

Session 12: Int'l Trade & Capital Flows

Professor: Alessandro Dario Lavia

`alessandro.lavia@unito.it`

April 2nd 2026

ESCP - Macroeconomics EF01

Academic Year: 2025-2026

International Trade and Tariffs

The Origins of Tariffs: A Historical Overview

- **Medieval Period:** Tariffs emerged as tolls imposed by feudal lords on goods passing through their territories.
- **Mercantilism (16th–18th c.):** States used tariffs to promote national self-sufficiency and accumulate precious metals.
- **Industrial Era (19th c.):**
 - Rise of protective tariffs to shield emerging industries.
 - Prominent in the U.S., Germany, and France.
- **Early 20th Century:** Protectionist backlash after WWI, culminated in Smoot-Hawley Tariff Act (1930).
- **Post-WWII Era:** Shift to liberalization with GATT (1947) and later WTO, global decline in tariff levels.
- **21st Century:** Revival of tariff use under nationalist economic policies (e.g., U.S.-China trade war).

Trade Surplus vs Trade Deficit

Trade Balance: The difference between a country's exports and imports of goods and services.

- X = Exports of goods and services (domestic production sold abroad)
- IM = Imports of goods and services (foreign production consumed domestically)
- **Trade Balance (TB)** $= X - IM$

Types of Trade Balance:

- **Trade Surplus:** $X > IM \Rightarrow TB > 0$
- **Trade Deficit:** $IM > X \Rightarrow TB < 0$

$$Y = C + I + G + (X - IM) \tag{1}$$

- Trade surplus contributes positively to aggregate demand and GDP.

Exchange Rates and the Trade Balance

Exchange rate (e): The price of foreign currency in terms of domestic currency.

How exchange rate changes affect trade:

- **Depreciation:** e increases $\Rightarrow$ Domestic currency weakens
 - Exports (X) become cheaper for foreigners $\Rightarrow X \uparrow$
 - Imports (IM) become more expensive $\Rightarrow IM \downarrow$
 - $\Rightarrow$ Trade balance improves: $X - IM \uparrow$
- **Appreciation:** e decreases $\Rightarrow$ Domestic currency strengthens
 - $X \downarrow, IM \uparrow \Rightarrow$ Trade balance deteriorates

Marshall-Lerner Condition: Depreciation improves trade balance if demand elasticities are high enough.

Note: Exchange rates adjust in response to capital flows, interest rates, and expectations, hence their effect on trade is both immediate and dynamic.

Global Trade Imbalances (2023)

Top 5 Trade Surpluses:

- **China:** +\$386.06 billion
- **Germany:** +\$280.00 billion
- **Russia:** +\$210.00 billion
- **Netherlands:** +\$100.00 billion
- **South Korea:** +\$90.00 billion

Top 5 Trade Deficits:

- **United States:** -\$784.89 billion
- **United Kingdom:** -\$200.00 billion
- **India:** -\$190.00 billion
- **France:** -\$150.00 billion
- **Brazil:** -\$50.00 billion

Source: TheGlobalEconomy.com (2023)

The U.S. Trade Deficit and Tariff History

Persistent Trade Deficits Since the 1970s

- The U.S. has consistently run trade deficits since the 1970s, reflecting higher imports than exports.
- A key factor is the higher Marginal Propensity to Consume (MPC) in the U.S., leading to increased spending on imports.

Historical Context of U.S. Tariffs

- **1790–1860:** Tariffs served primarily to raise government revenue.
- **1861–1933:** Known as the “restriction period”, to protect domestic industries.
- **Post-1934:** The “reciprocity period” saw a significant decline in tariffs, promoting global trade liberalization.
- **2018–2025:** Recent years have witnessed a resurgence in protectionist policies, with tariffs used as tools for economic strategy.

The Smoot-Hawley Tariff Act (1930)

- Signed by President Hoover during the Great Depression.
- Raised tariffs on over 20,000 imported goods to protect U.S. industry.
- Other countries retaliated, global trade collapsed.
- U.S. exports dropped sharply, deepening the economic crisis.
- Now seen as a major policy mistake.

Moral of the story: Tariffs can make things worse.

Do Tariffs Work? The Investment Trade-Off

The Trade-Off:

- Tariffs can boost domestic firms by reducing foreign competition.
- But if seen as temporary, firms may **delay investment**, waiting for clarity.
- Production tomorrow depends on **investment today**.

The Macroeconomic Channel:

- Tariffs raise prices → Inflation rises → Central bank hikes rates.
- **Higher real interest rate** (r) → Lower investment.

Plus: Risk of Retaliation

- Other countries may respond with tariffs of their own.
- This reduces export opportunities and adds further uncertainty.

Conclusion: Tariffs may help in the short run, but long-term outcomes depend on credibility, macro policy, and global reactions.

Trump's 2025 "Liberation Day" Tariffs: Overview

April 2, 2025: President Trump announces sweeping tariffs, declaring it "Liberation Day".

Key Measures:

- **Universal Tariff:** 10% tariff on all imports, effective April 5.
- **Reciprocal Tariffs:** Additional tariffs ranging from 10% to 54% on 57 countries with significant trade deficits, effective April 9.
- **Exemptions:** Canada and Mexico exempted for USMCA-compliant goods; certain critical minerals and energy products excluded.

