Global Supply Chains:
The Looming “Great Reallocation”

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Global Supply Chains (GVCs)
In the Spotlight

- **Optimism of 1990s & 2000s:** Falling transportation costs & policy barriers + technological change
  - **Supply chains…** improve **efficiency**, by allowing firms to perform stages/procure inputs in different locations
    - ➢ Opportunities for growth and development (WB, 2020)
- **Concerns of 2010s & 2020s:** Natural disasters, climate change, pandemics, war, national security tensions
  - **Supply chains…** expose firms and countries to **disruption risks**
    - ➢ Backlash in developed nations (Colantone et al., 2022; Alfaro, Chen and Chor, 2023) → rise in trade barriers
    - ➢ "Favoring the friendshoring of supply chains … will lower the risks to our economy" (Yellen, 2022)
- **This Paper:** Broad-ranging look at the **evolution of US supply chains** from 1990s to 2022 (focus on post-2017; available data)
  - Partners, products, modes, value chain position, economic activity; for signs of friend/near/reshoring

✓ **Not Deglobalization (yet)**: Trade flows have rebounded, US imports at all-time high in 2022 (Antràs, 2020; Baldwin, 2021)

✓ **A "Great Reallocation":** GVC reconfiguration (2017-2022).

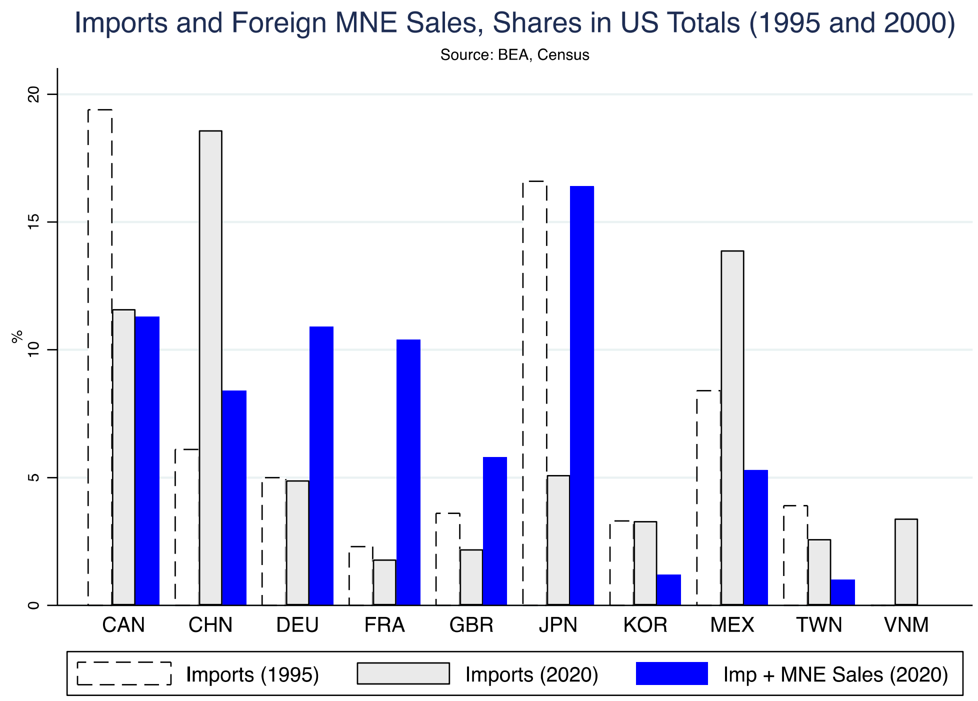
- Decrease in China's product-level import shares → Increase in import shares from "friends", including: Vietnam (low cost), Mexico (nearshoring / regional GVCs)
- **Caution:** i. Rising costs: Evidence of **rising unit values** from Vietnam and Mexico

