



Global Trade Analysis Project

The New International Landscape

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Global Trade Analysis Project**

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Outline

1. Overview of GTAP
2. A User's Guide to Restructuring the Global Trading System
3. US Role in Global GDP and Trade
4. Technology Trends
5. International architecture
6. Summary

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- **What is GTAP?**

- Founded in 1992, GTAP supports a global network of researchers and decision-makers conducting quantitative analysis of global issues.

- **Goal**

- Improve the quality of quantitative economic analysis of global issues in support of deliberate decision-making.

- **Philosophy**

- Collaboration in data and community building and an open marketplace for ideas.

- **Influence**

- Has become the common "language" for conducting economic analysis of global policy issues, leading to GTAP-based results being influential in trade, climate change, energy, and environment decision-making.

GTAP Consortium and Advisory Board



What does GTAP do?

- **Lowers barriers to high quality analysis**

- Data (www.gtap.org/databases/)
 - Bilateral trade patterns, production, consumption, intermediate use of commodities/services, land use, nutrition, greenhouse gas emissions, and other modules
- Models (www.gtap.org/models/)
 - Global general equilibrium models and gridded partial equilibrium approaches targeted at food and the environment.
- Training (www.gtap.org/gtap-u/)
 - Education platform with the goal of expanding access and improving educational and career opportunities for students and professionals, worldwide

- **Conducts research**

- One of the largest concentration of top-flight economywide modelers in the world

- **Serves as a platform** (www.gtap.org/events/)

- Annual Conferences on Global Economic Analysis,
- GTAP virtual technical and policy seminar series,
- *Journal of Global Economic Analysis* (www.jgea.org), and
- *Ad hoc* events
 - Trump tariff modeling discussion co-organized with WTO.
 - Reconciling widely varying estimates of the global economic impacts from climate change



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A User's Guide to Restructuring the Global Trading System

Prelude

- **Multiple voices and views within the current US administration**
- **Many are irreconcilable**
- **Example**
 - Tax cuts
 - Government spending
 - Fiscal discipline
- **Nevertheless, some of the voices are coherent**
 - Stephen Miran, Chairman of CEA
 - Coherent does not mean correct

A User's Guide to Restructuring the Global Trading System – Stephen Miran

- **Some quotes from the Executive Summary**
 - On the cusp of generational change in the international trade and financial systems.
 - Persistent dollar overvaluation (...) prevents the balancing of international trade.
 - As global GDP grows, it becomes increasingly burdensome for the United States to finance the provision of reserve assets and the defense umbrella.
 - The manufacturing and tradeable sectors bear the brunt of the costs.

Triffin Economy

- **Equilibrium concepts in foreign exchange**
 - $P_E E + B = P_M M$
 - Interest rate arbitrage
 - Demand for currency as a reserve asset (USD only)
- **Impacts of inelastic reserve asset demand for USD**
 - Cheaper borrowing (Lower interest rates)
 - Richer currency (Appreciation of USD)
 - Financial extraterritoriality (US influence in the global financial system)

USD as global reserve currency - 'Exorbitant privilege' versus 'not fair'

- Do lower interest rates and 'financial extraterritoriality' outweigh an appreciated exchange rate?
- 'Not fair' side adds in security umbrella imperatives and costs.
- Whatever the answer, this administration is very much on the 'not fair' side (and/or perceives gains to the USA from more nationalistic policies that should not be left on the table)

Tools for Restructuring the Global Trading System

- **Tariffs**

- Viewed as relatively easy and should go first
- Optimal tariff argument
- Leverage
 - Tariffs themselves once in place
 - Security arrangements

- **US Currency depreciation**

- Viewed as relatively hard and should go second



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US Role in Global GDP and Trade

From Robinson and Thierfelder (2019; 2024)

Inter-Connected Regional Economies (ICREs)

- **ICRE**
 - Integrated regional economies with respect to world trade
 - Members trade more within the ICRE than with non-ICRE countries
- **Three ICREs dominate the world economy**
 - North America (US, Mexico, Canada)
 - Europe (EU plus closely linked European countries)
 - East and Southeast (E&SE) Asia (China plus East and Southeast Asian countries)

