Fast and Furious: Daily Export Responses to the Liberation Day Tariff Shock

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Motivation

When tariffs are announced and scheduled to take effect within days, exporters may have only a narrow window to adjust shipment timing. Standard monthly or quarterly trade data cannot capture these rapid responses, especially when both the announcement and policy reversal occur within the same month.

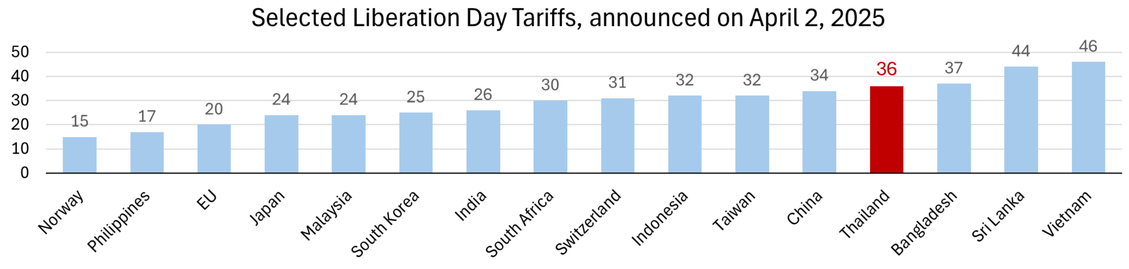
The U.S. Liberation Day tariff episode provides a rare high-frequency setting: country-specific tariffs were announced on April 2, 2025, scheduled to begin on April 9, and unexpectedly suspended the same day.

Research Question

1. How quickly do exporters adjust shipments when a sudden trade policy shock is scheduled to take effect within days?
2. Do exporters respond by changing shipment quantities, export prices, or both?
3. Do these responses differ across sectors and product types?

Policy Background

- Feb 13: Fair and Reciprocal Plan
- Apr 2: Liberation Day tariffs announced
- Apr 9: Country-specific tariffs scheduled to take effect
- Late Apr 9: Country-specific rates suspended; uniform 10% tariff imposed for 90 days



Data Description

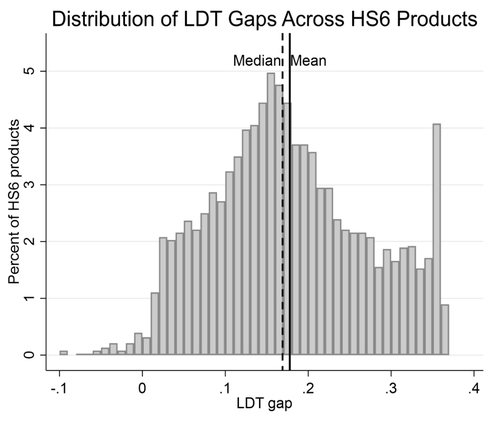
- Daily transaction-level customs data from the Thai Customs Department, covering Jan 1, 2024-Apr 30, 2025. We aggregate the data to the HS6-destination-date level.
- The data report export value, quantity, destination, and export-declaration paid date. Unit values proxy for export prices.
- We exclude gold, solar-panel transactions, small shipments below 1,500 baht, non-kg/piece units, non-working days, infrequent flows, and destinations outside Thailand's top 30 trading partners.
- **<u>Balanced panel</u>: 38,546 unique product (HS6)-destination and 12.5 million observations (almost 76% of the total exports).**

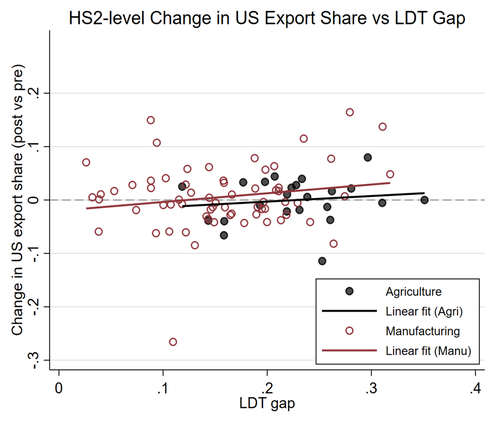
Identification

- Identification comes from **cross-product variation in Thailand's relative tariff exposure** after the U.S. Liberation Day announcement. We define the LDT gap for product p as:

$$\text{LDT\_gap}_p = \text{LDT}^{\text{THA}} - \sum_{c \neq \text{THA}} \left(\frac{\text{Import}_{pc}^{US,2024}}{\sum_{c \neq \text{TH}} \text{Import}_{pc}^{\text{US},2024}} \times \text{LDT}^c \right),$$

  - where competitors' tariff rates are weighted by their 2024 U.S. import shares in the same HS6 product market.
- The LDT gap measures Thailand's expected **relative tariff disadvantage** in the U.S. market. A larger gap means that Thai exporters were expected to become less competitive relative to other suppliers after the tariff took effect.
- Products with larger **LDT gaps had stronger incentives to accelerate shipments** to the U.S. before the tariff deadline.