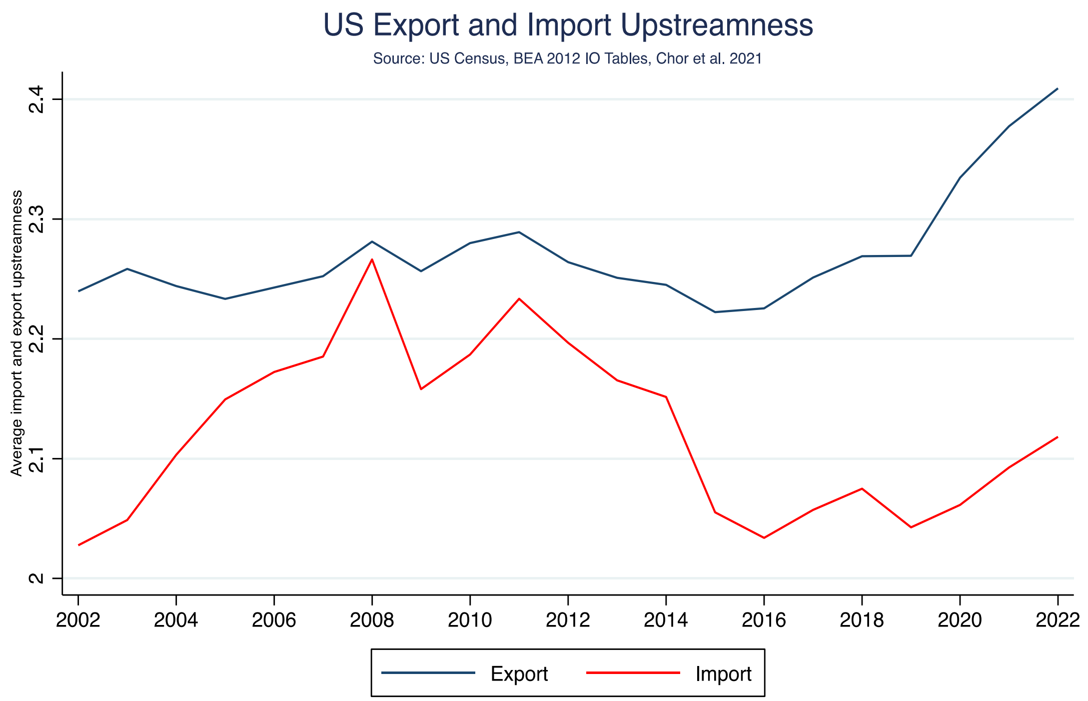
  ii. And **may not** ultimately **reduce dependence** on China

US Supply Chain Patterns
A Longer-Run Perspective (1990s-2017)

- **Partners:** Shift in import sourcing from High-Income (Japan & Canada) → Low-Wage (China & Mexico)
  - Though regional patterns persist: NAFTA, EU, Asia Pacific
- **Mode:** High-Income countries remained engaged via FDI (to circumvent policy barriers, rising costs at home)

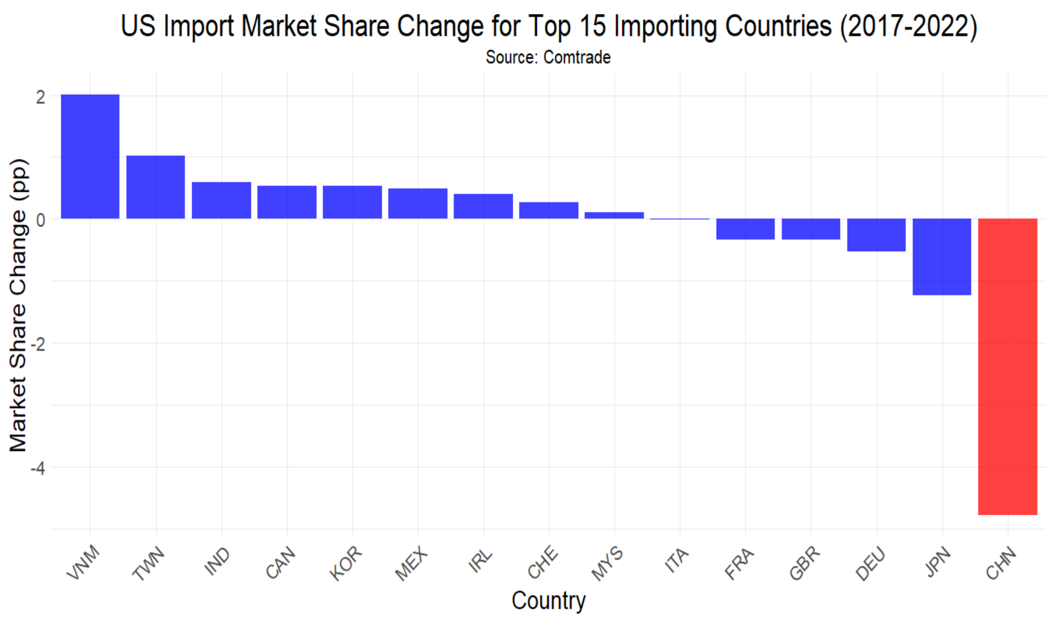
- **Products**: Measure of value chain positioning to final goods (c.f., Chor et al. 2021)
  - Exporter of upstream products; importer of final goods
  - Rise in US export upstreamness: partly, energy independence
  - Also: **Recent ↑ in US import upstreamness**