Objective: Address persistent U.S. trade deficits and promote domestic manufacturing.

Trump's 2025 "Reciprocal Tariffs": Calculation

$$\tau_i = \max \left(10\%, \frac{1}{2} \cdot \frac{1}{\varepsilon \cdot \varphi} \cdot \frac{IM_i - X_i}{IM_i} \right) \quad (2)$$

- IM_i = U.S. imports from country i
 - X_i = U.S. exports to country i
 - ε = elasticity of import demand (assumed: 4).
 - φ = pass-through rate (assumed: 0.25, as if exporters are generous).
-
- *Observation:* Since $\varepsilon \cdot \varphi = 1$, we're right back to the basic formula.
 - *Conclusion:* Elasticities are technically included, but do nothing.

Critique of the Tariff Calculation Methodology

- **Oversimplification:** The formula focuses solely on goods trade deficits, ignoring services, investment flows, and supply chain complexities.
- **Arbitrary Threshold:** The 10% minimum tariff lacks a clear economic rationale.
- **Elasticity Parameters:** The inclusion of elasticity parameters (ε and φ) does not alter the outcome, rendering them superficial.
- **Economic Impact:** Economists warn of potential inflation, retaliation from trade partners, and disruptions to global trade dynamics.
- **Methodology Concerns:** The approach resembles simplistic AI-generated solutions, lacking nuanced economic analysis.

Conclusion: The tariff calculation methodology has been widely criticized for its lack of nuance and potential to harm both domestic and international economic stability.

Policy Credibility, Uncertainty, and Investment Risks

Lack of Credibility:

- No clear signal that tariffs are a long-term strategy—investors remain unconvinced.
- Echoes of Smoot-Hawley: protectionism without coordination risks deeper downturns.

Retaliation and Supply Chain Risks:

- China and the EU threaten counter-tariffs.
- U.S. firms depend on foreign intermediate goods (e.g., chips, components).
- Domestic substitution is costly—inflation risk is real.

Uncertainty Delays Investment:

- Policy uncertainty leads firms to wait, even if rates are low.
- If the Fed is constrained, uncertainty has stronger negative effects.

Macroeconomic Effects of Tariffs: Theory and Evidence

Theoretical Effects:

- **Importing Country:**
 - Short-term boost to protected sectors, but higher consumer prices and reduced efficiency.
 - Long-term losses due to reduced productivity, disrupted global value chains, and uncertainty.
- **Exporting Countries:** Lower exports, weaker currencies, reduced investment.
- **Unaffected Countries:** May gain from trade diversion, but also suffer from global trade slowdown.

Empirical Evidence:

- Tariffs increase inflation in the short run.
- GDP falls both in the imposing and affected countries.
- Global value chains amplify negative impacts.

Capital Flows

What Are Capital Flows?

Capital Flows: Cross-border movements of financial assets between countries.

Main Types:

- **Foreign Direct Investment (FDI):** Long-term investments (e.g., factories, firms)
- **Portfolio Flows:** Stocks and bonds (more volatile)
- **Other Flows:** Bank lending, deposits

Direction:

- **Inflows:** Foreign investors buying domestic assets
- **Outflows:** Domestic investors buying foreign assets

Key Insight: Capital flows reflect global investment decisions and risk perceptions.

Capital Flows and the Balance of Payments

Balance of Payments Identity:

$$\text{Current Account} + \text{Financial Account} = 0 \quad (3)$$

Implication:

- Trade deficit $\Rightarrow$ Capital inflows
- Trade surplus $\Rightarrow$ Capital outflows

Interpretation:

- The U.S. runs trade deficits but attracts large capital inflows.
- Countries with strong savings export capital abroad.

Key Message: Trade and capital flows are two sides of the same coin.

Capital Flows and Global Uncertainty

Global Financial Cycle:

- Capital flows respond strongly to global risk (e.g., VIX).

In High Uncertainty:

- **Flight to safety:** Investors move toward safer assets (e.g., U.S.)
- **Retrenchment:** Reduction in foreign investment elsewhere

Stylized Fact:

- Capital inflows fall in most countries during crises
- But remain stable (or increase) in safe havens

Question: Why do some countries remain attractive during uncertainty?

Equity Flows in Uncertain Times (Beraldi et al. (2026))

Research Question:

- Why do capital flows collapse in some countries but not others during uncertainty?

Core Mechanism: Information Heterogeneity

- Investors do not understand all countries equally well.
- Learning about foreign markets is costly.

Key Insight:

- In uncertain times, investors shift capital toward markets they **understand better**.

Result:

- Capital flows are driven not just by risk, but by **information**.

Main Results: Theory and Evidence

Three Main Findings:

1. **Uncertainty increases information gaps**
 - Domestic investors become relatively better informed
2. **Foreign capital retrenches**
 - Countries with strong domestic information advantage see lower inflows
3. **Reallocation across countries**
 - Investors shift toward “information-friendly” markets

Special Case: United States

- Acts as an **information haven**
- Continues to attract capital even in crises

Takeaway: Information frictions shape global capital allocation.