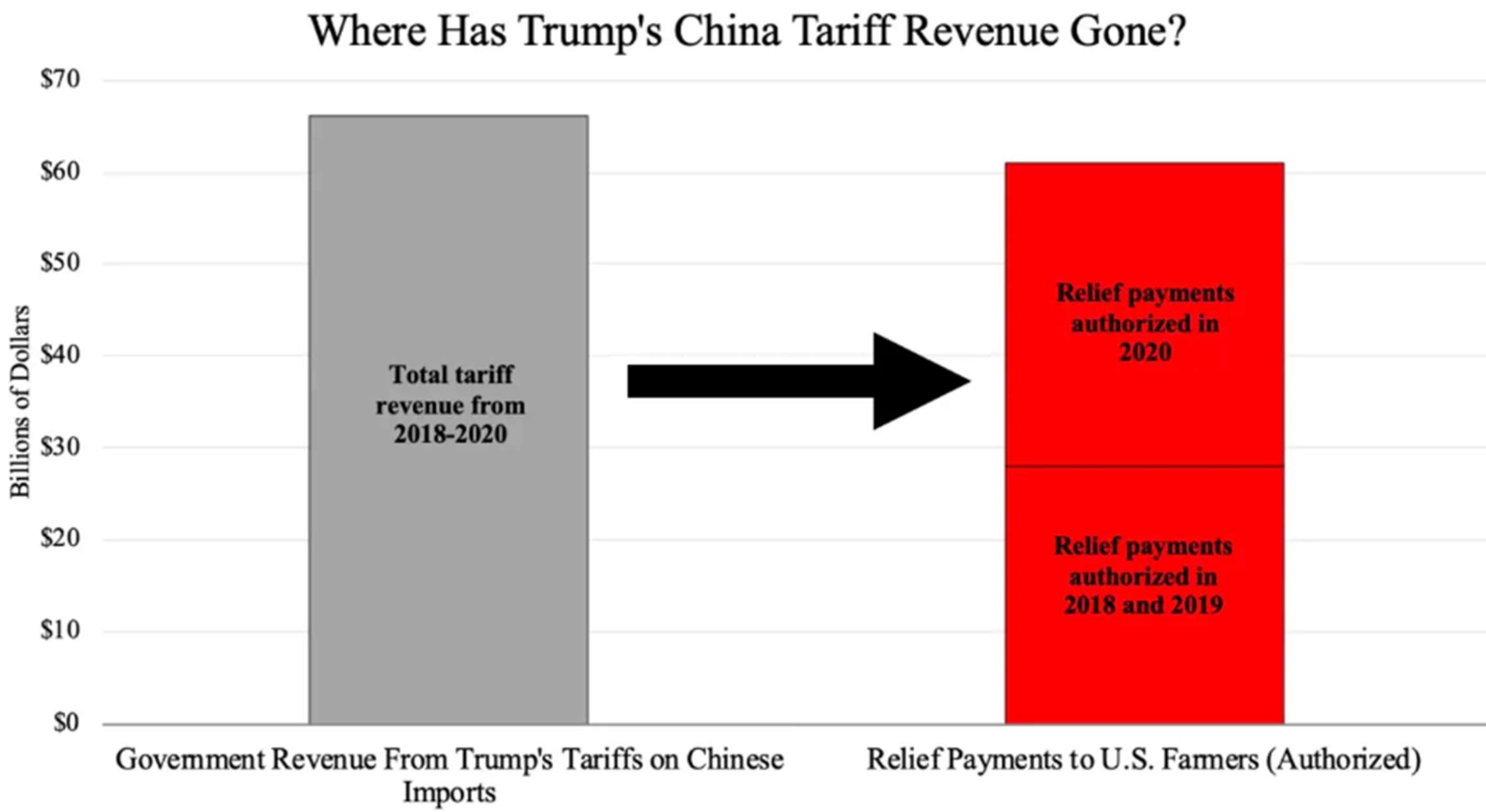
US tariffs on China 2018-2020

- Usually , the resulting price is a combination of all three possibilities-exporters, importers and consumers share in paying the tariff
- in 2018-2020 Trump imposed tariffs on China.
  - 6/15/2018 : US to impose a 25% tariff on $50 billion of Chinese exports.
  - 7/10/ 2018, additional $200 billion of Chinese goods subject to a 10% tariff ,
  - etc.