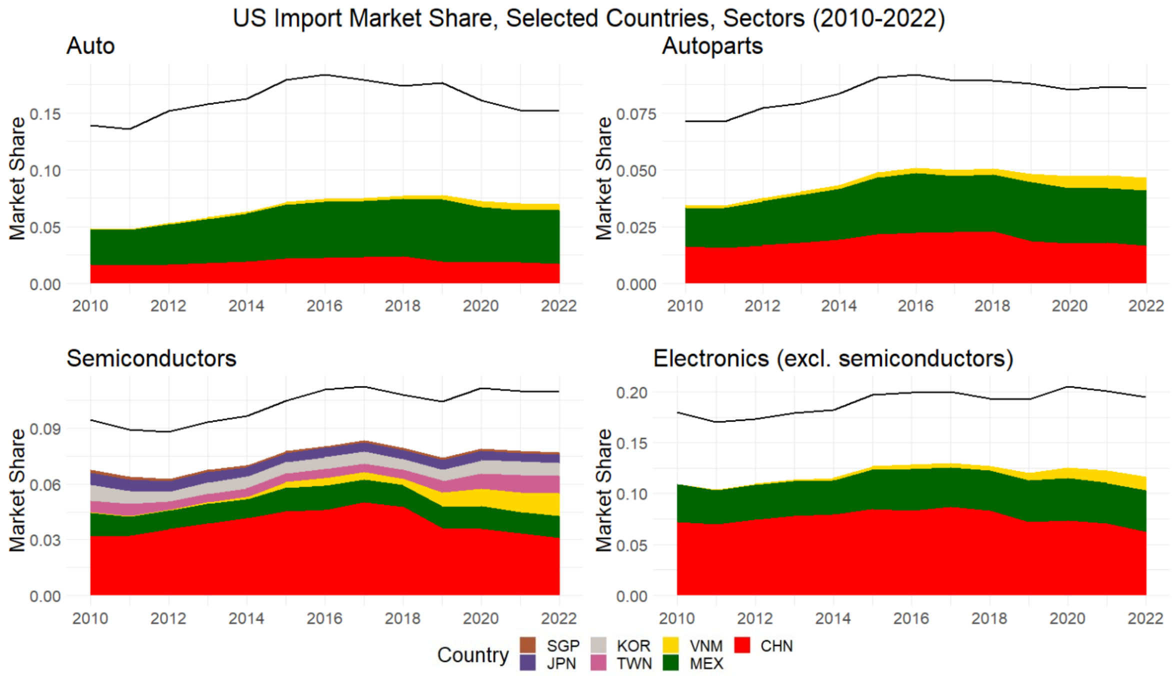


The Great Reallocation
2017-2022

- US imports grew 6.7% (non-petroleum real imports: 4.2%)
- **Imports from China grew** 1.2%
- **BUT… lost 5pp market share** to among other "friends": Vietnam, Mexico (Freund et al., 2023)