Bilateral trade and GDP shares

	US	Rest of NAFTA	Europe	China	Rest of E&SEAsia	Other regions	Total	Percent of global GDP
US	0.0	2.8	2.5	1.0	1.9	2.2	10.4	24.6
Rest of NAFTA	3.1	0.1	0.4	0.2	0.2	0.3	4.3	3.5
Europe	3.1	0.5	22.9	1.9	2.2	5.9	36.7	23.9
China	2.4	0.4	2.0	0.8	3.6	2.8	12.0	15.9
Rest of ESEAsia	2.2	0.3	2.1	4.8	5.6	2.5	17.5	14.6
Other regions	2.4	0.3	5.4	2.4	2.8	5.8	19.2	17.4
Total	13.3	4.4	35.3	11.1	16.4	19.5	100.0	100.0

Note:

1. Exports valued fob from row region to column region.
2. Bilateral trade as a percent of total trade.
3. Source: Robinson and Thierfelder 2019 and 2024 using GTAP v11c, 2017.

Bilateral trade shares net of intra-regional trade

	US	Rest of NAFTA	Europe	China	Rest of E&SEAsia	Other regions	Total
US	0.0	0.0	4.5	1.7	3.4	3.9	13.5
Rest of NAFTA	0.0	0.0	0.6	0.4	0.4	0.5	1.9
Europe	5.6	0.9	0.0	3.4	3.9	10.6	24.4
China	4.2	0.6	3.6	0.0	0.0	5.0	13.5
Rest of ESEAsia	3.9	0.6	3.7	0.0	0.0	4.4	12.6
Other regions	4.3	0.5	9.7	4.3	5.0	10.3	34.2
Total	18.0	2.7	22.1	9.8	12.7	34.7	100.0

Note:

1. Exports valued fob from row region to column region.
2. Bilateral trade as a percent of total trade.
3. Source: Robinson and Thierfelder 2019 and 2024 using GTAP v11c, 2017.

Key finding: US Imposes Tariffs

- **Countries can diversify away from the US with “little” difficulty**
 - Trade with US declines, little or no change in global trade
 - US share of global trade is much lower than Europe and E&SE Asia
 - Relatively easy to divert trade around US

Source: Robinson and Thierfelder 2019 and 2024 using GTAP v11c, 2017.

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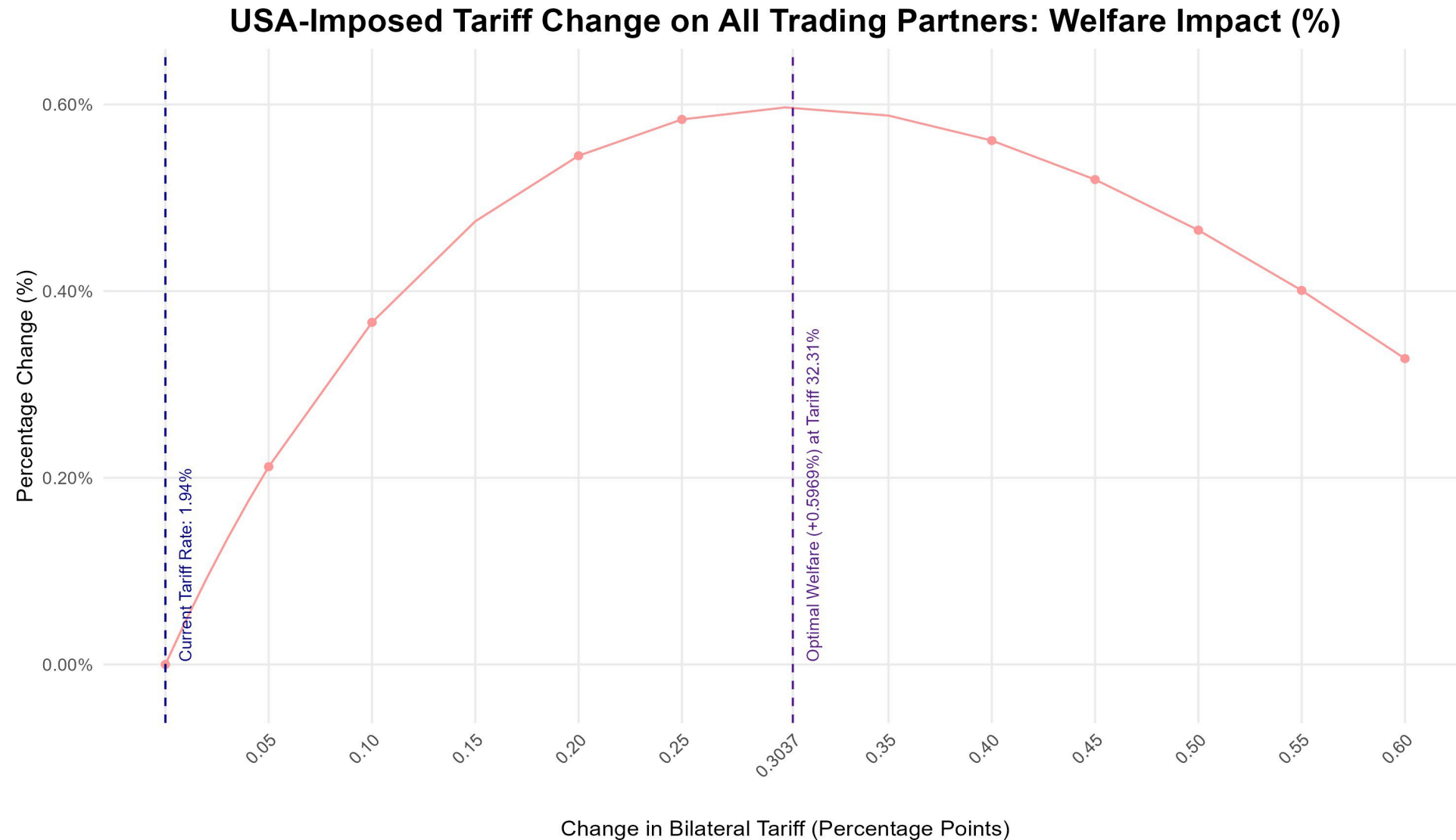
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- **Some preliminary evidence for this**
 - *The Economist* reports that Chinese exports to USA fell by 28% in April and May (combined) compared with 2024
 - But, total exports from China rose by 6% due to increased volumes elsewhere