US tariffs on China 2018-2020

- There were no reliable proofs that US $ prices of Chinese exports have increased.
- Chinese currency ultimately depreciated 10% against $- to allow the Chinese producers to absorb most of the tariff cost without changing the $ price
- Most probably, the Chinese producers absorbed most of the tariff
- Cost to USA – Chinese tariffs on US agricultural goods

Proceeds


Where Has Trump's China Tariff Revenue Gone?
Billions of Dollars
$70
$60
$50
$40
$30
$20
$10
$0
Total tariff revenue from 2018-2020
Relief payments authorized in 2020
Relief payments authorized in 2018 and 2019
Government Revenue From Trump's Tariffs on Chinese Imports
Relief Payments to U.S. Farmers (Authorized)

Efficiency gains and National security

Efficiency gains in English agriculture before WW1

- **Before WW1 England was importing 66% of its food supply. Why?**
  - imported grains were cheap
  - British farmers could not compete with imports; they specialized in livestock and UK imported grains and vegetables
  - *The free trade policies and a strong navy were seen as the guarantee of English prosperity*

Large efficiency gains from trade

- Before the 1914 , the major food exporters to UK were the US, Russia and India
- Gain-gain situation:
- When UK farmers specialized in livestock while the country imported grains and vegetables, the total production of food in the world had increased and the wellbeing of UK and of the US, Russia and India was going up
- In general, free trade increases the wellbeing of all involved

World War 1

- The WW1 (and the German submarines) disrupted the UK food imports
- **England experienced near-starvation during WW1**
- It introduced compulsory rationing to ensure fair distribution of food supplies and to control prices
- Conclusion: efficiency may come at expense of national security
- Long-Term Impact: The war changed British agriculture and food production practices, leading to a greater focus on self-sufficiency.

England : Long-Term Impact

- The WW1 changed British agriculture and food production practices;
- Now UK produces 60% of the food it consumes.
- But how could UK agriculture compete against cheaper imports?
- Two alternatives to finance local production:
  - **Subsidies** to farmers to compete with cheap foreign food -requires cash from the budget
  - **Tariffs** on imports to make UK food prices higher- the consumers pay for it

Labor costs issues

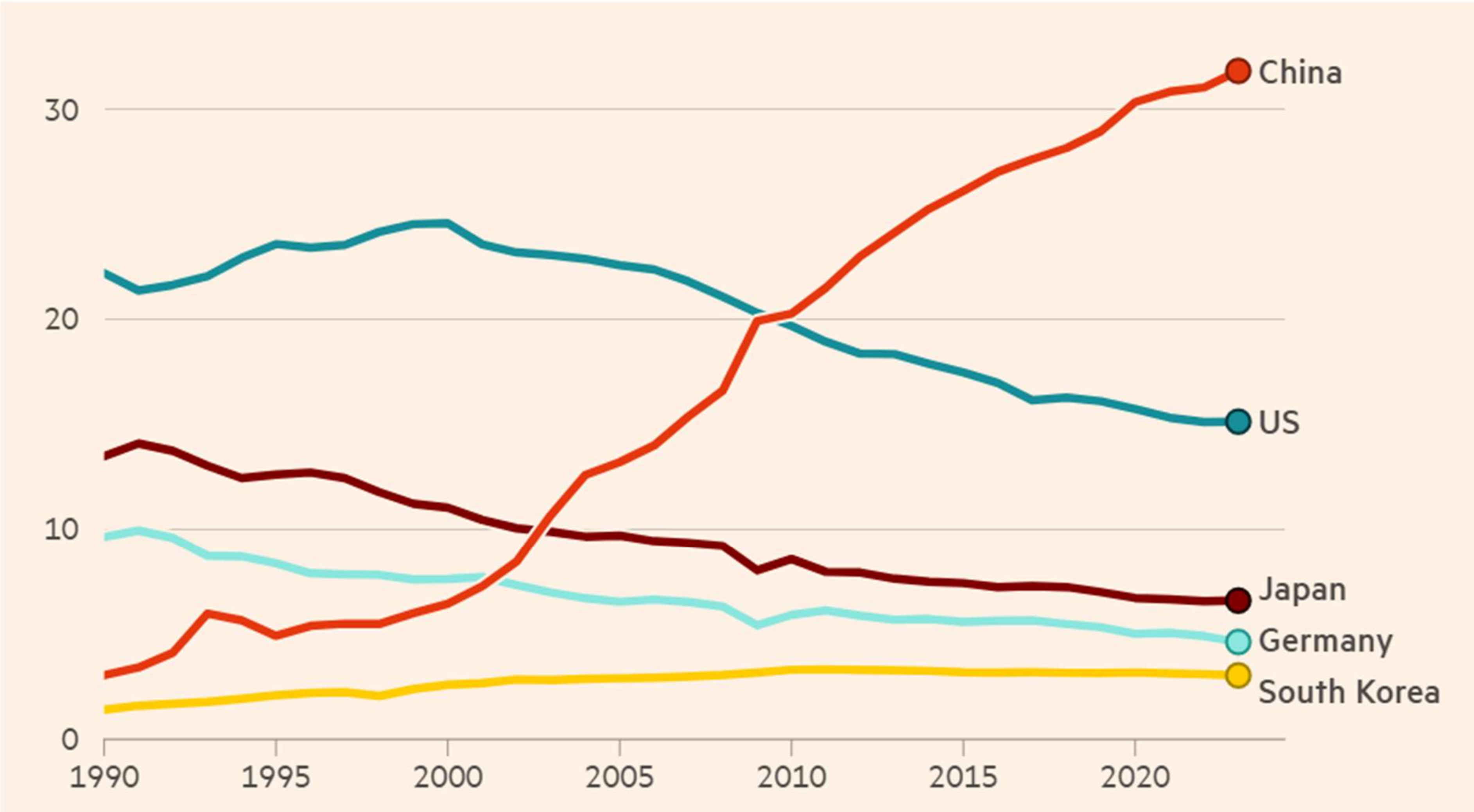
- A modern car has around 30,000 parts, from nuts and bolts to engine
- large components: around 1,800 separate parts.
- Assembly is labor-intensive. Mexico's low labor costs can result in savings of $600-$700 per car assembled there (circa 2021)
- Idea: Bring parts from USA to Mexico, assemble and re-export back to USA