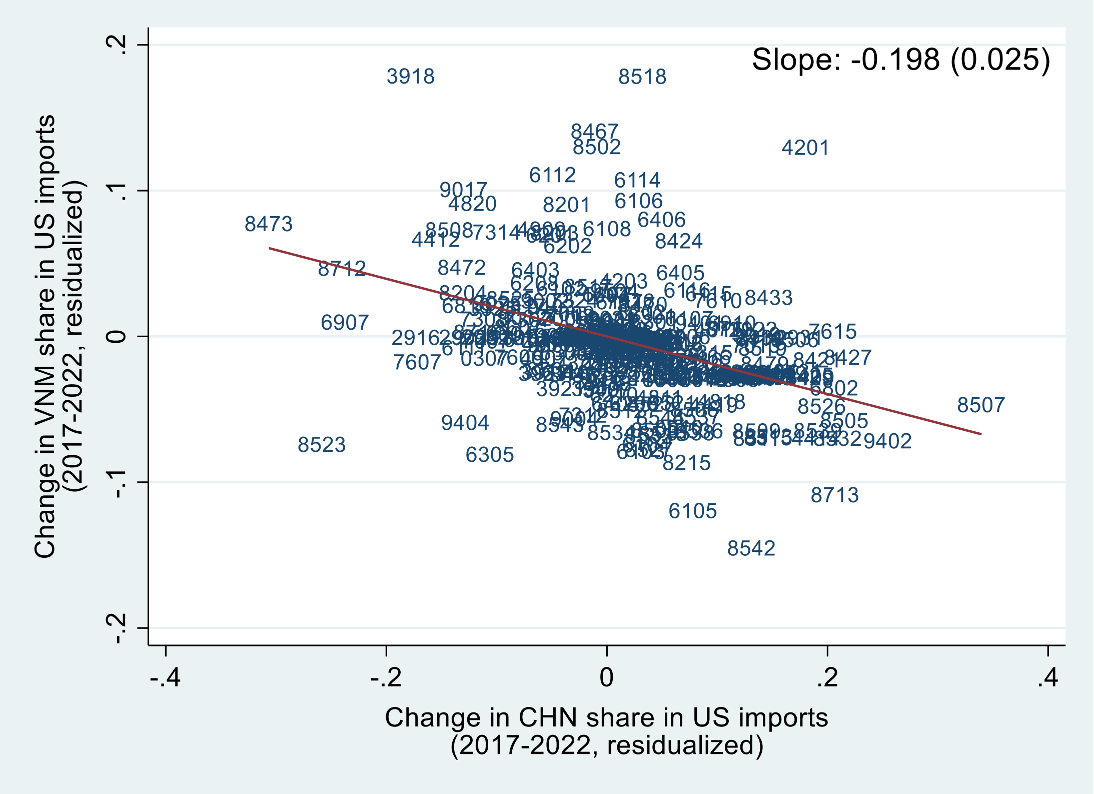


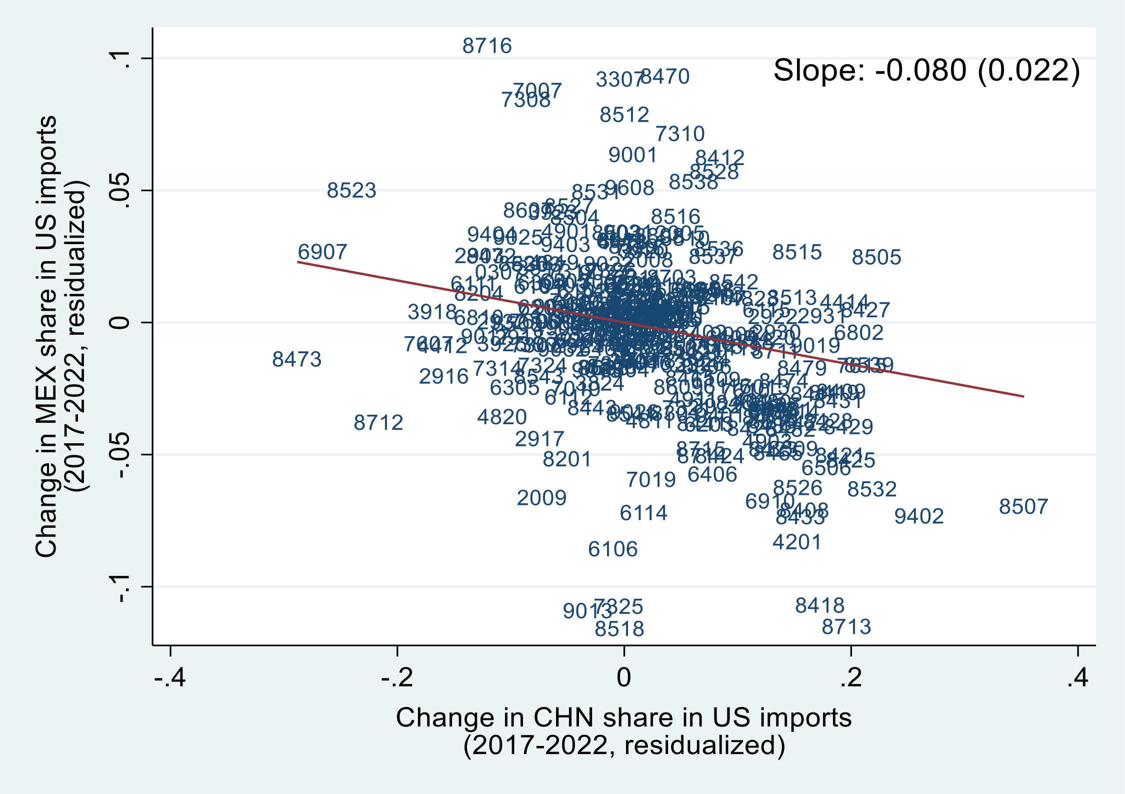
- In sectors central to policy debate: autos, auto parts, semiconductors, electronics



