Pricing the Global Trade Vulnerability by Jiatao Liu and Jun Pan

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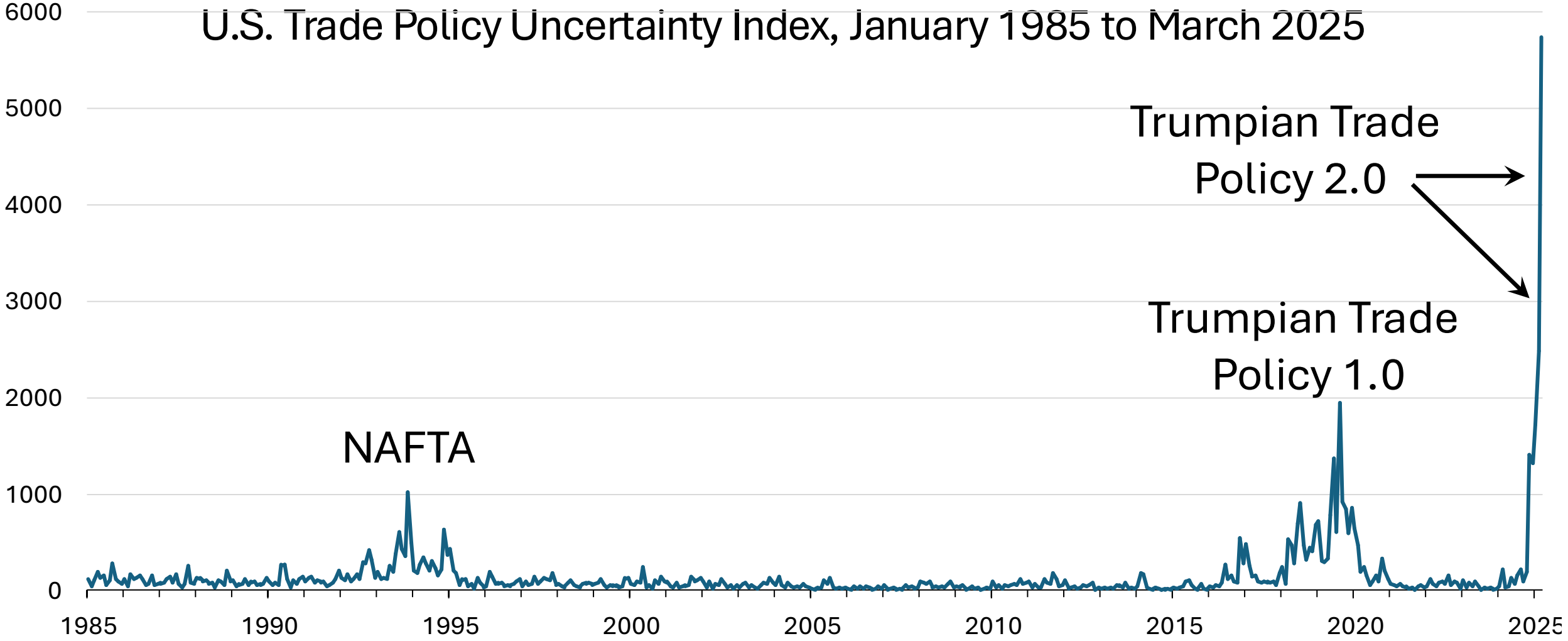
Overview of Remarks