Mexico and China costs of labor (circa 2021)

- Semi-skilled operator earns per hour
  - Mexico= **$5.30**
  - U.S. = **$23**
- average manufacturing worker earned **annually** US = **$60,000;**

  China= **$16,000**
- In 2000, he earned per the $760
- Result: it is efficient to assemble products in low-wage countries- meaning most of finished products will be imported to USA

Share of global manufacturing, %



Where to assemble the machines

- Conclusion: **efficiency** is achieved when assembly of the finished goods and other labor-intensive processes are done in low-wage countries like Mexico or China
- Problem: in cases of emergency or confrontation- as few finished good are produced in USA

COVID -19: example of Import interruption

- All basic personal protective equipment (hospital gowns and gloves, surgical masks and respirators, goggles, and face shields) are imported ,mainly from China
- During the COVID-19 pandemic, US experienced personal protective equipment shortages, impacting nursing homes and hospitals
- increased prices: masks and respirators prices went up +700%

The imports interruption: Pharmaceuticals

- **The active pharmaceutical ingredients** are the biologically active components in medications responsible for producing intended therapeutic effects
- U.S. is currently importing about 70% of **the active pharmaceutical ingredients**
- meaning: a significant portion of the antibiotics and medicines used in the US **cannot be produced domestically without imports.**

Policy conclusion- need for self-reliance

- Amoxicillin- a crucial antibiotic, used to treat everything from ear infections to pneumonia etc.
- It is a generic drug ; United States is unable to be compete in genericswith China and India:
- International price per unit of a packet of 30 Amoxicillin tablets is $5 but **the US** costs of inputs is $4; the $1 margin isn't enough for a US firm to pay for overhead and make a profit.
- Currently , only one US company produces Amoxicillin : **USAntibiotics**