Import Market Share from "Friends"

Product-level Regressions (HS4): $\Delta y_{p,22\text{-}17} = \beta_1 \Delta CHNsh_{p,22\text{-}17} + \beta_2 \Delta y_{p,17\text{-}12} + D_{p0} + \varepsilon_p$





Product-level decreases in China's import share:

- **Increase in import market share from "friends", e.g., Vietnam, Mexico**

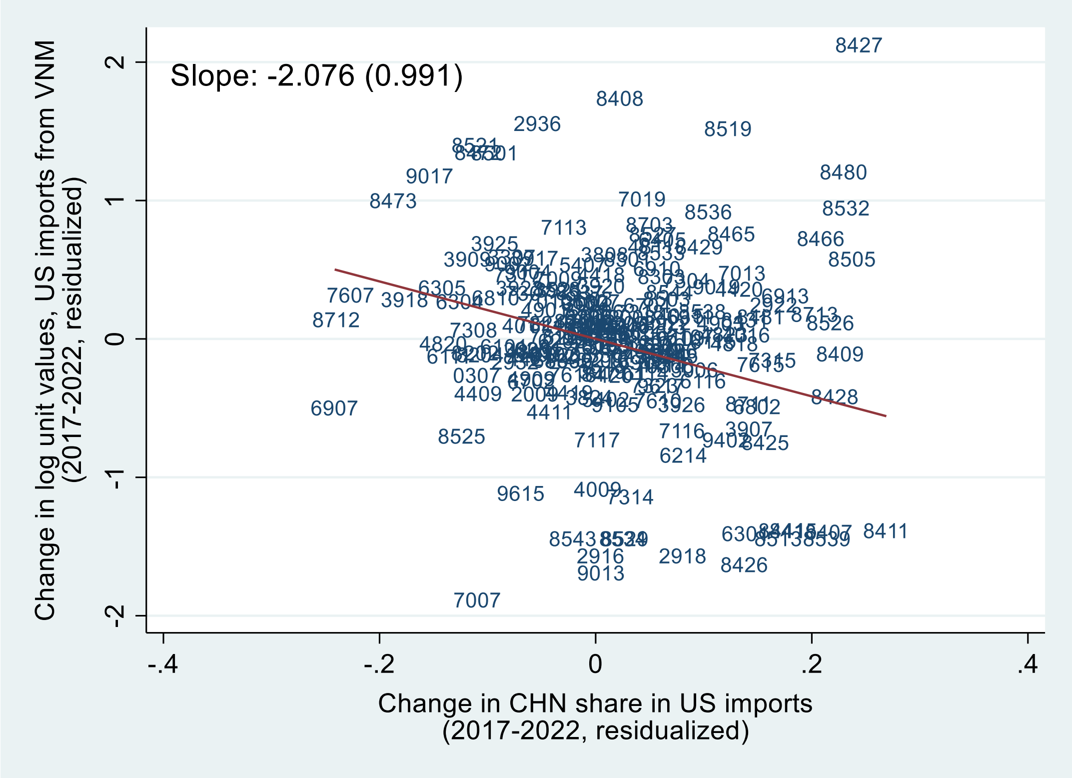
Import Market Share from "Friends"
Heterogeneous Responses