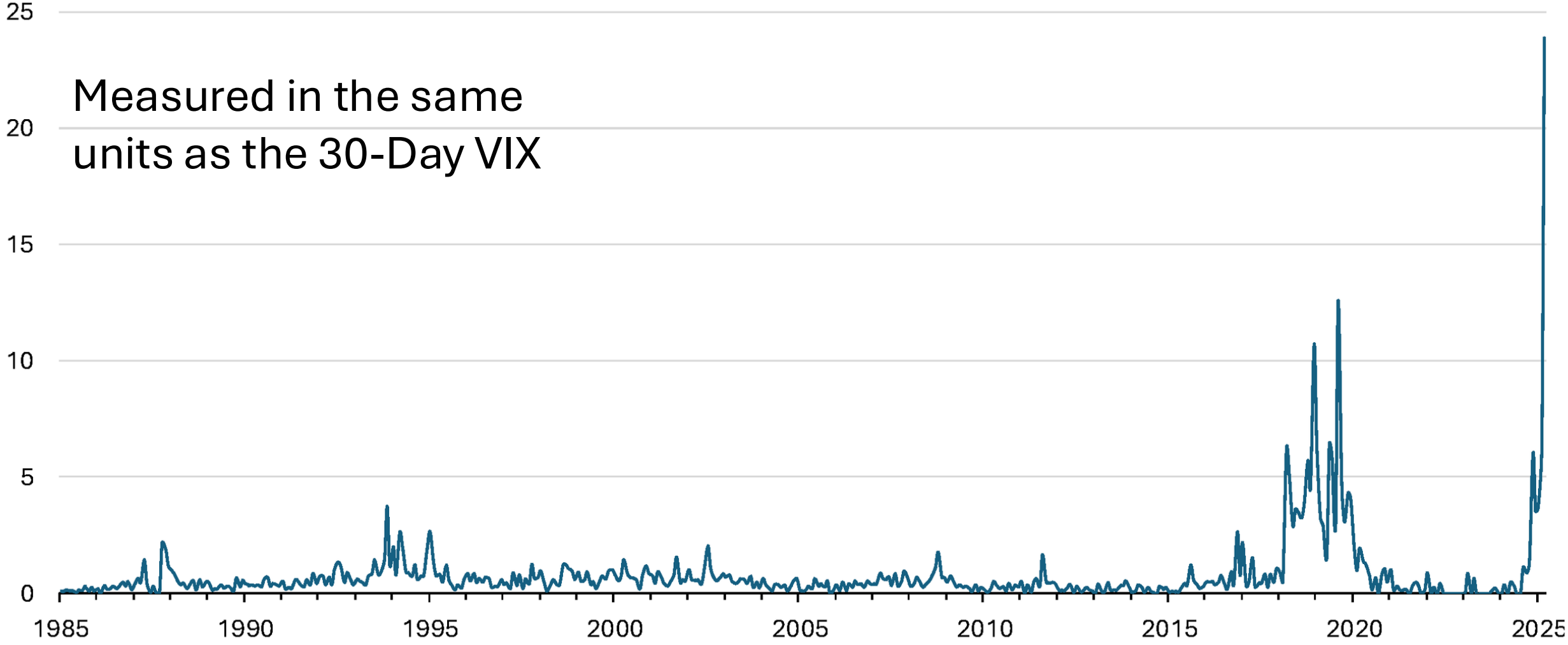
1. The extraordinary rise in trade policy uncertainty and in the relevance of trade-related risks.
2. Brief remarks on the bill-of-lading data
3. Concerns about how the authors measure exposure to trade-related risks.
4. My bottom-line takeaway.
5. Brief additional remarks.

U.S. Trade Policy Uncertainty Hit Unprecedented Levels Even Before "Liberation" Day



Source: Baker, Bloom and Davis (2016), as updated at www.PolicyUncertainty.com

U.S. Equity Market Volatility Tracker for Trade Policy, January 1985 to March 2025



Source: Baker, Bloom, Davis and Kost (2026), as updated at www.PolicyUncertainty.com.

Longer Historical Context

1900 to 2023: U.S. stock market moved > |2.5%| on 1,193 trading days, close to close.

- That's 3.5% of all trading days.