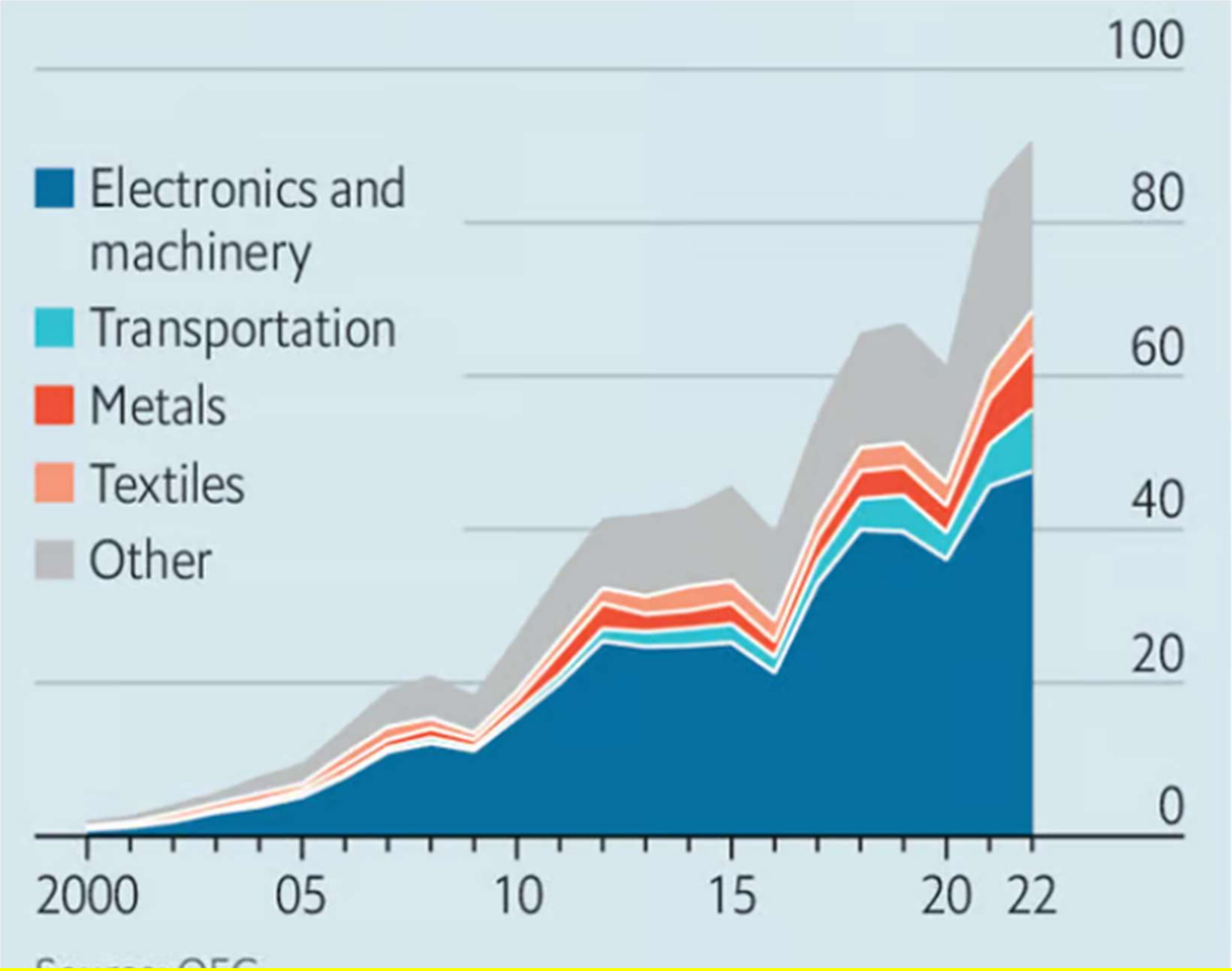
Mayo clinic proc. April 2020 "Medication Shortages During the COVID-19 Crisis-What We Must Do"

- Encourage and fund nonprofit generic drug manufacturing in the United States.
- Increase the domestic manufacturing of active pharmaceutical ingredients.
- Establish centralized systems to track need, based on patient caseload, to inform manufacturing needs and shift supply rapidly and equitably