Empirical Method

We compare U.S.-bound exports with exports to other destinations, before and after the tariff announcement, across products with different LDT gaps:

$$\log(y_{pct}) = \beta_1 (\text{Post}_t \times \text{US}_c \times \text{LDT\_gap}_p) + \boldsymbol{X}'_{\boldsymbol{pct}}\boldsymbol{\theta} + \delta_{pc} + \gamma_{cw} + \vartheta_{pw} + \zeta_{pd} + \varepsilon_{pct}.$$

- The dependent variables are **export value, quantity**, and **unit price**.
- The vector X controls for sectoral and country-targeted tariff measures.
- The model includes product-(destination) country, (destination)country-week, product-week, and product-day-of-week fixed effects.

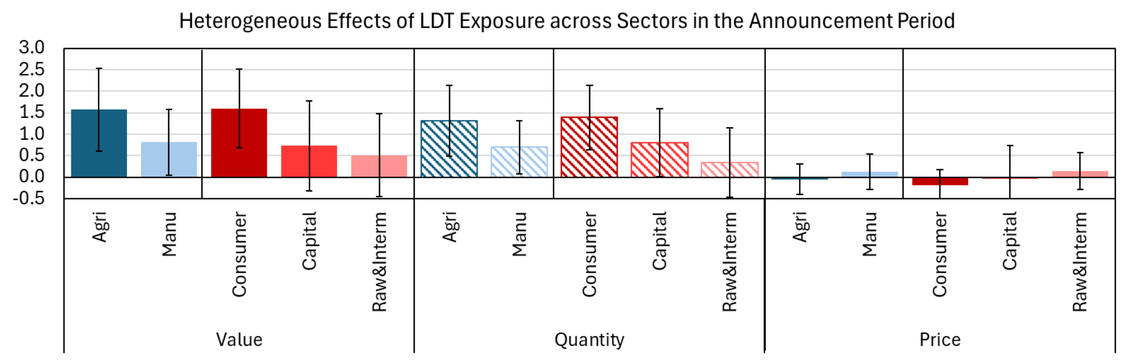
Main Results

- Products with larger LDT gaps saw stronger increases in U.S.-bound exports, driven by higher quantities rather than price changes.
- Stronger responses during the announcement period, but weakens during the suspension period.

	Panel A			Panel B		
VARIABLES	(1) Value	(2) Quantity	(3) Price	(4) Value	(5) Quantity	(6) Price
$\text{Post}_t \times \text{US}_c \times \text{LDT\_gap}_p$	0.707***	0.570***	0.044			
	(0.269)	(0.219)	(0.126)			
$\text{Announce}_t \times \text{US}_c \times \text{LDT\_gap}_p$				0.957***	0.818***	0.052
				(0.337)	(0.274)	(0.175)
$\text{Suspend}_t \times \text{US}_c \times \text{LDT\_gap}_p$				0.557*	0.420*	0.039
				(0.310)	(0.253)	(0.137)
Observations	12,430,373	12,430,373	2,619,464	12,430,373	12,430,373	2,619,464
R-squared	0.473	0.488	0.808	0.473	0.488	0.808
Adjusted R-squared	0.459	0.474	0.791	0.459	0.474	0.791

Heterogeneity Results

- Agricultural goods respond more strongly than manufacturing goods.
- Final consumption goods show the largest anticipatory response.



Robustness Checks

The results are **NOT** driven by violations of key assumptions: there are no differential pre-trends, no placebo effects before the tariff announcement, and no evidence of trade diversion away from other destinations.

The results also remain **ROBUST** when using alternative product aggregation, alternative LDT gap weights, a subsample starting with Trump's second term, and outlier treatment.

Future Plans

1. Extend the sample beyond April 2025 to study post-front-loading dynamics.
2. Add inventory proxies, such as time since last shipment or shipment frequency.
3. Estimate PPML specifications to better handle zeros in daily trade data.
4. Decompose the response into the number of shipments and average shipment size.
5. Examine whether firm and product characteristics explain differences in front-loading behavior.

Conclusions

- Exporters can re-time shipments within days of a sudden tariff shock.
- The response is driven mainly by higher shipment quantities, not price changes.
- Agricultural goods and final consumption goods show the largest anticipatory responses.
- Daily customs data reveal a fast-moving adjustment margin that monthly or quarterly trade data would miss.

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