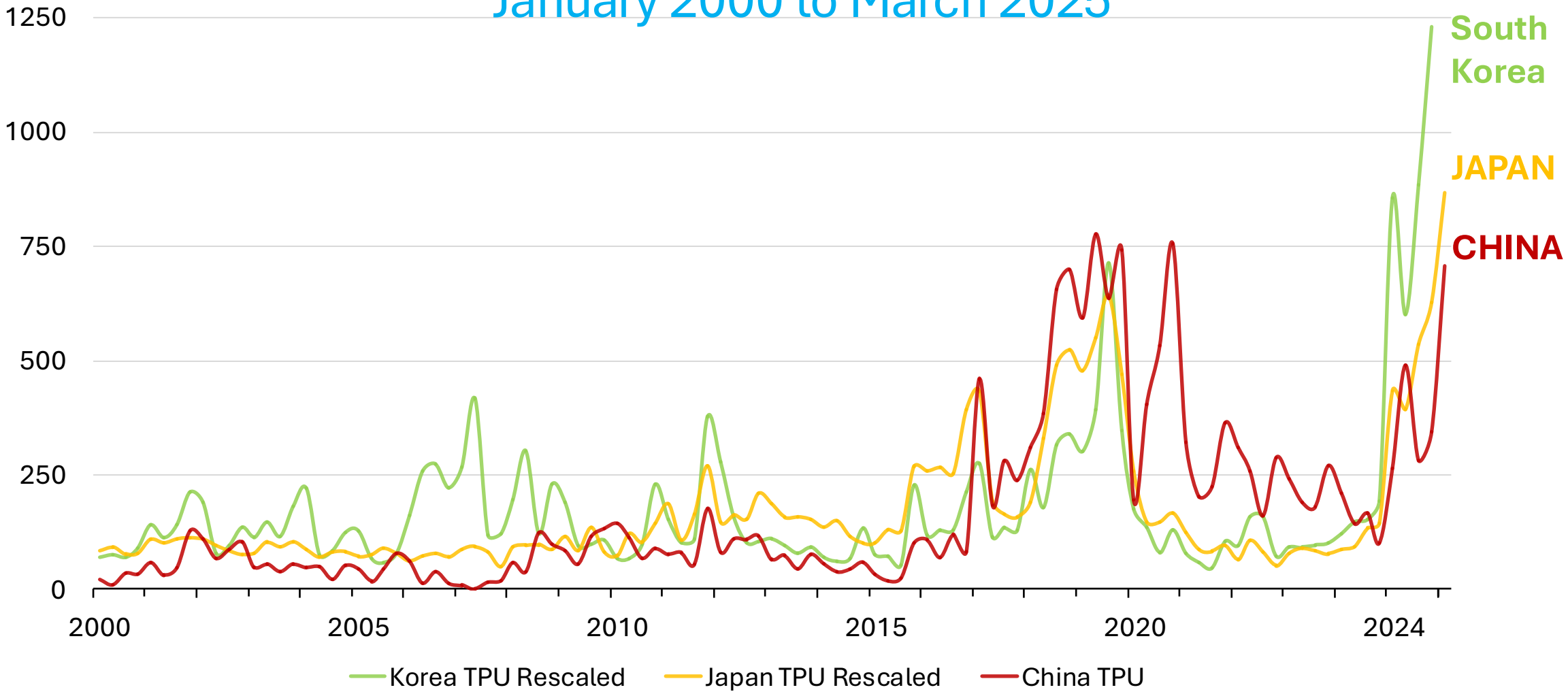
Next-day newspaper accounts attribute **ten** of these daily jumps to trade policy news (Baker et al., 2026b).

- Half occurred in 2018 and 2019.

26 March (first new Trump tariffs) to 17 April 2025: Trade policy news triggered **3 or 4** daily jumps > |2.5%|.

- That's ~800 times the frequency of daily jumps triggered by trade policy news from 1900 to 2023.

Trade Policy Uncertainty Indexes for Three U.S. Trading Partners
January 2000 to March 2025



Source: Arbatli et al. (2023) for Japan; Davis, Liu and Sheng (2019) for China; and Cho and Kim (2023) for South Korea; as updated as updated at www.PolicyUncertainty.com. The monthly series for Japan and South Korea are rescaled to match the mean value for the China TPU series from January 2000 to December 2022. The chart shows quarterly averages from 2000 Q1 to Q3 2024 and monthly values thereafter through March 2025 (February 2025 for South Korea).

The 2025 Trade Policy Rupture

See Davis (2025) for a broader account of the 2025 trade policy rupture. Irwin (2025) encapsulates one key aspect:

"[Trump's] tariffs blow an enormous hole in the liberal trade order that America has led and fostered since the second world war. They undermine every free-trade agreement America has ever signed. … If Mr Trump is willing to rip up his own agreement—known as the USMCA —with [Canada and Mexico] then all past agreements are null and void, and future ones are of limited value. No one can sign any such deal with confidence if tariffs can be imposed on a whim."