Avoiding Tariffs

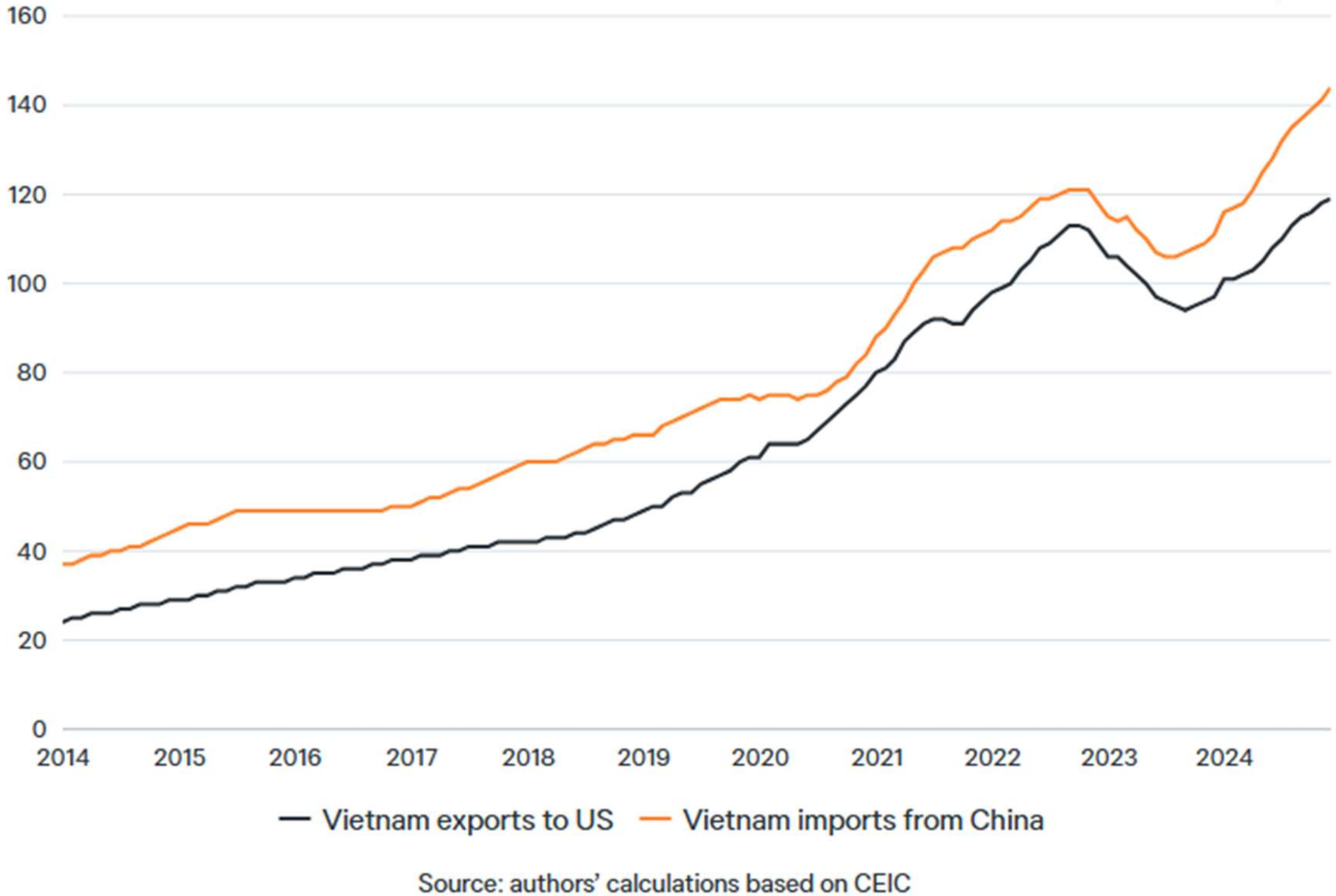
- Mexican labor is good at car-assembly.
- Mexico is part of NAFTA- no tariffs on exports to US.
- Avoid tariffs: Import Chinese car parts to Mexico, assemble them ,export to USA tariff-free
- A vehicle costing $50,000 could save $15,000 when a 30% tariff is imposed on Chinese goods

