Discussion of

Global Supply Chains: The Looming "Great Reallocation" by Alfaro and Chor

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Bank Financing of Global Supply Chains

by Alfaro, Brussevich, Minoiu, and Presbitero

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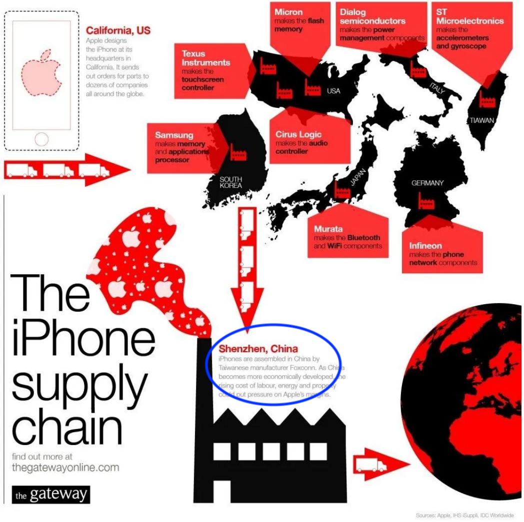
[1]The views expressed are those of the author and not necessarily those of the Federal Reserve Bank of New York or any other person affiliated with the Federal Reserve System.

Are we witnessing a (large) shift in global supply chains?



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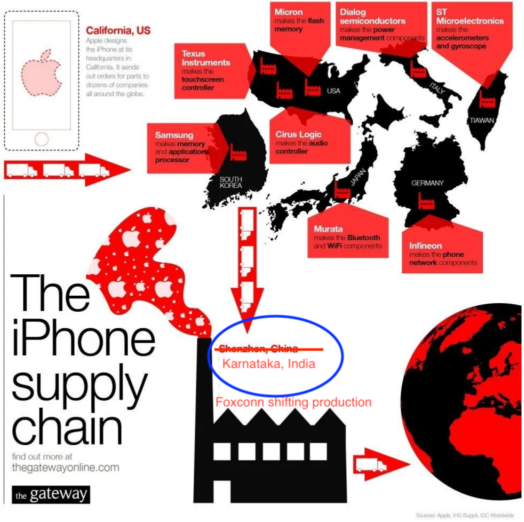


Two papers that present a slew of interesting facts using granular data

Paper #1 (Alfaro and Chor, 2023)

- Focuses on US firms' changing sources of intermediate goods between 2017-2022
- Exploits product-level imports, sector-level measure of supply chain position, earnings calls, FDI data
- Main take-away results:
    1. Shift away from Chinese suppliers to "friends" (e.g., Mexico) but ...
    2. ... at a possible cost given *increase* in unit value of products
    3. ... and Chinese FDI flows to "friends" on the increase

Two papers that present a slew of interesting facts using granular data

Paper #2 (Alfaro, Brussevich, Minoiu and Presbitero, 2024)

- Deeper dive at the US importer-level on change in foreign supplier relationships and how this is financed
- Exploits granular data on supply linkages merged with detailed firm-level and banking data, and 2017-18 "trade war"
- Main take-away results:
  1. Tariff-hit firms are more likely to substitute away from Chinese suppliers to other countries (complements Paper #1)
  2. These firms demand more credit and on average pay a *higher* rate for doing so
  3. But, the type of banking relationships matter for loan terms:

  $\Rightarrow$ Borrowing from several banks or a bank specialized in foreign markets $\downarrow$ rate