Other Developments that Raise Trade Risks

1. Russian imperialism and the return of hot war in Europe – a major source of trade disruptions and trade sanctions.
2. China's aggression over Taiwan and the South China Sea, raising fears of conflicts that would have devastating effects on trade.
3. 2026 Persian Gulf War, largely halting shipping via the Strait of Hormuz and with no full resumption in sight.
4. Rising use of economic chokepoints to deter, punish, and degrade adversaries – most notably, U.S. use of financial sanctions and China's supply restrictions on rare earth minerals.
5. We are moving to a world with three nuclear superpowers, rather than two.

U.S. Bill-of-Lading Data

1. These data are ***extremely granular.*** They specify the U.S. consignee, foreign shipper, country of origin, shipment date, product description, contain counters, declared value.
2. They cover publicly listed firms ***and privately held firms***.
3. The data source – S&P Global Panjiva – covers 40-46% of the total import value reported by the BPEA over 2012-2023, 22-45% of U.S. imports from China.
   - What's captured by Panjiva? What's not?
   - Selectivity, and changes in selectivity over time?
   - I wasn't persuaded by this claim: "the Panjiva dataset in our sample provides a highly representative picture of U.S. import behavior and dynamics."

Concerns about the Concentration Measure

Country Concentration (CC): For firm i in a shipment year t, let $I_{i,c,t}$ denote the import value from country c, and let

$$I_{i,t} = \sum_c I_{i,c,t}$$

be the total import value across all countries. Define the country import share as

$$s_{i,c,t} = \frac{I_{i,c,t}}{I_{i,t}}.$$

Then the *firm-level country import concentration* is given by

$$CC_{i,t} = \sum_c (s_{i,c,t})^2 = \sum_c \left(\frac{I_{i,c,t}}{I_{i,t}} \right)^2. \quad (1)$$

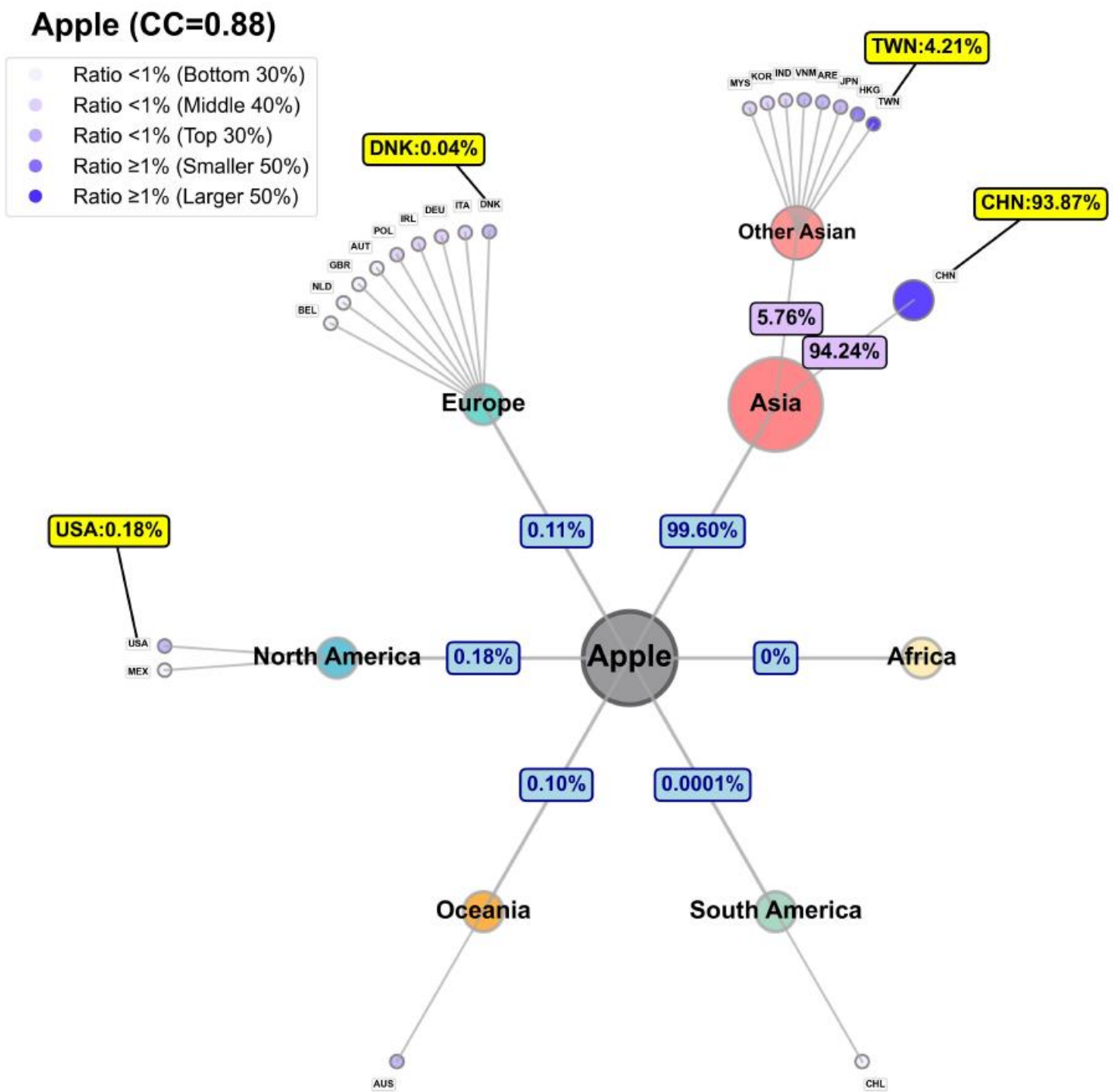
Denominator is firm's total import costs, **not** its total input cost or total cost of purchased inputs.