Rerouting: China Exports to Mexico ($B)

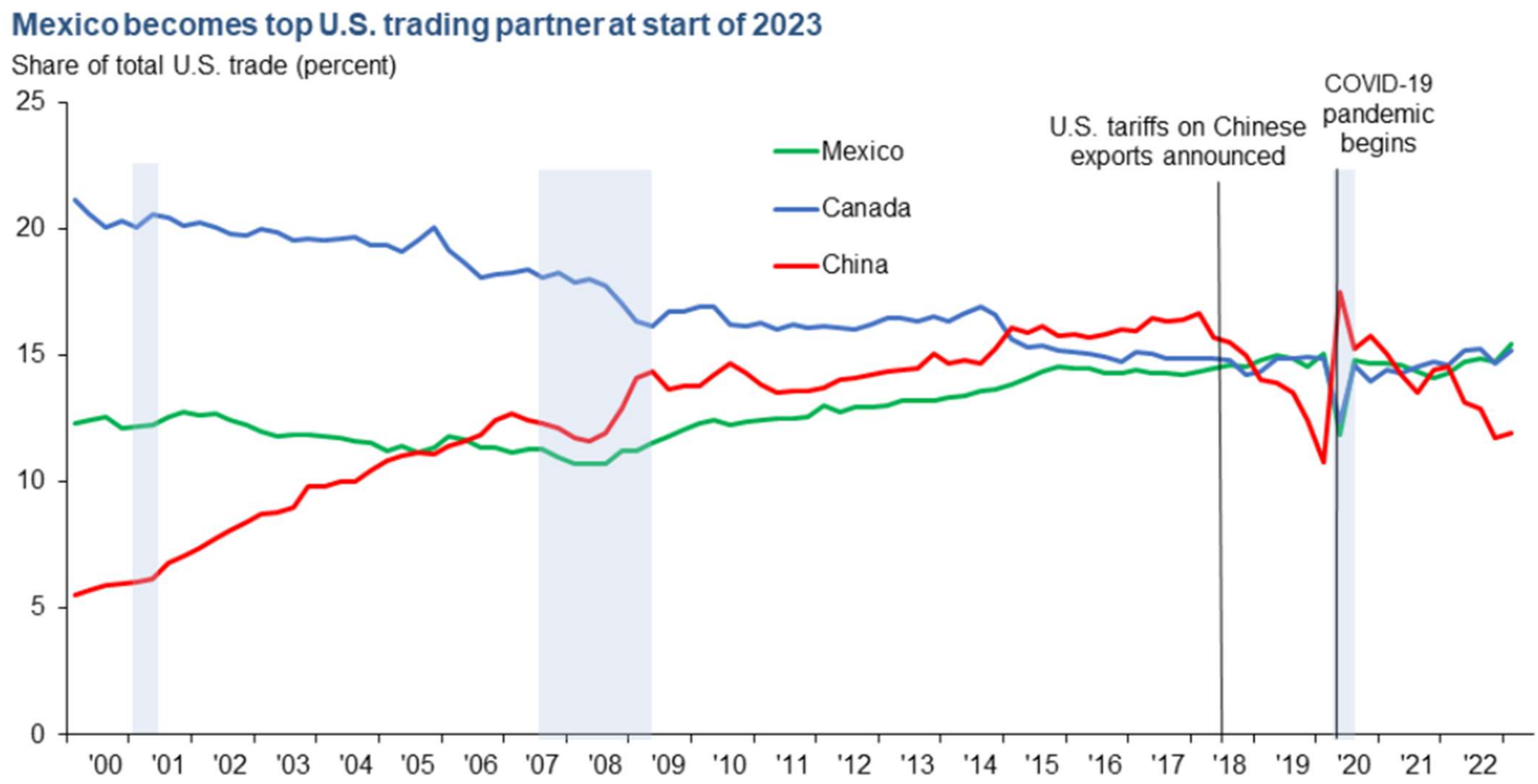


Between 2018 and 2024 , the Chinese exports to Mexico grew by 150%

Rerouting:
Vietnam trade with US and China (US$B)



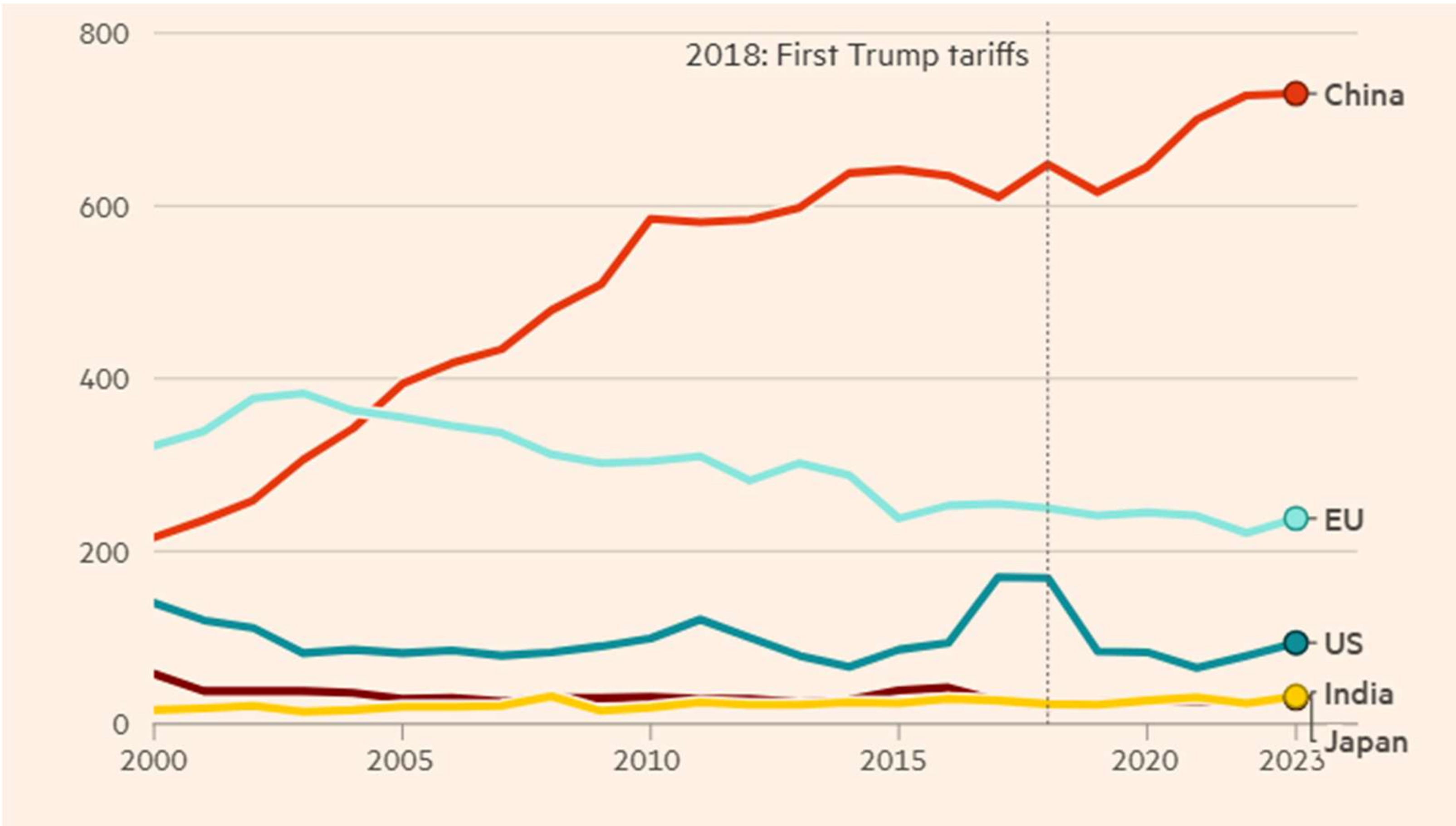
Mexico becomes the biggest exporter to US