Source: “How America and China spooked each other.” *The Economist*. June 10, 2025.

USA Optimal Tariff



Importance of (non) Retaliation

Percent change in Real Final Demand and Terms of Trade.

	US Protects		Global Trade War		Limited Trade War	
	Final Demand	Terms of Trade	Final Demand	Terms of Trade	Final Demand	Terms of Trade
United States	0.60	5.02	-2.38	-17.41	-1.30	-10.61
Canada	-1.31	-4.20	1.53	7.58	0.40	4.33
Mexico	-1.65	-4.91	1.66	7.54	0.36	3.89
Europe	0.03	-0.05	0.59	1.46	0.37	1.14
China & HK	-0.17	-0.16	0.20	0.77	0.00	0.59
Japan	0.07	0.16	0.55	3.27	0.40	2.73
South Korea	0.04	0.14	1.79	3.20	1.09	2.40
Other High Income Asia	-0.57	-0.73	1.23	2.61	0.47	1.67
Low Income Asia	-0.19	-0.39	0.36	0.88	0.26	0.40
Central America	-0.57	-1.86	1.53	4.18	0.83	1.08
Latin America	-0.33	-1.50	0.34	2.43	0.10	0.56
India	0.37	0.32	0.09	0.82	0.24	0.44
Africa	-0.60	-1.77	-0.18	-0.45	-0.33	-1.14
Russia	-0.65	-1.01	0.14	0.16	-0.24	-0.55
MENA	-0.90	-1.40	0.25	0.56	-0.25	-0.38
Other countries	0.31	-0.20	-0.18	0.01	0.09	-0.08

Source: Authors' calculations.

Miran: "Thus, preventing retaliation will be of great importance (p. 25)."

Relative success on retaliation thus far

- 10% plus tariff more or less across the board except with China
- Trade war with China
- Not much, if any, explicit retaliation other than from China
- Emphasis on bilateral trade negotiations to prevent countries from acting as blocks
- Explicit linkage of security and trade enhances US leverage

My guess is that, if you told Miran in January that the above would prevail in terms of retaliation, he would be fine with this outcome.