The authors implicitly recognize this first point, excluding "firms whose total import value is negligible relative to revenue."

It's not obvious that the Herfindahl index is the most suitable functional form here.

Other Concerns and Limitations

1. Substitution possibilities in response to supply disruptions will differ across firms, conditional on the firm's measured country-level import concentration. Examples:
   A. Larger stockpiles on hand and lower storage and spoilage costs imply less vulnerability to temporary supply disruptions.
   B. The ease with which a firm can substitute away from *its* main country-level supply source depends on the *global concentration* of the product in question.
   C. Demand-side substitution possibilities also differ across products.
2. Neglect of occurrence risk except Hi-Lo China results.
3. No visibility deeper into the international supply chain.


Apple (CC=0.88)
Ratio <1% (Bottom 30%)
Ratio <1% (Middle 40%)
Ratio <1% (Top 30%)
Ratio ≥1% (Smaller 50%)
Ratio ≥1% (Larger 50%)
TWN:4.21%
MYS KOR IND VNM ARE JPN HKG TWN
Other Asian
DNK:0.04%
DNK ITA DEU IRL POL AUT GBR NLD BEL
Europe
CHN:93.87%
CHN
5.76%
94.24%
Asia
USA:0.18%
USA MEX
North America
0.11%
99.60%
0.18%
Apple
0%
Africa
0.10%
0.0001%
Oceania
South America
AUS
CHL

My Bottom-Line Takeaway

1. Despite the concerns and limitations of their measures, their sorting of firms yields clear evidence that exposure to global trade vulnerabilities is a priced risk factor.
2. If sorts based on crude exposure measures yield such clear evidence, it suggests that vulnerabilities to global trade disruptions have become a big deal for asset pricing and for the economy more broadly.

Risk Exposures, Mitigation, Resilience

- Trade risks per se are largely beyond the control of firms and most countries, but firms and countries can shape their exposures to those risks and their resilience in the face of realized shocks.
- Thus, a recognition that global trade risks have intensified will prompt efforts to mitigate exposures and build resilience.
- Two implications:
    1. Exposures are likely to become more muted over time, even if the underlying sources of global trade risks remain elevated.
    2. The newfound relevance of global trade risks is good news for firms that offer exposure mitigation and greater resilience.

Another Approach with a Distinct Focus: Davis, Hansen & Seminario-Amez (2025)

Abstract: Recent macroeconomic shocks have driven a sharp rise in firm-level outcome dispersion. We argue that this heterogeneity arises from differences in firms' exposure to macro shocks, shaped by their business characteristics. To measure this, we construct firm-specific shock exposures using jump-date stock returns and Risk Factors text from 10-K filings. These exposures predict abnormal returns and a variety of real outcomes through interpretable variation in language. They also explain much of the increase in observed dispersion. Our findings provide a novel explanation for countercyclical dispersion and highlight the role of firm characteristics in macro shock transmission.

DHS focus on COVID-era shocks, but their approach is equally applicable to trade-related shocks.

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