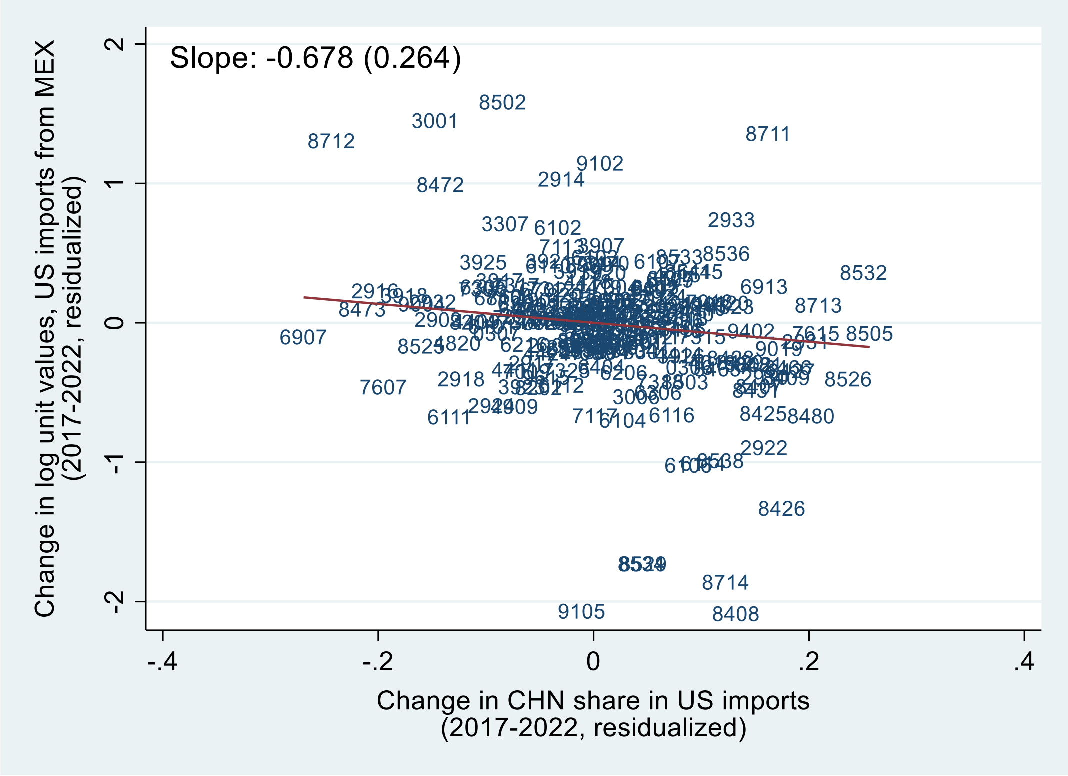
- Vietnam: Gains particularly in electrical and electronic equipment (e.g., microphones, electric generating sets, telephone sets). Also: plastic floor coverings and apparel.
    - Broadly speaking: In more upstream, or lower labor share products.
- Mexico: Also gained import share in electrical and electronic equipment (e.g., discs, tapes and storage devices, calculating machines). Also: autos and auto parts, glass iron and steel products.
    - Broadly speaking: Less upstream (proximity to the US), or higher labor share products.

✓**Policy Driven Reallocation. Both Vietnam and Mexico: Greater response for products with higher US tariffs on China.**

Caution I

Higher Unit Prices from "Friends"





Product-level decreases in China's import share:

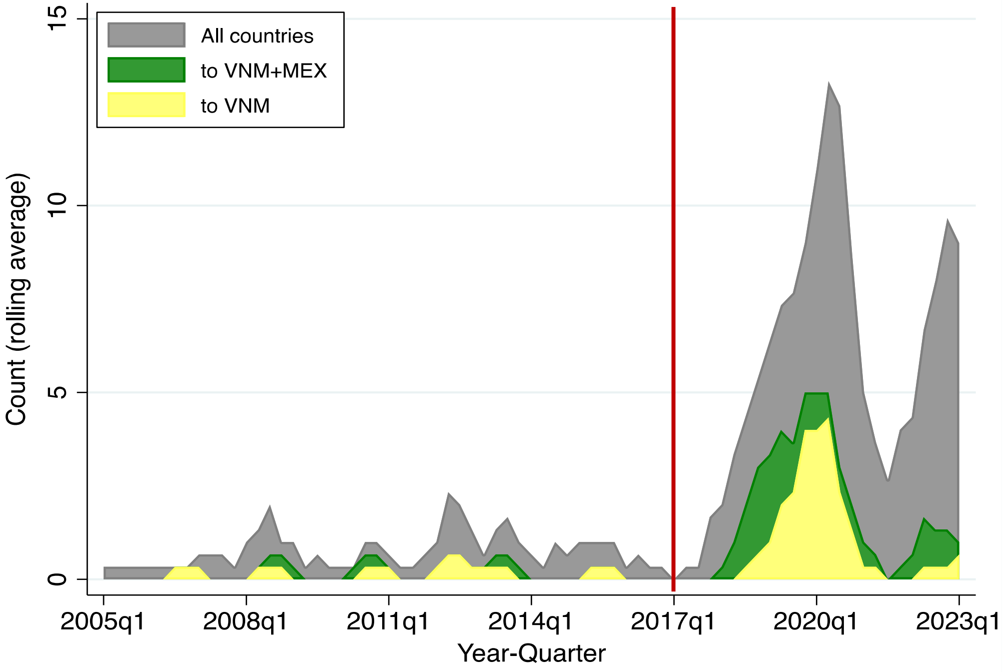
➢ **Increases in the unit values** of goods purchased by the US from **Vietnam (10%), Mexico (3%)**