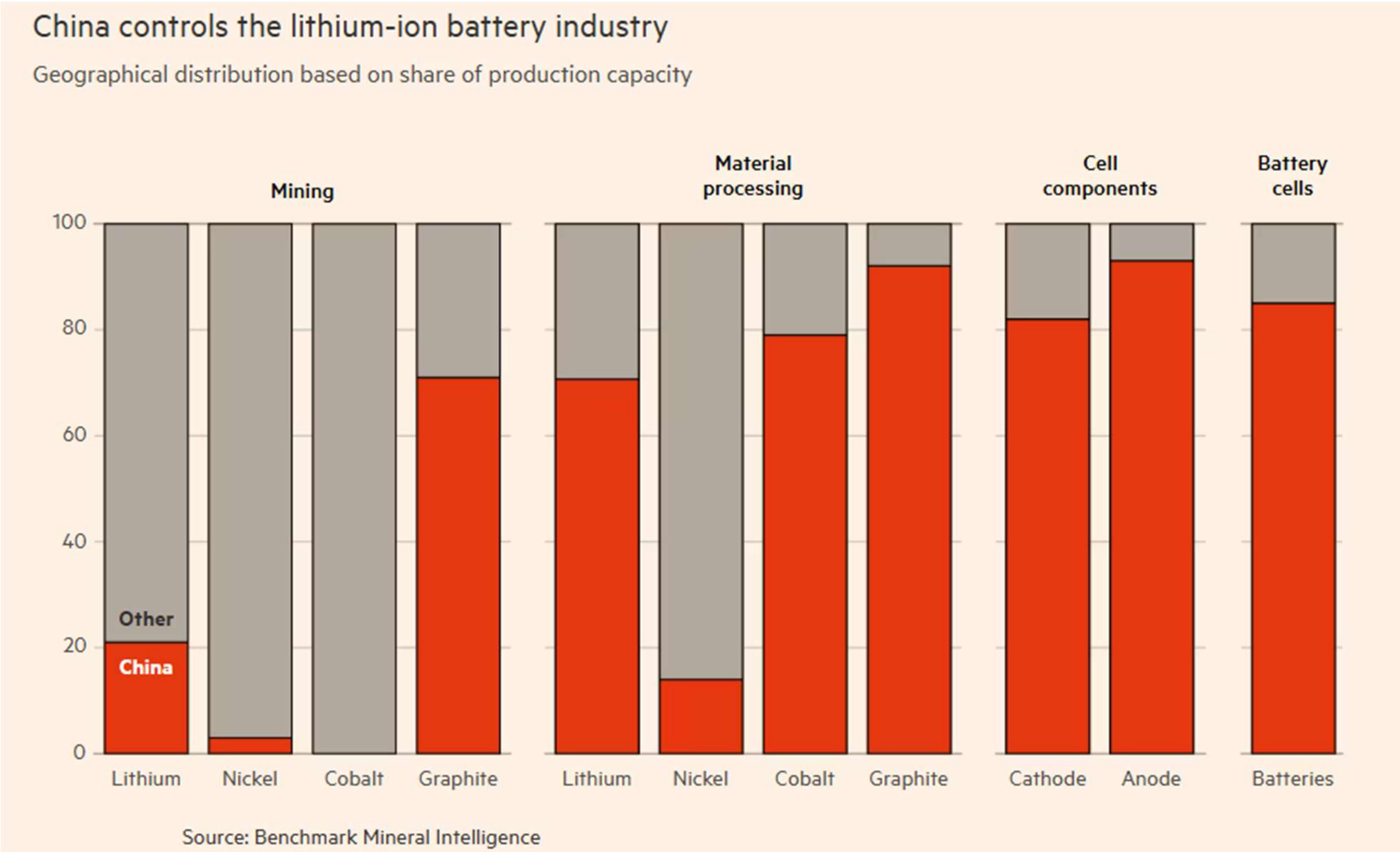


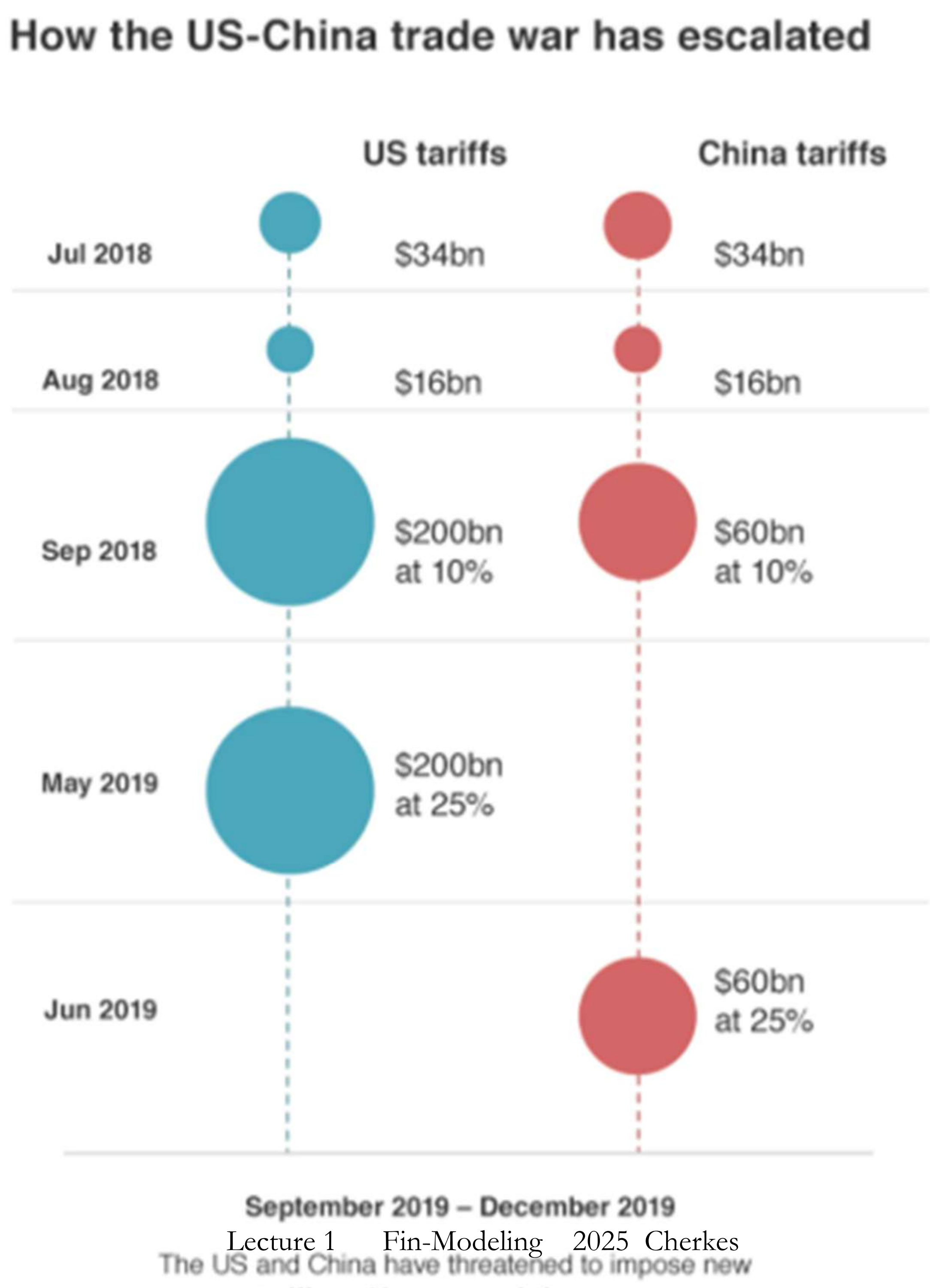
WSJ April 15, 2025 U.S. Plans to Use Tariff Negotiations to Isolate China

- U.S. use negotiations with other nations " to disallow China to ship goods through their countries, prevent Chinese firms from locating in their territories to avoid U.S. tariffs".
- This maybe one of reasons for the huge tariff rates- to get help from other countries

Number of products where a country has more than 50% share of global exports




China controls the lithium-ion battery industry
Geographical distribution based on share of production capacity
Mining
Material processing
Cell components
Battery cells
100
80
60
40
20
0
Other
China
Lithium
Nickel
Cobalt
Graphite
Lithium
Nickel
Cobalt
Graphite
Cathode
Anode
Batteries
Source: Benchmark Mineral Intelligence


How the US-China trade war has escalated
US tariffs
China tariffs
Jul 2018
$34bn
$34bn
Aug 2018
$16bn
$16bn
Sep 2018
$200bn at 10%
$60bn at 10%
May 2019
$200bn at 25%
Jun 2019
$60bn at 25%
September 2019 – December 2019
The US and China have threatened to impose new


Vanilla prices
€ per kg
600
500
400
300
200
100
0
1990
95
2000
05
10
15
17
Sources: Eurovanille; Nielsen-Massey
FT