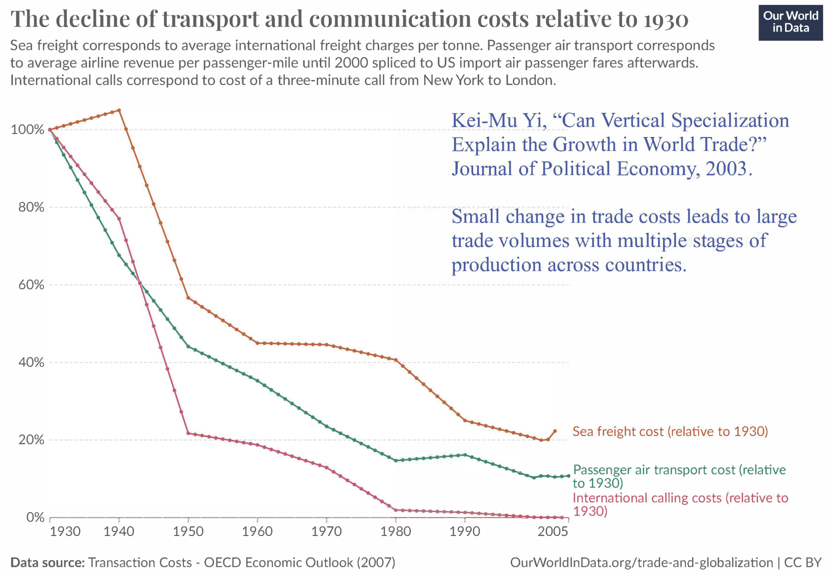
My discussion

Given that papers #1 and #2 present **a lot** of micro facts, my discussion will

- Zoom out with macro focus on globalization and the global production network
- Think about what **micro** facts in papers #1 and #2 might mean for **macro** risk
- Give some specific comments on the two papers

World trade has grown exponentially since WWII

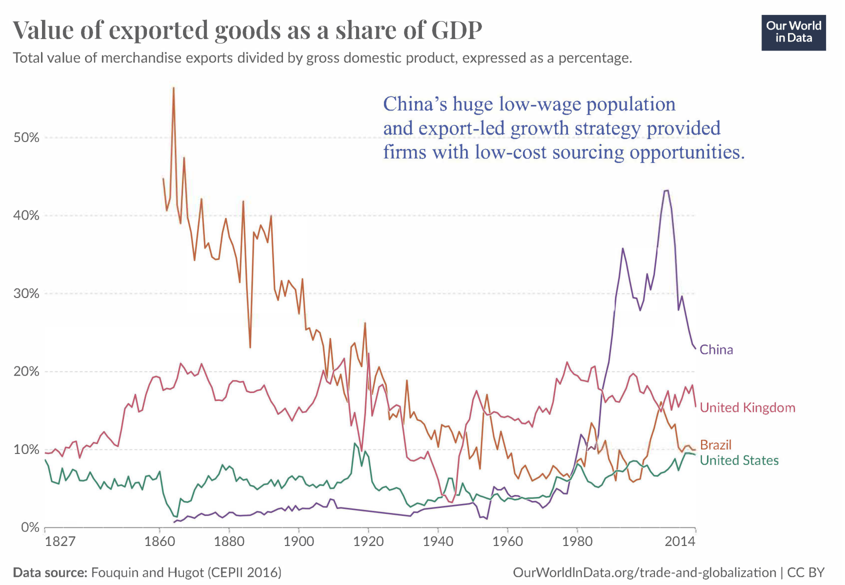
Fall in shipping and communications costs played a role



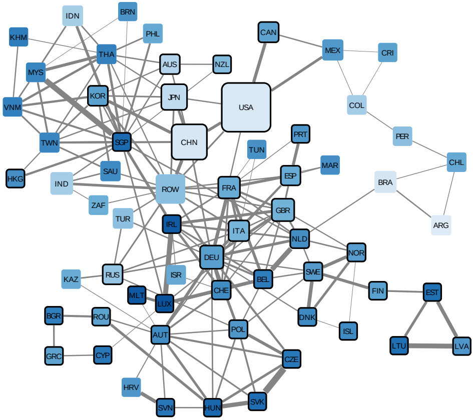
Kei-Mu Yi, "Can Vertical Specialization Explain the Growth in World Trade?" Journal of Political Economy, 2003.

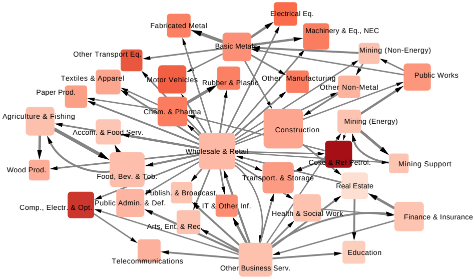
Small change in trade costs leads to large trade volumes with multiple stages of production across countries.