- A combination of cost-push or demand-pull forces

The Great Reallocation: Firms' Strategies

Offshoring and Greenfield FDI

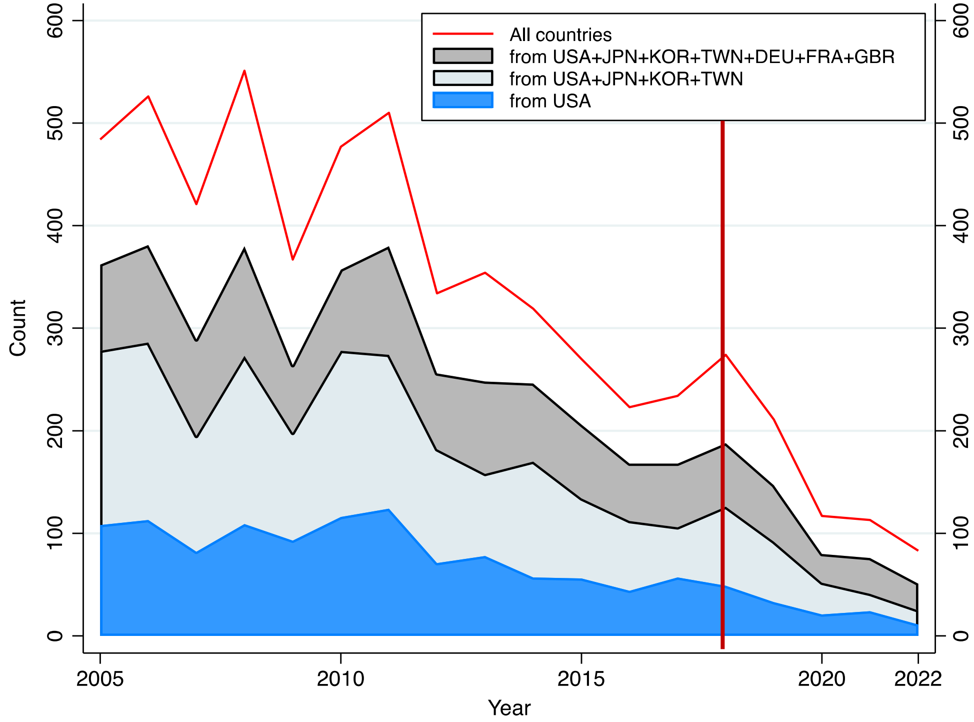
- **Intent/Attention:** In companies' earnings call transcripts, increased mentions of "friend/near/reshoring" + potential moves away from China, toward Vietnam or Mexico



Friend/Near/Reshoring in Earnings Calls

(2005-2023Q3) Refinitiv & NL Analytic

- **Modes**: China dropped off as a preferred destination for greenfield FDI originating from the US + other source countries



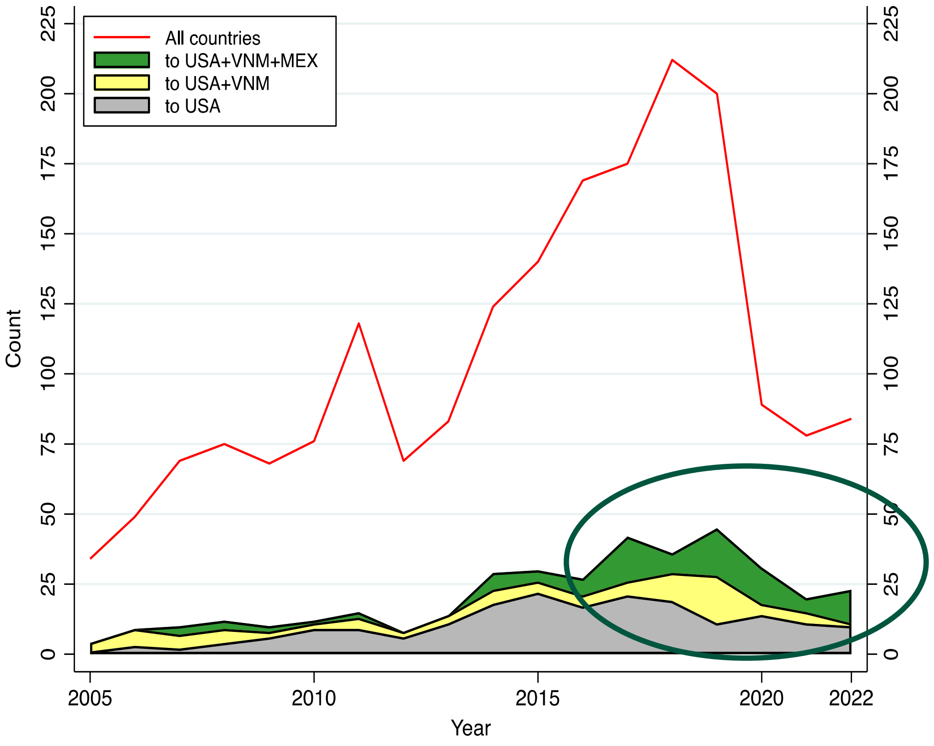
China's Inward Greenfield FDI (2005-2022)