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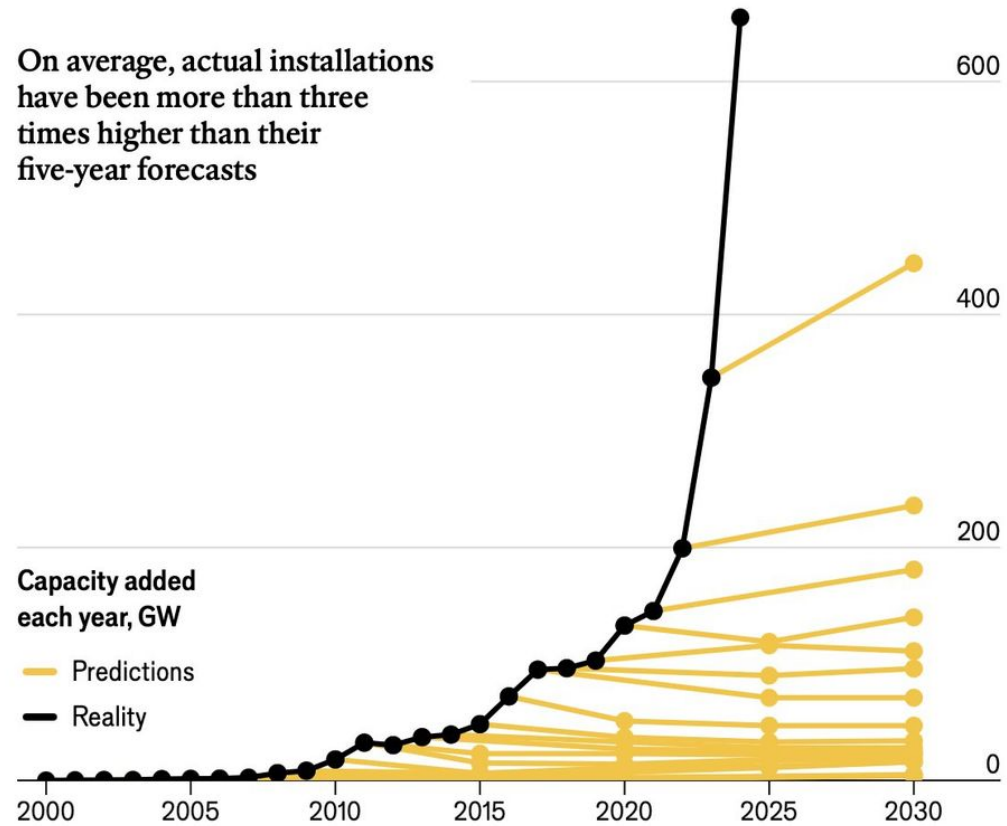
Technology Trends and Industrial Policy

Rapid advance

- 1. Variable renewable energy, notably solar**
- 2. Electrification of processes, starting with transport**
- 3. Artificial intelligence**

These items interact.

↓ EASY PV
how solar outgrew expectations



Sources: IEA; Energy Institute; BloombergNEF

Transport

- Globally, more than 20% of new light vehicle sales are electric vehicles (EVs)
- More than 50% in China
- Massive battery production capacity
- Production costs for EVs falling
- China is now the world's largest vehicle exporter
- IEA (2024 and 2025) project global oil demand to peak in 2029



China's EV onslaught

January 13th 2024

Artificial intelligence

- Assume we can take rapid advance in AI as given

Striking Differences in Industrial Policy

- China is 'all in' in all three of these interacting and rapidly evolving realms.
- China's industrial and environmental and policies overlap substantially.
- Under the new administration, the US has substantial commitment only to AI.



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The International Architecture



The international architecture

- The norms, rules, and institutions are in flux.
- There is no going back to the old order.
 - Humpty dumpty sat on a wall...
- Reinventing, adapting, reimagining, evolving (whatever the right verb might be) the international architecture is a key task.



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Summary



Summary (1)

- **USA is seeking “generational change in the international trade and financial systems.”**
- **USA is:**
 - A large economy,
 - A behemoth in security,
 - Dominant in finance, and
 - Not particularly large in trade.
- **The US has, thus far, imposed tariffs without significant retaliation (other than China).**
 - Avoiding retaliation is key to securing terms of trade gains
 - Insistence on bilateral negotiations is an important tactical element.
 - Explicit linkages between security and trade increases leverage.

Summary (2)

- **At the same time,**
 - Tariffs remain effectively a tax on exports with negative implications for exporting sectors like agriculture,
 - Simulation and very preliminary data point to an ability of the rest of the world to trade around the USA with relative ease,
 - There are striking differences between the industrial policies being pursued by the USA and China (maybe only AI matters?), and
 - The norms, rules, and institutions that comprise the international architecture are in flux.



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Thank You