As did China entering WTO: a “shock” to world trade system



Allowed for a complex global production network to develop





Source: Çakmaklı, Demiralp, Kalemli-Özcan, Yeşiltaş and Yıldırım (2021).
Constructed using data from OECD ICIO Tables (2020) for 65 countries and 44 sectors.

Going forward: a world of fragmented trade with fewer/greater risks?

- The (globalization) party is over ... COVID, geopolitics, climate risks ...
- Will "friendshoring" (and reshoring) make the US economy more resilient?

$\Rightarrow$ *A priori*, not obvious

Going forward: a world of fragmented trade with fewer/greater risks?

- For example, di Giovanni, Kalemli-Özcan, Silva and Yildirim (2023) show how global production linkages imply that domestic inflation depends on:
  1. Domestic and foreign aggregate demand shocks
  2. Domestic and foreign sector-level productivity shocks
  3. Changes in domestic and foreign sectoral factor supply (e.g., workers)
  4. Changes in local-global demand-supply imbalances

$\Rightarrow$ Must look beyond changes in firms' direct sourcing choices and consider the source and type of shocks + global production network

Micro sourcing facts for macro

Tracing out the whole global network is key, as Alfaro and Chor (2023) also note, but even in "partial" equilibrium how to interpret their results (Paper #1)?

- How many Vietnams are needed to replace one China?

$\Rightarrow$ Hard to interpret without a model, but authors could try to give a back-of-the-envelope calculation given regression results

- What are rising unit costs capturing?
  - More expensive factor costs in sourcing countries?
  - Larger transport costs?
  - Transitory setup/switching costs?
  - General equilibrium effect of tariffs?

Customer-supplier evidence and shocks

- Paper #2 begins by providing complementary evidence on "friendshoring" using more granular data

$\Rightarrow$ US firms increase number of non-Chinese suppliers and decrease Chinese ones

- Will this dampen potential risks to production chains and macro risk?
- Again, answer is "it depends"
  - How diversified are firms? Matters for idiosyncratic shocks having macro effects:

  $\Rightarrow$ E.g., di Giovanni, Levchenko and Mejean (2014, 2018, 2024); Kramarz, Martin and Mejean (2020)

  - Depends on production and ease of input substitution given shocks:

  $\Rightarrow$ E.g., Baqaee and Farhi (2022), di Giovanni, Kalemli-Özcan, Silva and Yildirim (2023)

Search costs and financial constraints: preliminary evidence

Question 1: what are costs faced by US importers in getting new foreign suppliers?

- Only related to search or other "doing business" costs with new suppliers, which may need upfront financing?

$\Rightarrow$ Is there information on trade credit at bank and firm levels available?

- Number of pre-existing firms in a foreign market may help new firms' search given network effect (Chaney, 2014)

Search costs and financial constraints: preliminary evidence

Question 2: what are firms' financial constraints?

- Focus on differential impact on bank type, not firm characteristics (controls)
- Include *time-varying* measures of firms' riskiness?

$\Rightarrow$ Might change given impact of tariffs?

- More generally, if firms are getting the necessary credit to finance new supply relationships, are they constrained?

$\Rightarrow$ What is the counterfactual? Less credit and/or more costly credit?

Search costs and financial constraints: preliminary evidence

Question 3: how to interpret results on banking relationships?

- Banks specializing in foreign markets may have followed other domestic firms

⇒ Regressions on bank specialization picking up firm network effect (Chaney, 2014)?

- Literature on bank specialization points to specialized banks choosing better firms in general (Blickle, Parlatore and Saunders, 2023)

⇒ Firms that can borrow from many banks "better" than single-bank firms? Or, just able to spread financial needs across many banks so less risk per bank?

Concluding remarks

- The globalization era appears to be over as the world heads towards a more fragmented trade regime
- Implications for both real economy and financial markets
- Lots of work underway studying the world economy at multilateral institutions, such as the IMF, to understand potential implications
- Documenting the micro facts, such as papers #1 and #2, key to better understanding mechanisms driving aggregate patterns

$\Rightarrow$ Important for both researchers and policymakers!

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