FT fDi Markets

Caution II
The Back Door: Does Friendshoring Reduce Dependence?

- **Rising greenfield FDI** by China in Vietnam and Mexico (in line with FDI trends reported by VNM/MEX statistical agencies)

China's Inward Greenfield FDI, 2005-2022
(FT fDi Markets)



- **Rising share of imports** from China in third-countries, including US "friends"

China's Market Share- Top US Trading Partners
(Comtrade, Eurostat)

	2017		2022	
#	**MEX**			
1	USA	46.4%	USA	43.9%
2	**CHN**	**17.6%**	**CHN**	**19.6%**
	CAN			
1	USA	51.4%	USA	48.6%
2	**CHN**	**12.6%**	**CHN**	**14.0%**
	JPN			
1	**CHN**	**24.5%**	**CHN**	**21.0%**
2	USA	11.0%	USA	10.1%
	DEU			
1	**CHN**	**10.2%**	**CHN**	**12.0%**
3	USA	6.3%	USA	6.1%
	VNM			
1	**CHN**	**27.5%**	**CHN**	**33.2%**
6	USA	4.4%	THA	3.8%
	EU			
1	**CHN**	**18.2**	**CHN**	**20.9**
2	USA	11.5	USA	11.9

The Looming "Great Reallocation" of Supply Chains
Implications and Conclusions

✓ **Reallocation: Direct US sourcing from China has decreased; "Friends" have gained**

- Gaining market share: low-wage locations (e.g., Vietnam) + nearshoring (e.g., Mexico)
- US imports have become more upstream (reshoring of production stages)

○ But … **caution** (beyond preliminary data):

a. True **extent** of decoupling **remains to be seen**: different modes of globalization
   – Trade: China gaining market share with "friends" (Mexico, Vietnam, EU…)
   – FDI: China increasing presence in "friends"
   → Not total independence from China

b. Reallocation will come at a **cost**: tariffs on China have been passed on to consumers (Amiti et al., 2019; Cavallo et al., 2021)
   \+ **Rising unit import prices from alternative source countries**, including Vietnam and Mexico
   \+ Costs of reinvigorating manufacturing hubs (reliable supply chains, transport networks, adaptable skilled labor, specialized factories…)
   → **Impact on profits and productivity remains to be assessed**

- **Crucial debate:** weigh static losses against dynamic gains (Mill-Bastable test)
  – Dynamic gains: spillovers, agglomeration effects (Alfaro and Chen, 2014; Alfaro et al., 2019); national security (Goldberg and Reed, 2023).

➢ Recent policies eliminated "exhibitions of indecision" (Kennan, 47): political backing + sentiment (Alfaro, Chen, Chor, 2023)
  – Important nevertheless to develop frameworks to subject policies to evaluation

Implications for a sustainable transformation
Opportunities and Challenges

- For the US and China:
  - Open question: How will the "great reallocation" affect the productivity of global firms?
  - Will rising cost pressures constrain firms' ability to invest in innovation and productivity improvements? Or does this reevaluation of GVC strategies present new opportunities for firms to deepen resilience, reorganize, and reposition themselves for growth?
- For third countries:
  - As more GVC production and trade flows through these countries → An opportunity for firms to plug themselves into global supply chains, and reap potential gains.
  - But also: Challenges are likely to emerge, such as strains on labor and land markets. What policies to implement to ensure this expansion is sustainable, including from an environmental perspective?